



- Occupation or position held **Researcher (fixed-term staff) PROT. N. 2002/454, PROT. N. 1925191/2003, PROT. N. 1967764/2004.**
- Main activities and responsibilities Study of cationic exchange capacity of zeolites
  - Dates (from - to) January 2002 – December 2002
- Name and address of the employer National Research Council– Institute of Crystallography
  - Type of business or sector Medicinal Chemistry
  - Occupation or position held **Research fellow** PROT. N. 126.268.BO.1/02
- Main activities and responsibilities Study of enzymatic kinetics
  - Dates (from - to) From 2003 to 2005
- Name and address of the employer University La Sapienza of Rome, faculty of Pharmacy
  - Type of business or sector Toxicological Chemistry
  - Occupation or position held **Teaching**
- Main activities and responsibilities Teaching activity

## EDUCATION AND TRAINING

- Dates (from - to) 2014-2015
- Name and type of organisation providing education and training University La Sapienza of Rome
- Principal subjects/occupational skills covered Bioinformatics, Structural biology
- Title of qualification awarded **Master Degree in Bioinformatics – vote 110/110**
- Dates (from - to) 2015
- Name and type of organisation providing education and training European Molecular Biology Organization, EMBO Laboratory Management Course: The Art of Leadership, Heidelberg
- Principal subjects/occupational skills covered Management
- Title of qualification awarded **TOP**
- Dates (from - to) 2005-2009
- Name and type of organisation providing education and training University La Sapienza of Rome, European Molecular Biology Organization, **EMBO Fellow**
- Principal subjects/occupational skills covered Cloning, expression and purification of proteins from E.Coli
- Title of qualification awarded **PhD in Pharmaceutical Sciences**
- Dates (from - to) 2005-2009
- Name and type of organisation providing education and training University La Sapienza of Rome
- Principal subjects/occupational skills covered Structural biology
- Title of qualification awarded **PhD in Pharmaceutical Sciences**
- Dates (from - to) 1996-2001
- Name and type of organisation providing education and training University La Sapienza of Rome
- Principal subjects/occupational skills covered Organic synthesis
- Title of qualification awarded **MSc Pharmacy – vote 110/110 cum laude**

## PERSONAL SKILLS AND COMPETENCES

- Research interests (5 Key words): biomolecular modeling, structural biology, medicinal chemistry, crystallography, Surface Plasmon Resonance
- Scientific supervisor of 2 CNR research fellowships and many students
- Ability to use graphic programs for Drug Design and 3D interpretation of crystallographic structures (CCP4, Rosetta, Molegro, PyMol, etc ...)

## PROJECTS

- Responsible of the CNR Unit:
  - o A Structure Guided Approach to target the Aurora-A/N-Myc complex in MYCN amplified neuroblastoma
- Collaborator:
  - o 2016 Contratto con la ditta farmaceutica ACRAF spa PROT. N. 0000789. Crystallographic studies on complexes of OXA-48 beta-lactamase with six inhibitors
  - o 2015 Contratto con la ditta farmaceutica ACRAF spa PROT. N. 0001627. Studi cristallografici su complessi della beta-lattamasi OXA-48 con alcuni inibitori
  - o 2015 Contratto con la ditta farmaceutica ACRAF spa PROT. N. 0000686. Rx structures of complexes of IMP-1 beta-lactamase with two inhibitors
  - o 2011 Progetto Bilaterale CNR-JSPS tra Italia e Giappone PROT. N. 0036438. Study of potential drugs for the treatment of the metabolic syndrome: search of new PPAR ligands with enhanced therapeutic efficacy by structural biology techniques, NMR and microcalorimetry analysis.
  - o 2011 PRIN 2009 PROT. N. 0001937. Integrated multidisciplinary approaches to improve the discovery of novel nuclear receptor ligands: from virtual screening to in vivo evaluation of newly identified compounds
  - o 2010 Fondazione CARIPLO PROT. N. 0011610. Peroxisome proliferator-activated receptors (PPARs) in the regulation of glucose and lipid metabolism: a multidisciplinary approach for the identification and characterization of new ligands to improve therapeutical interventions in diabetes, obesity and metabolic syndrome.
  - o 2009 Contratto con la ditta farmaceutica ACRAF spa PROT. N. 0017975. Studi di microcalorimetria sull'interazione tra PPARgamma e i ligandi AF3369 e AF2368
  - o 2008 Contratto con la Società farmaceutica ACRAF spa PROT. N. 0000707. Studi di cristallizzazione di agonisti del recettore PPARγ.
  - o 2007 Contratto con industria farmaceutica americana Alantox Pharmaceuticals inc. PROT. N. 0000410. Strutture RX di complessi della metalloproteinasi di matrice MMP-8 con i suoi inibitori.

## PUBLICATION INDEXES (SCOPUS)

- o NUMBER OF PUBLICATIONS: 28
- o TOTAL NUMBER OF CITATIONS: 855
- o H-INDEX: 17
- o i10-index: 21
- o Link to SCOPUS/Orcid/researcher ID:
- o <https://www.scopus.com/authid/detail.uri?authorId=14525429000>
- o <https://orcid.org/0000-0002-7533-5425>

## PUBLICATIONS

1. Dalila Boi, Fani Souvalidou, Roberta Montanari, Federica Polverino, Grazia Marini, Davide Capelli, Giorgio Pochetti, Angela Tramonti, Roberto Contestabile, Daniela Trisciunglio, Patrizia Carpinelli, Camilla Ascanelli, Catherine Lindon, Alessandro De Leo, Michele Saviano, Roberto Di Santo, Roberta Costi, Giulia Guarguaglini, Alessandro Paiardini, PHA-680626 is an Effective Inhibitor of the Interaction between Aurora-A and N-Myc, *International Journal of Molecular Sciences* (2022).
2. Spizzichino S., Boi D., Boumis G., Lucchi R., Liberati F.R., Capelli D., Montanari R., Pochetti G., Piacentini R., Parisi G. Paone A., Rinaldo S., Contestabile., Tramonti A., Paiardini A., Giardina G., Cutruzzolà F., Cytosolic localization and in vitro assembly of human de novo thymidylate synthesis complex (2021) *Accepted Febs Journal FJ-21-0863*.
3. Toro, R.G., Adel, A.M., de Caro, T., Federici, F., Cerri, L., Bolli, E., Mezzi, A., Barbalinardo, M., Gentili, D., Cavallini, M., Al-Shemy, M.T., Montanari, R., Caschera, D. Evaluation of long-lasting antibacterial properties and cytotoxic behavior of functionalized silver-nanocellulose composite (2021) *Materials*.
4. Garofalo, B., Prati, F., Buonfiglio, R., Coletta, I., D'atanasio, N., Molteni, A., Carettoni, D., Wanke, V., Pochetti, G., Montanari, R., Capelli, D., Milanese, C., Di Giorgio, F.P., Ombrato, R. Discovery of novel chemical series of oxa-48  $\beta$ -lactamase inhibitors by high-throughput screening (2021) *Pharmaceuticals*.
5. Adel, A.M., Al-Shemy, M.T., Diab, M.A., El-Sakhawy, M., Toro, R.G., Montanari, R., de Caro, T., Caschera, D. Fabrication of packaging paper sheets decorated with alginate/oxidized nanocellulose silver nanoparticles bio-nanocomposite (2021) *International Journal of Biological Macromolecules*.
6. Peiretti, F., Montanari, R., Capelli, D., Bonardo, B., Colson, C., Amri, E.-Z., Grimaldi, M., Balaguer, P., Ito, K., Roeder, R.G., Pochetti, G., Brunel, J.M. A Novel N-Substituted Valine Derivative with Unique Peroxisome Proliferator-Activated Receptor  $\gamma$  binding Properties and Biological Activities (2020) *Journal of Medicinal Chemistry*.
7. Caschera, D., Toro, R.G., Federici, F., Montanari, R., de Caro, T., Al-Shemy, M.T., Adel, A.M. Green approach for the fabrication of silver-oxidized cellulose nanocomposite with antibacterial properties (2020) *Cellulose*.
8. Montanari, R., Capelli, D., Yamamoto, K., Awaishima, H., Nishikata, K., Barendregt, A., Heck, A.J.R., Loidice, F., Altieri, F., Paiardini, A., Grottesi, A., Pirone, L., Pedone, E., Peiretti, F., Brunel, J.M., Itoh, T., Pochetti, G. Insights into ppar $\gamma$  phosphorylation and its inhibition mechanism (2020) *Journal of Medicinal Chemistry*.
9. Capelli, D., Parravicini, C., Pochetti, G., Montanari, R., Temporini, C., Rabuffetti, M., Trincavelli, M.L., Daniele, S., Fumagalli, M., Saporiti, S., Bonfanti, E., Abbraccio, M.P., Eberini, I., Ceruti, S., Calleri, E., Capaldi, S. Surface Plasmon Resonance as a Tool for Ligand Binding Investigation of Engineered GPR17 Receptor, a G Protein Coupled Receptor Involved in Myelination (2020) *Frontiers in Chemistry*.
10. Laghezza, A., Piemontese, L., Brunetti, L., Caradonna, A., Agamennone, M., Di Pizio, A., Pochetti, G., Montanari, R., Capelli, D., Tauro, M., Loidice, F., Tortorella, P. Bone-seeking matrix metalloproteinase inhibitors for the treatment of skeletal malignancy (2020) *Pharmaceuticals*.
11. Laghezza, A., Piemontese, L., Cerchia, C., Montanari, R., Capelli, D., Giudici, M., Crestani, M., Tortorella, P., Peiretti, F., Pochetti, G., Lavecchia, A., Loidice, F. Identification of the First PPAR $\alpha/\gamma$  Dual Agonist Able to Bind to Canonical and Alternative Sites of PPAR $\gamma$  and to Inhibit Its Cdk5-Mediated Phosphorylation (2018) *Journal of Medicinal Chemistry*.
12. Gloria Brusotti\*, Roberta Montanari\*, Davide Capelli, Giulia Cattaneo, Antonio Laghezza, Paolo Tortorella, Fulvio Loidice, Franck Peiretti, Bernadette Bonardo, Alessandro Paiardini, Enrica Calleri (\*equal contribution), "Betulinic acid is a PPAR $\gamma$  antagonist that hampers adipogenesis and promotes osteogenesis", submitted to *Scientific Reports* (SREP-17-03104-T).
13. D. Capelli, C. Cerchia, R. Montanari, F. Loidice, P. Tortorella, A., Laghezza, L. Cervoni, G. Pochetti and A. Lavecchia, *Scientific Reports* 6, 34792, 2016.
14. Tauro M, Laghezza A, Loidice F, Piemontese L, Caradonna A, Capelli D, Montanari R, Pochetti G, Di Pizio A, Agamennone M, Campestre C, Tortorella P. *J Enzyme Inhib Med Chem*. 24:1-13. 2016.
15. Roberta Montanari, Davide Capelli, Aldo Tava, Andrea Galli, Antonio Laghezza, Paolo Tortorella, Fulvio Loidice & Giorgio Pochetti, "Screening of saponins and sapogenins from *Medicago* species as potential PPAR $\gamma$  agonists and X-ray structure of the complex PPAR $\gamma$ /caulophyllogenin" *Scientific Reports* 6, (2016) 27658
16. Antonio Laghezza\*, Roberta Montanari\*, Antonio Lavecchia, Luca Piemontese, Giorgio Pochetti, Vito Iacobazzi, Vittoria Infantino, Davide Capelli, Michela De Bellis, Antonella Liantonio, Sabata Pierno, Paolo Tortorella, Diana Conte Camerino, Fulvio Loidice "On the metabolically active form of metaglidase: improved synthesis and investigation of its peculiar activity on PPARs and skeletal muscle function" (2015) *ChemMedChem*, Volume 10, Issue 3, 555-565. (\*the authors equally contributed to this work)
17. C. Lori, A. Pasquo, R. Montanari, D. Capelli, V. Consalvi, R. Chiaraluce, L. Cervoni, F. Loidice, A. Laghezza, M. Aschi and G. Pochetti "Structural Basis of the Transactivation Deficiency of Human PPAR $\gamma$  F360L Mutant Associated with Familial Partial Lipodystrophy" (accepted 2014) *Acta Cryst D* Reference code: BE5257
18. E. Calleri, G. Pochetti, K.S.S. Dossou, A. Laghezza, R. Montanari, D. Capelli, E. Prada, F. Loidice, G. Massolini, M. Bernier, R. Moaddel, "Resveratrol and its metabolites bind to PPARs". *ChemBioChem* (2014) Volume 15, Issue 8, 26 May 2014, Pages 1154-1160
19. C. Temporini, G. Pochetti, G. Fracchiolla, L. Piemontese, R. Montanari, R. Moaddel, A. Laghezza, F. Altieri, L. Cervoni, D. Ubiali, E. Prada, F. Loidice, G. Massolini, E. Calleri, "Open tubular columns containing the immobilized ligand binding domain of peroxisome proliferator-activated receptors  $\alpha$  and  $\gamma$  for dual agonists characterization by FAC-MS" *Journal of Chromatography A* 1284 (2013) 36-43.
20. A. Laghezza, G. Pochetti, A. Lavecchia, G. Fracchiolla, S. Faliti, L. Piemontese, C. Di Giovanni, V. Iacobazzi, V. Infantino, R. Montanari, D. Capelli, P. Tortorella, F. Loidice, "New 2-aryloxy-3-phenyl-propanoic acids as peroxisome proliferator-activated receptors  $\alpha/\gamma$  dual agonists able to up regulate the mitochondrial carnitine shuttle system gene expression", *J. Med. Chem.* 56(1) (2013) 60-72
21. E. Calleri, G. Fracchiolla, R. Montanari, G. Pochetti, A. Lavecchia, F. Loidice, A. Laghezza, L. Piemontese, G. Massolini, C. Temporini, "Frontal affinity chromatography with MS detection of the ligand binding domain of PPAR $\gamma$  receptor: ligand affinity

- screening and stereoselective ligand- macromolecule interaction" Journal of Chromatography A 1232 (2012) 84-92.
22. L. Porcelli, F. Gilardi, A. Laghezza, L. Piemontese, N. Mitro, A. Azzariti, F. Altieri, L. Cervoni, G. Fracchiolla, M. Giudici, U. Guerrini, A. Lavecchia, R. Montanari, C. Di Giovanni, A. Paradiso, G. Pochetti, G.M. Simone, P. Tortorella, M. Crestani, F. Liodice. "Synthesis, characterization and biological evaluation of ureidofibrate-like derivatives endowed with peroxisome proliferator-activated receptor activity" J. Med. Chem. 55 (2012) 37-54.
23. G. Fracchiolla, A. Laghezza, L. Piemontese, M. Parente, A. Lavecchia, G. Pochetti, R. Montanari, C. Di Giovanni, G. Carbonara, P. Tortorella, E. Novellino, F. Liodice. "Frontal affinity chromatography with MS detection of the ligand binding domain of PPARgamma receptor: ligand affinity screening and stereoselective ligand-macromolecule interaction" Bioorg. Med. Chem. 20 (2012) 2141-2151.
24. G. Pochetti, N. Mitro, A. Lavecchia, F. Gilardi, N. Besker, E. Scotti, M. Aschi, N. Re, G. Fracchiolla, A. Laghezza, P. Tortorella, R. Montanari, E. Novellino, F. Mazza, M. Crestani, F. Liodice, "Structural Insight into Peroxisome Proliferator-Activated Receptor  $\gamma$  Binding of Two Ureidofibrate-Like Enantiomers by Molecular Dynamics, Cofactor Interaction Analysis, and Site- Directed Mutagenesis" J. Med. Chem. 53 (2010) 4354-4366.
25. G. Fracchiolla, A. Laghezza, L. Piemontese, P. Tortorella, F. Mazza, R. Montanari, G. Pochetti, A. Lavecchia, E. Novellino, S. Pierno, D. Conte-Camerino, F. Liodice, "New 2-Aryloxy-3-phenyl-propanoic Acids As Peroxisome Proliferator-Activated Receptors  $\alpha/\gamma$  Dual Agonists with Improved Potency and Reduced Adverse Effects on Skeletal Muscle Function" J. Med. Chem. 52 (2009) 6382-6393.
26. R. Montanari, F. Saccoccia, E. Scotti, M. Crestani, C. Godio, F. Gilardi, F. Liodice, G. Fracchiolla, A. Laghezza, P. Tortorella, A. Lavecchia, E. Novellino, F. Mazza, M. Aschi, G. Pochetti, "Crystal structure of the PPAR- gamma ligand binding domain complexed with a novel partial agonist: a new region of the hydrophobic pocket could be exploited for drug design." J. Med. Chem. 51 (2008) 7768-7776.
27. G.Pochetti, R.Montanari, C.Gege, C.Chevrier, A.G.Taveras & F.Mazza, "Extrabinding region induced by non-zinc chelating inhibitors into the S 1 subsite of matrix metalloproteinase 8 (MMP-8), J.Med.Chem. 52(4)(2009)1040-1049.
28. Ursini, O., Lilla, E., & Montanari, R. "The investigation on cationic exchange capacity of zeolites: The use as selective ion trappers in the electrokinetic soil technique" Journal of Hazardous Materials 137(2) (2006) 1079-1088.

**According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.**

Rome, September 22, 2022

Signature

