Marino Convertino

Curriculum Vitae

Department of Biochemistry and Biophysics
University of North Carolina at Chapel Hill
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Education

Jan 2007 - Feb 2011	Double PhD in Biochemistry and Medicinal Chemistry University of Zurich, Zurich (Switzerland) University of Bari, Bari (Italy)
Sep 2000 - Jul 2005	MSc in Pharmacy (*summa cum laude*) University of Bari, Bari (Italy)

Working Experience

Sep 2015 - present	Research Assistant Professor University of North Carolina at Chapel Hill
Jan 2013 - present	PostDoctoral Fellow University of North Carolina at Chapel Hill
Oct 2011 - Dec 2012	Junior PostDoc Italian Institute of Technology - D3 unit
Jan - Dec 2006	Research Technician University of Bari
Sep - Dec 2005	Pharmacist Municipality of Taranto (Italy)

Teaching Experience

Jan 2007 - Feb 2011	Analytical Chemistry Teaching Assistant - University of Zurich

Mentoring

Aug 2013 - present	Joseph Kousouros May - Jul 2013, UNC Summer Biophysics Program
	Benfeard Williams II Aug - Jan 2013, First-year graduate student
	Stephan Kudlacek Aug - Jan 2015, First-year graduate student
	Jack Maguire Aug - Jan 2015, First-year graduate student

Honors and Awards

Mar 2014	Best Young Researcher Award and Best Poster Award Winner at IV Study in Multidisciplinary Pain Research - SIMPAR 2014, Rome, Italy

Nov 2013	2013 Biochemistry and Biophysics Research Retreat, UNC Chapel Hill, NC, USA [poster, best poster award]
Jul 2013	Director's Discretionary Program of Oak Ridge Leadership Computing Facility (USA) 6 million CPU-hours on Titan (Cray/XK7)
Mar 2013	Director's Discretionary Program of Argonne National Laboratory (USA) 5 million CPU-hours on Intrepid (Blue Gene/P)
Mar 2013	Director's Discretionary Program of Argonne National Laboratory (USA) 5 million CPU-hours on Vesta (Blue Gene/Q)
May 2006	University of Bari Bronze Seal as best graduated student of the Faculty of Pharmacy for the academic year 2005

Publications

16. A. Samoshkin,* **M. Convertino**,* C. T. Viet, J. S. Wieskopf, O. Kambur, J. Marcovitz, P. Patel, L. S. Stone, W. Maixner, E. Kalso, J. S. Mogil, B. L. Schmidt, N. V. Dokholyan, and L. Diatchenko. Structural and functional interaction between six transmembrane μ-opioid receptor isoform and β2-adrenoreceptors. *Scientific Reports*, **2015**, 5, 18198. **co-first authors*

15. G. Palermo, A. D. Favia, **M. Convertino**, and M. De Vivo. The molecular basis for dual FAAH/COX inhibition. *ChemMedChem*, **2015**, *in press*.

14. **M. Convertino**,* A. Samoshkin,* C. T. Viet, J. Gauthier, S. P. Li Fraine, R. Sharif-Naeini, B. L. Schmidt, W. Maixner, L. Diatchenko, and N. Dokholyan. Differential regulation of 6- and 7-transmembrane helix variants of μ-opioid receptor in response to morphine stimulation. *PLoS ONE*, **2015**, 10(11), e0142826. **co-first authors*

13. L. J. Martin, M. H. Piltonen, J. Gauthier, **M. Convertino**, E. L. Acland, N. V. Dokholyan, J. S. Mogil, L. Diatchenko, and W. Maixner**.** Differences in the analgesic effects and binding properties of propanolol and bupranolol enantiomers. *The Journal of Pain*, **2015**, S1526-5900(15)00877-9.

12. G. Palermo, E. Minniti, M. L. Greco, L. Riccardi, E. Simoni, **M. Convertino**, C. Marchetti, M. Rosini, C. Sissi, A Minarini, and M. De Vivo**.** An optimized polyamine moiety boosts potency of human type II topoisomerase poisons as quantified by comparative analysis centered on the clinical candidate F14512. *Chemical communications*, **2015**, 51(76), 14310-14313.

11. C. B. Meloto, S. K., Segall, S. Smith, M. Parisien, S. A. Shabalina, C. M. Rizzatti-Barbosa, J. Gauthier, D. Tsao, **M. Convertino**, M. H. Piltonen, G. D. Slade, R. B. Fillingim, J. D. Greenspan, R. Ohrbach, C. Knott, W. Maixner, D. Zaykin, N. V. Dokholyan, I. Reenilä, P. T. Männistö, L. Diatchenko**.** COMT gene locus: new functional variants. *Pain*, **2015**, 156(10), 2071-2083.

10. B. Williams, **M. Convertino**, J. Das, N. V. Dokholyan. ApoE4-specific misfolded intermediate identified by molecular dynamics simulations. *PLoS Computational Biology*, **2015**, 11(10), e1004359.

9. **M. Convertino**, A. Samoshkin, J. Gauthier, M. S. Gold, W. Maixner, N. V. Dokholyan, and L. Diatchenko. μ-Opioid receptor 6-transmembrane isoform: a potential therapeutic target for new effective opioids. *Progress in Neuropsychopharmacology & Biological Psychiatry*, **2014**, S0278-5846(14)00235-8.

8. F. Attanasio,* **M. Convertino**,* A. Magno, A. Caflisch, A. Corazza, H. Haridas, G. Esposito, S. Cataldo, B. Pignataro, D. Milardi, and E. Rizzarelli. Carnosine Inhibits Aβ(42) Aggregation by Perturbing the H-Bond Network in and around the Central Hydrophobic Cluster. *ChemBioChem,* **2013**, 14, 583. **co-first authors*

7. R. Scherzer-Attali,* **M. Convertino**,* R. Pellarin, A. Caflisch, E. Gazit, and D. Segal. Methylations of tryptophan modified naphtoquinone affect its inhibitory potential towards Aβ aggregation. *Journal of Physical Chemistry B*, **2012**, 117, 1780. **co-first authors*

6. O. Nicolotti, **M. Convertino**, F. Leonetti, M. Catto, S. Cellamare, and A. Carotti. Estimation of the Binding Free Energy by Linear Interaction Energy Models. *Mini Reviews in Medicinal Chemistry,* **2012**, 12, 551.

5. **M. Convertino**, A. Vitalis, and A. Caflisch. Disordered binding of small molecules to $A\beta_{12-28}$. *Journal of Biological Chemistry*, **2011**, 286*,* 41578.

4. A. Frydman-Marom, **M. Convertino**, R. Pellarin, A. Lampel, R. Shaltiel-Kario, A. Caflisch, D. E. Shalev, and E. Gazit. Inhibiting Aβ-Aggregation by β-Breaker-Containing Endomorphin Tetrapeptides and Synthetic Analogue. *ACS Chemical Biology*, **2011**, 6(11), 1265.

3. R. Scherzer-Attali, R. Pellarin, **M. Convertino**, A. Frydman-Marom, N. Egoz/Matia, S. Peled, M. Levy-Sakin, D. E. Shalev, A. Caflisch, E. Gazit, and D. Segal. Complete phenotypic recovery of an Alzheimer's Disease Model by a Quinone-Tryptophan Hybrid aggregation inhibitor. *PLoS ONE*, **2010**, 5(6), e11101.

2. O. Nicolotti, I. Giangreco, T. F. Miscioscia, **M. Convertino**, F. Leonetti, L. Pisani, and A. Carotti. Screening of benzamidine-based thrombin inhibitors via a linear interaction energy in continuum electrostatics model. *Journal of Computational Aided Molecular Design*, **2010**, 24, 117.

1. **M. Convertino**, R. Pellarin, M. Catto, A. Carotti, and A. Caflisch. 9,10 –Anthraquinone hinders β aggregation: How does a small molecule interfere with Aβ-peptide amyloid fibrillation? *Protein Science*, **2009**, 18, 792.

Attended Meetings

Mar 2014	Study in Multidisciplinary Pain Research SIMPAR 2014 Rome, Italy [poster, **best poster award**]
Nov 2013	2013 Biochemistry and Biophysics Research Retreat, UNC Chapel Hill, NC, USA [poster, **best poster award**]
May 2012	International meeting on Computational Chemogenomics to Understand System Biology & Computational Medicinal Chemistry; Genéve, Switzerland
Nov 2011	Computational Driven Drug Discovery Meeting L'Aquila, Italy
Nov 2010	MM2010 - Advances in Biomolecular and Materials Modeling Melbourne, Australia [poster]
Aug 2009	Benzon Symposium 56 "Functional and Pathogenic Protein aggregation" Copenhagen, Denmark [poster]
Apr 2009	IV Meeting on the Molecular Mechanism of Neurodegeneration; Milan, Italy [poster]
Feb 2009	III Meeting Nuove prospettive in Chimica Farmaceutica; Lucca, Italy
Jul 2008	European School of Medicinal Chemistry; Urbino, Italy
Jun 2007	Conference Jacques Monod Protein Misfolding and Aggregation in Ageing Disease Roscoff, France [poster]

Talks

Mar 2014	Study in Multidisciplinary Pain Research SIMPAR 2014 Rome, Italy [**best young researcher award**]

Professional Service

Jan 2013 - present	Reviewer for *Journal of Physical Chemistry Letters*
Jan 2013 - present	Reviewer for *Journal of Chemical Information and Modeling*
Jan 2013 - present	Reviewer for *Proteins: Structure, Function and Bioinformatics*