

Matteo Rossi Sebastiano

Academic profile

Computational medicinal chemist with expertise in protein and small-molecule modeling, drug discovery and rare neurodegenerative disease research. Integrates computational with experimental validation to accelerate therapeutic development. Experienced in supervising students, leading interdisciplinary collaborations, and developing innovative protocols in molecular modeling and medicinal chemistry.

Research Interests

- Modeling of proteins linked to rare genetic diseases
 - Integration of AI-driven protein modeling with experimental validation
- Drug Repurposing strategies for rare genetic diseases
- Structure-based drug discovery and degrader (PROTAC) design

Professional Appointments

University of Torino – Dept. of Biotechnology

Postdoctoral Scientist | Turin, IT

Assegnista 6/2022-present, Borsista 3/2021-5/2022

In collaboration with non-profit associations and the Institute of Genetics, I model pathogenic variants associated with rare diseases and apply approaches to identify potential therapeutic strategies. I also develop and implement computational protocols to characterize the conformational landscape, activity, permeability and solubility of beyond the Rule of 5 compounds (e.g., macrocycles, PROTACs). Additionally, I tutor students and support course examinations.

sevenTM

Director of Computational Biology | Montreal, CA 9/2023-present Responsible for overseeing the screening and curation of pan-cancer databases, conducting genomic and protein-level analyses of commercial cell lines, and identifying candidates for in vitro assays. I also implement and supervise cluster-based automated molecular dynamics protocols and oversee the in vitro screening of sevenTM's drug candidates.

University of Bern – Institute of Pharmacology

Postdoctoral Scientist | Bern, CH 04/2020 to 09/2020

Gained expertise in the in vivo administration of two investigational drug candidates and in the characterization of their combined effects on the pancreatic tumor microenvironment.

Education

Ph.D. in Biomedical Sciences

University Of Bern (CH)

Mark: 5.5/6 (*Insigni cum Laude*)

Date: 31.03.2020

MSc in Pharmacy

University of Turin (IT)

Mark: 110+/110 (*cum Laude and Honors*)

Date: 15.03.2015

Skills

- Languages: English, German (professional), French (basic)
 - Molecular modelling: Alpha Fold, Chimera, PyMOL, CDK, RDKit, Open Babel, Maestro, MOE package, FLAP, MoKa, VS+, Spartan
- Bioinformatics: expression profiling, survival analysis
- Bench Work: Cell culture, RT-PCR, PCR, Western Blot, ELISA
 - *In vivo* work: genetic mouse models, necropsy, tissue extraction, IHC, scoring

University of Bern – Institute of Pharmacology

PhD Candidate | Bern, CH

08/2016 to 03/2020

Graduated *Insigni cum Laude* (mark: 5.5/6). Published four high-impact papers in the fields of cancer metabolism and immune modulation. Supervised two undergraduate students who completed their theses with top evaluations.

Uppsala University - BMC, Physical Organic Chemistry

Researcher | Uppsala, SWE

08/2015 to 08/2016

Published two scientific papers. Curated crystallographic databases, developed molecular descriptors, and optimized QSAR/QSPR, molecular dynamics, and NMR-based methods to study permeability and solubility of non-Lipinski-like drug candidates.

University of Torino – Faculty of Pharmacy

Master Candidate | Turin, IT

09/2014 to 03/2015

Published one paper describing the identification of two novel breast cancer drug candidates. Investigated the 3D dynamics of a cancer-relevant protein-protein interaction and validated top in-silico hits experimentally

University of Torino – MBC

Master Candidate | Turin, IT

09/2012 to 11/2013

Experimentally demonstrated a binary protein-protein interaction via cloning of tagged fusion constructs and affinity chromatography. Their interface was so validate a drug screening target.

Honors and activities

- Best poster presentation, Italian Neuroscience Society (SINS2023)
- Master's Degree *Summa cum Laude* with Academic Honors
- Silver medal-Best Master Thesis, University of Turin (2015)
- Member of Scientific Societies: Rete HSP-Italia, Società Italiana di Neuroscienze, EACR
- Public engagement: author for OMAR, organizer of several Third Mission outreach events

Contacts & Bibliometrics



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