

PERSONAL INFORMATION

Alessandro Pedretti



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JOB APPLIED FOR POSITION

Associate professor

WORK EXPERIENCE

From 1/03/2015

Associate professor

Department of Pharmaceutical Sciences, Faculty of Pharmaceutical Sciences at the University of Milan.

Main activities and responsibilities:

- Teaching, laboratory training, seminars in degree and PhD courses.
- Verification of skills acquired by students.
- Tutoring for students of the first two years of the Pharmacy degree course, tutoring for students of PhD courses), supervision of the degree thesis and tutoring of professional internship in pharmacy.
- Quality assurance of Pharmacy degree course.
- Main research interests in the medicinal chemistry field: identification of new drugs by *in silico* approaches, development of new computational methods and software for molecular modelling.
- Participation at the collegial governance of the university.

From 1/10/2004 to 27/02/2014

Assistant professor

Department of Pharmaceutical Sciences, Faculty of Pharmaceutical Sciences at the University of Milan.

From 1/10/2001 to 30/09/2004

Researcher

Medicinal Chemistry Institute, School of Pharmacy at the University of Milan.

Dal 1/10/2000 al 30/09/2001

Post-doc fellowship

Medicinal Chemistry Institute, School of Pharmacy at the University of Milan.

Dal 1/06/1997 al 31/07/1997

Teacher

Ente di Formazione Professionale ENFAP Lombardia, Milan.

EDUCATION AND TRAINING

From 11/1997 to 11/2000

Ph.D. in Medicinal Chemistry

I attended the Ph.D. course in Medicinal Chemistry (XIII cycle) at the University of Milan.

From 11/1989 to 10/1994

Degree in Chemistry and Pharmaceutical Technology

I attended the degree course in Chemistry and Pharmaceutical Technology at the University of Milan, receiving the degree in 7/11/1995.

From 09/1984 to 06/1989

Scientific High School Degree

I was student at the Liceo Scientifico Statale "Elio Vittorini" of Milan, receiving the Scientific High School Degree in 07/1999.

PERSONAL SKILLS

Mother tongue(s) Italian

| Other language(s) | SELF-ASSESSMENT | | | | |
|-------------------|-----------------|---------|--------------------|-------------------|---------|
| | UNDERSTANDING | | SPEAKING | | WRITING |
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | B2 | B2 | B2 | B |
| German | B1 | B1 | A2 | A2 | A2 |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills I have good communication skills in Italian and English acquired through several years of teaching, seminarial and congressional activity.

Organisational / managerial skills

- Coordination of the activities of the research laboratory.
- Tutoring of the research activity of undergraduate and Ph.D. students.
- Collaboration with national and international research groups.

Job-related skills May interests mainly deal with molecular modelling topics in developing new drugs through *in silico* approaches. More in detail, my researches are related to the study of ligand - receptor interactions by molecular docking calculations, the homology modelling of proteins whose 3D structure is not experimentally available, the analysis of the quantitative structure - activity relationships (QSAR), the development of new computational approaches and software for the molecular modelling.

Digital skills

| SELF-ASSESSMENT | | | | |
|------------------------|-----------------|------------------|-----------------|-----------------|
| Information processing | Communication | Content creation | Safety | Problem solving |
| Proficient user | Proficient user | Proficient user | Proficient user | Proficient user |

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

- Excellent skills on Windows and Unix-like operating systems (Android, Linux, NetBSD/FreeBSD).
- Excellent command of the main programs for molecular modelling.
- Very good skills on programming languages such as C, C++, JavaScript, PHP, Python, R, REXX, Rebol and Visual Basic.
- Good skills in developing of mobile applications for Android.
- Excellent command of office suite (word processor, spread sheet, presentation software).
- Very good command of CMS for the Web sites and excellent skills in writing HTML code.
- Good command of photo and video editing software gained as an amateur videographer.

Other skills

- Very good skills in microcontroller programming for automation systems based on Microchip (PIC) and Atmel (ATmega) chips.

Driving licence B

ADDITIONAL INFORMATION

Most significant publications

- [Pedretti A.](#), [Mazzolari A.](#), [Vistoli G.](#), [Testa B.](#), "MetaQSAR: An integrated database engine to manage and analyze metabolic data", *J Med Chem.*, 61(3), 1019-1030 (2018).
- [Vistoli G.](#), [Mazzolari A.](#), [Testa B.](#), [Pedretti A.](#), "Binding space concept: A new approach to enhance the reliability of docking scores and its application to predicting butyrylcholinesterase hydrolytic activity", *J Chem Inf Model.* 57(7), 1691-1702 (2017).

- Pedretti A., Granito C., Mazzolari A., Vistoli G., “Structural effects of some relevant missense mutations on the MECP2-DNA binding: A MD study analyzed by Rescore+, a versatile rescoring tool of the VEGA ZZ program”, *Mol Inform.* 35(8-9), 424-33 (2016).
- Gambini L., Rizzi L., Pedretti A., Tagliatela-Scafati O., Carucci M., Pancotti A., Galli C., Read M., Giurisato E., Romeo S., Russo I., “Picomolar inhibition of Plasmeprin V, an essential malaria protease, achieved exploiting the prime region”, *PLoS One.* 10(11), e0142509 (2015).
- Di Domizio A., Vitriolo A., Vistoli G., Pedretti A., “SPILLO-PBSS: detecting hidden binding sites within protein 3D-structures through a flexible structure-based approach”, *J Comput Chem.* 35(27), 2005-2017 (2014).
- Vistoli G., De Maddis D., Straniero V., Pedretti A., Pallavicini M., Valoti E., Carini M., Testa B., Aldini G., “Exploring the space of histidine containing dipeptides in search of novel efficient RCS sequestering agents”, *Eur J Med Chem.* 66, 153-160 (2013).
- Testa B., Pedretti A., Vistoli G., “Reactions and enzymes in the metabolism of drugs and other xenobiotics”, *Drug Discov Today.* 17(11-12), 549-560 (2012).
- Pedretti A., Labozzetta A., Lo Monte M., Beccari A.R., Moriconi A., Vistoli G., “Exploring the activation mechanism of TRPM8 channel by targeted MD simulations”, *Biochem Biophys Res Commun.* 414(1), 14-19 (2011).
- Vistoli G., Pedretti A., Mazzolari A., Testa B., “Homology modeling and metabolism prediction of human carboxylesterase-2 using docking analyses by GridDock: a parallelized tool based on AutoDock 4.0”, *J Comput Aided Mol Des.* 24(9), 771-87 (2010).
- Pedretti A., Marconi C., Bettinelli I., Vistoli G., “Comparative modeling of the quaternary structure for the human TRPM8 channel and analysis of its binding features”, *Biochim Biophys Acta.* 1788(5), 973-82 (2009).
- Vistoli G., Pedretti A., Testa B., “Assessing drug-likeness--what are we missing?”, *Drug Discov Today.* 13(7-8), 285-294 (2008).
- Pedretti A., Vistoli G., “Modeling of human ghrelin receptor (hGHS-R1a) in its close state and validation by molecular docking”, *Bioorg Med Chem.* 15(8), 3054-3064 (2007).
- Pedretti A., Villa M., Pallavicini M., Valoti E., Vistoli G., “Construction of human ghrelin receptor (hGHS-R1a) model using a fragmental prediction approach and validation through docking analysis”, *J Med Chem.* 49(11), 3077-3085 (2006).
- Vistoli G., Pedretti A., Villa L., Testa B., “Solvent constraints on the property space of acetylcholine. I. Isotropic solvents”, *J Med Chem.* 48(6), 1759-1767 (2005).
- Pedretti A., Villa L., Vistoli G., “VEGA - An open platform to develop chemo-bio-informatics applications, using plug-in architecture and script programming”, *J Comput Aided Mol Des.* 18(3), 167-173 (2004).
- De Luca L., Pedretti A., Vistoli G., Barreca M.L., Villa L., Monforte P., Chimirri A., “Analysis of the full-length integrase-DNA complex by a modified approach for DNA docking”, *Biochem Biophys Res Commun.* 310(4), 1083-1088 (2003).
- Pedretti A., Villa L., Vistoli G., Testa B., “The solute-solvent system: solvent constraints on the conformational dynamics of acetylcholine”, *J Am Chem Soc.* 124(25), 7472-7480 (2002).

The complete list of the publications is available at the AIR site (<https://air.unimi.it>).

Personal information

I authorize the handling of personal information in this curriculum, according to D.Lgs n. 196/03 and following modifications and Regulations EU 679/2016 (General Regulations concerning Data Protection or GRDP) and art. 7 of University Regulations concerning protection of personal information.

I authorize, according to D.lgs 14/03/2013 n. 33 concerning transparency, in case of conferment of the position and of the fellowship, the publication of this curriculum in the Web site of Università

degli Studi di Milano in the section “Amministrazione trasparente”, “Consulenti e collaboratori”.

Milan, 7/11/2018