

CV Profile

Alessandro Barbieri

Brief introduction about yourself (including your research interests)

BIO Dedicated and collaborative Scientist with major background in **Computational Biology / Chemistry** and more than 6y of research experience. Besides lab experience, my expertise focuses on Molecular Modelling, Molecular Dynamics and data-processing in Cryo-EM.

SUMMARY 5y **Master's Degree** in Medicinal Chemistry at the University of Pisa. Achieved two **Internships** in companies combined with professional postgraduate courses. **Scholarship Award** and Visiting Scientist at the University of Siena. Joint **PhD** in Biochemistry at both **The University of Manchester** and **A*STAR Singapore**.

I am interested in Computational Biology/Chemistry applied to Pharmaceutical problems, from the design of novel ligands to mechanistic studies of key proteins involved in Cancer, Parkinson's disease or other Genetic/Infectious Diseases. Currently, I have published/deposited 6 articles, 3 PDBs and 2 cryo-EM maps but I am submitting/completing 4 first-author manuscripts, 2 external collaborations and a book chapter.

Education

Ph.D. in Biochemistry, **The University of Manchester** (UK) & **A*STAR Singapore** (SG), (Sep 2017 – Sep 2021)

2nd level **Master's Degree** – Drug Design & Synthesis, **University of Siena** (IT), (Feb 2015 – Feb 2016)

IELTS Supplementary course, **Kaplan College**, London (UK), (Nov 2014 – Feb 2015)

2nd level **Master's Degree** – Drug Design & Development, **University of Pavia** (IT), (Mar 2013 – Mar 2014)

(5y) **Master's Degree** in Medicinal Chemistry, **University of Pisa** (IT), (Oct 2005 – Nov 2011)

Experience in research

Ph.D. in Biochemistry (Sep 2017 – Sep 2021) (4y)

The University of Manchester (UK), Faculty of Biology, Medicine and Health, *Supervisor: Prof. R.C. Ford*

RESEARCH ASSISTANT (Oct 2018 – Apr 2021): **Agency for Science, Technology and Research (A*STAR) Singapore (SG)**, Bioinformatics Institute (BII), *Senior Principal Investigator: Dr Hao Fan*

- (R&D, **Computational Chemistry, Structural Biology**) Structure-based Ligand Discovery and Design and Cryo-electron microscopy on ABC transporters.

Visiting Scientist (Mar 2016 – Sep 2017) (1y 6mo)

University of Siena (Italy) – Department of Biotechnology, Chemistry and Pharmacy, *Supervisor: Prof. Maurizio Botta*

- (R&D, **Computational Chemistry**) Covalent Docking and MD simulations on GIRK channels.

Internship (with Research Scholarship Award) (Jun 2015 – Feb 2016) (8mo)

Lead Discovery Siena Srl – Computational Chemistry Lab, University of Siena (Italy), *Supervisor: Prof. Maurizio Botta*

- (R&D, **Computational Chemistry**) Identification of new potential inhibitors of Hiv-1 gp-120.

Internship (Oct 2013 – Feb 2014) (5mo)

Nerviano Medical Sciences Srl, Milan (Italy)

- (R&D, **Organic Synthesis**) Design and synthesis of intermediates oriented to new chemical classes: synthesis of substituted indolic compounds, precursors of natural products.

Personal skills / Competences / Publications

LANGUAGES	ITALIAN (Mother tongue), ENGLISH (C1)
COMPUTER	5y exp. with SuperComputing Facilities, Bash (Advanced), Python, Photoshop.
JOB-RELATED SKILLS	Docking - Virtual Screening: AutoDock, Gold, Glide, Phase, Virtual Flow. Molecular Dynamics: AMBER, GROMACS. Homology Modeling: UCSF Modeller, Prime. Quantum Chemistry: Gaussian09. Cryo-EM Image Processing: CisTEM, Cryosparc, basics of Relion and EMAN. Basic techniques in Organic Synthesis . Analysis, monitoring and characterization of synthetic products (chromatography, mass spectrometry, UV, NMR).
AWARDS & CERTIFICATES	1. Qualified Pharmacist (University of Pisa, Jun-Jul 2012) 2. IELTS certificate (International House, London, UK, Mar 2015) 3. Scholarship Award (University of Siena, Italy, 2016)
ACKNOWLEDGEMENTS POSTERS	1. XI EWDD - European Workshop of Drug Design Assistant of the Local Organizing Committee, Siena, Italy, May 2017. 2. 8th FEBS Special Meeting on ABC Proteins - Poster (Innsbruck, Austria, March 2020) 3. Singapore's National SuperComputing Centre – Calls for Research Projects (4) Jul'19 – Jun '20, Jan'20 – Dec'20, Jul'20 – Jun'21, Jan'21 – Dec'21
DEPOSITIONS	EMD-4391 with PDB (6GDI) 2018 May, replaced as PDB (6Q81) 2018 Dec. EMD-XXXX with PDB (XXXX) 2021 ---.
PUBLICATIONS	ORCID ID : 0000-0002-0135-9977 SCOPUS : 57205094676 https://www.researchgate.net/profile/Alessandro-Barbieri-7

Sector of activity

Health and Life Sciences, Pharmaceutical Sciences, Biochemistry, Chemistry

To be admissible for the call, you must fulfil **at least one** of the two requirements.

PhD and a minimum of 2 additional years of full-time research experience (the 2 minimum additional years of full-time research must be done after the PhD): **Yes or No**

No

Master's degree and a minimum of 6 additional years of full-time research experience (PhD studies are considered research experience): **Yes or No**

Yes

Contact information

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