# Curriculum Vitæ Dr. ANDREA MATTAREI

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***Personal Information***


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| **Family name, First name** | Mattarei, Andrea |
| **Place and Date of birth** | Rovereto (TN), May 21st, 1982 |
| **Country of Citizenship** | Italy |
| **Address** | Via B. Barisoni 9C, 35010, Padova (PD), Italy |
| **Work Address** | Department of Pharmaceutical and Pharmacological Sciences, Via F. Marzolo 5, 35131 Padova (PD), Italy |
| **Work Phone** | +39 049 8275024 |
| **Current Position** | Researcher, RTDA, University of Padova |
| **E-mail** | andrea.mattarei@unipd.it |


***Education, training, positions***

- **March 2017 – Present:** Term contract Researcher (RTDA) at the Department of Pharmaceutical and Pharmacological Sciences, University of Padova.
- **March 2016 – February 2017:** Post-doctoral fellow at the Department of Biology, University of Padova. Title of the project: "*Synthesis of mitochondrial ion channel inhibitor derivatives*". Principal Investigator: Prof. Ildiko Szabò.
- **March 2014 – February 2016:** Senior research fellow at the Department of Chemical Sciences, University of Padova. The position was obtained in an open competition (Bando Assegni di Ricerca Senior 2013, University of Padova, DR. 3210-2013) for which the candidates had to submit and orally defend an original research proposal. Title of the project: "*Synthesis of Lipid-Mimetic Derivatives of Active Natural Compounds for a Novel Approach to Treat Obesity and Associated Diseases"*.
- **August 2012 – February 2014:** Term contract Researcher (RTD) of the Institute of Neuroscience of the National Council of Research (CNR).
- **March – April 2013:** Visiting researcher at the Institute of Organic Chemistry of the University of Regensburg, Germany, working in collaboration with Dr. Sabine Amslinger on the project *"Synthesis of a biotinylated benzophenone derivative of a T cell stimulator"*.

- **January 2011 – July 2012:** Post-doctoral fellow of the National Council of Research (CNR). Fellowship granted within the research program "*Development of a Pharmacology of Polyphenols*", funded by the Fondazione Cassa di Risparmio di Padova e Rovigo, CARIPARO – Progetti di Eccellenza. PI: Dr. Mario Zoratti, IN-CNR.
- **March 2011:** PhD in Molecular Sciences, University of Padova, Italy. Thesis Title: "*Development of derivatives of natural polyphenols for pharmacological applications*". Advisor: Prof. Cristina Paradisi.
- **February – August 2010:** Visiting scientist in the laboratory of Prof. Alan P. Kozikowski at the University of Illinois at Chicago, Department of Medicinal Chemistry and Pharmacognosy. Research Project: "*Synthesis and characterization of novel daidzein derivatives. A Dual Drug Approach to improve the activity toward Arginase 1 expression*".
- **January 2008 – December 2010:** Graduate student in the Graduate School of Molecular Sciences at the Department of Chemical Sciences, University of Padova.
- **November 2007:** Habilitation to the profession (*Esame di Stato*).
- **July 2007:** MSC Degree (Laurea Magistrale) in Industrial Chemistry, University of Padova, Italy. Final grade **110/110.** Thesis Title: "*Synthesis and characterization of mitochondriotropic derivatives of quercetin*". Supervisor: Prof. Cristina Paradisi.
- **November 2004:** BSC Degree (Laurea Triennale) in Industrial Chemistry: University of Padova, Italy. Final grade **101/110**. Thesis Title: "*Nanostructured Palladium catalysts immobilized on acrylic resins*". Supervisor: Prof. Benedetto Corain.
- **July 2001:** High School Degree. Industrial chemistry school ITIS "Buonarroti", Trento, Italy. Final grade **100/100**.

***National Scientific Qualification (ASN; Abilitazione Scientifica Nazionale)***

In 2018 Dr. Mattarei obtained the National Scientific Qualification (ASN, associate professor) in the fields of Pharmaceutical, Toxicological and Nutraceutical Chemistry and Technologies (II Fascia, 03/D1, SSD CHIM/08-CHIM/10. Valid from April 4, 2018 to April 4, 2024) and of Organic Chemistry (II Fascia, 03/C1, SSD CHIM/06. Valid from April 6, 2018 to April 6, 2024).

**Summary of Scientific Production**

Dr. Mattarei's research interests are in the field of medicinal and bioorganic chemistry with a special focus on the design and synthesis of new compounds for biomedical and pharmacological applications. As of today, Dr. Mattarei has co-authored 37 papers published in indexed journals, 16 of which as first author and 5 as corresponding author, 1 book chapter and 3 registered patents. His h-index is 15, the number of citations is 612 in 10.5 years of academic age. (*Scopus* May 27, 2019)

***List of scientific publications***

1. Pendin, D., Norante, R., De Nadai, A., Gherardi, G., Vajente, N., Basso, E., Kaludercic, N., Mammucari, C., Paradisi, C., Pozzan, T., **Mattarei, A.**[#] A synthetic fluorescent mitochondria-targeted sensor for ratiometric imaging of Calcium in live cells. *Angewandte Chemie International Edition*. Accepted for publication (2019), DOI: 10.1002/anie.201902272 and 10.1002/ange.201902272. IF: 12.102.
2. Barattin, M.*, **Mattarei, A.***, Balasso, A., Paradisi, C., Cantù, L., Del Fevero, E., Vitala, T., Mastrotto, F., Caliceti, P., Salmaso, S. pH-Controlled Liposomes for Enhanced Cell Penetration in Tumor Environment. *ACS Applied Materials and Interfaces*. 10(21), 17646-17661 (2018). IF: 8.097.
3. **Mattarei A.**, Romio, M., Managò, A., Zoratti, M., Paradisi, C., Szabò, I., Leanza, L., Biasutto, L. Novel Mitochondria-Targeted Furocoumarin Derivatives as Possible Anti-Cancer Agents. *Frontiers in Oncology*. 8, 122 (2018). IF: 4.416.
4. Venturini E., Leanza L., Azzolini M., Kadow S., **Mattarei A.**, Weller M., Tabatabai G., Edwards M.J., Zoratti M., Paradisi C., Szabò I., Gulbins E., Becker K.A. Targeting the Potassium Channel Kv1.3 Kills Glioblastoma Cells. *NeuroSignals*. 25(1), 27-38 (2018). IF: 6.143.
5. **Mattarei, A.**[#], Rossa, A., Bombardelli, V., Azzolini, M., La Spina, M., Paradisi, C., Zoratti, M., Biasutto, L. Novel lipid-mimetic prodrugs delivering active compounds to adipose tissue. *European Journal of Medicinal Chemistry*. 135, 77-88 (2017). IF: 4.816.
6. **Mattarei, A.**, Enzinger, M., Gu, S., Karunakaran, M.M., Kimmel, B., Berner, N., Adams, E.J., Herrmann, T., Amslinger, S. A Photo-Crosslinkable Biotin Derivative of the Phosphoantigen (E)-4-Hydroxy-3-Methylbut-2-Enyl Diphosphate (HMBPP) Activates Vγ9Vδ2 T Cells and Binds to the HMBPP Site of BTN3A1. 49. *Chemistry – A European Journal*. 11945-11954 (2017). IF: 5.16.

7. Peruzzo, R., **Mattarei, A.**, Romio, M., Paradisi, C., Zoratti, M., Szabò, I., Leanza, L. Regulation of Proliferation by a Mitochondrial Potassium Channel in Pancreatic Ductal Adenocarcinoma Cells. *Frontiers in Oncology*. 7, 239 (2017). IF: 4.416.

8. Austin, S., Tavakoli, M., Pfeiffer, C., Seifert, J., **Mattarei, A.**, De Stefani, D., Zoratti, M., Nowikovsky, K. LETM1-mediated $K^+$ and $Na^+$ homeostasis regulates mitochondrial $Ca^{2+}$ efflux. *Frontiers in Physiology*. 8, 839 (2017). IF: 3.394.

9. Sassi, N.*, **Mattarei, A.***, Espina, V., Liotta, L., Zoratti, M., Paradisi, C., Biasutto, L. Potential anti-cancer activity of 7-O-pentyl quercetin: Efficient, membrane-targeted kinase inhibition and pro-oxidant effect. *Pharmacological Research*. 124, 9-19 (2017). IF: 4.897.

10. Biasutto, L., **Mattarei, A.**, Azzolini, M., La Spina, M., Sassi, N., Romio, M., Paradisi, C., Zoratti, M. Resveratrol derivatives as a pharmacological tool. *Annals of the New York Academy of Sciences*. 1403(1), 27-37 (2017). IF: 4.277.

11. Leanza, L., Romio, M., Becker, K.A., Azzolini, M., Trentin, L., Managò, A., Venturini, E., Zaccagnino, A., **Mattarei, A.**, Carraretto, L., Urbani, A., Kadow, S., Biasutto, L., Martini, V., Severin, F., Peruzzo, R., Trimarco, V., Egberts, J.H., Hauser, C., Visentin, A., Semenzato, G., Kalthoff, H., Zoratti, M., Gulbins, E., Paradisi, C., and Szabò, I. Direct pharmacological targeting of a mitochondrial ion channel selectively kills tumor cells in vivo. *Cancer Cell*. 31, 516-531 (2017). IF: 22.844.

12. Azzolini, M.*, **Mattarei, A.***, La Spina, M., Fanin, M., Chiodarelli, G., Romio, M., Paradisi, C., Biasutto, L. New natural amino acid-bearing prodrugs boost pterostilbene's oral pharmacokinetic and distribution profile. *European Journal of Pharmaceutics and Biopharmaceutics*. 115, 149-158 (2017). IF: 4.491.

13. Tehran, D., Pirazzini, M., Leka, O., **Mattarei, A.**, Lista, F., Binz, T., Rossetto, O., Montecucco, C. Hsp90 is involved in the entry of clostridial neurotoxins into the cytosol of nerve terminals. *Cellular Microbiology*. 19(2), e12647 (2017). IF: 4.41.

14. Schnell, L., Mittler, A., **Mattarei, A.**, Tehran, D., Montecucco, C., Barth, H. Semicarbazone EGA inhibits uptake of diphtheria toxin into human cells and protects cell article from intoxication. *Toxins*. 8(7), 221 (2016). IF: 3.03.

15. Schnell, L., Mittler, A.K., Sadi, M., Popoff, M.R., Schwan, C., Aktories, K., **Mattarei, A.**, Azarnia Tehran, D., Montecucco, C., Barth, H. EGA protects mammalian cells from *Clostridium difficile*

CDT, *Clostridium perfringens* Iota toxin and *Clostridium botulinum* C2 toxin. *Toxins*. 8(4), 101 (2016). IF: 3.03.

16. Azarnia Tehran, D., Zanetti, G., Leka, O., Caccin, P., Lista, F., Binz, T., Shone, C.C., Rossetto, O., Montecucco, C., Paradisi, C., **Mattarei, A.**[#], Pirazzini, M.[#] A novel inhibitor prevents the peripheral neuroparalysis of botulinum neurotoxins. *Scientific Reports.* 5, 17513 (2015). IF: 5.228.
17. **Mattarei, A.**[*,#], Azzolini, M.*, La Spina, M., Zoratti, M., Paradisi, C., Biasutto, L. Amino acid carbamates as prodrugs of resveratrol. *Scientific Reports.* 5, 15216 (2015). IF: 5.228.
18. Azzolini, M.*, **Mattarei, A.***, La Spina, M., Marotta, E., Zoratti, M., Cristina, P., Biasutto, L. Synthesis and evaluation as prodrugs of hydrophilic carbamate ester analogs of resveratrol. *Molecular Pharmaceutics*. 12(9), 2441-3454 (2015). IF: 4.342.
19. **Mattarei, A.**[*,#], Azzolini, M.[*], Zoratti, M., Biasutto, L., Paradisi, C. N-Monosubstituted methoxy-oligo(ethylene glicol) carbamate ester prodrugs of resveratrol. *Molecules*. 20(9), 16085-16102 (2015). IF: 2.465.
20. Biasutto, L., **Mattarei, A.**, Paradisi, C. Synthesis and testing of novel isomeric mitochondriotropic derivatives of resveratrol and quercetin. *Methods in Molecular Biology*, **Volume** "Mitochondrial Medicine: Methods and Protocols". 1265:161-179 (2015).
21. **Mattarei, A.**, Biasutto, L., Romio, M., Zoratti, M., Paradisi, C. Synthesis of Resveratrol Sulfates: Turning a nightmare into a dream. *Tetrahedron*. 71(20), 3100-3106 (2015). IF: 2.645.
22. **Mattarei, A.**, Carraro, M., Azzolini, M., Paradisi, C., Zoratti, M., Biasutto, L. New Water-Soluble Carbamate Ester Derivatives of Resveratrol. *Molecules*, 19(10), 15900-17 (2014). IF: 2.416.
23. Azzolini, M., La Spina, M., **Mattarei, A.**, Paradisi, C., Zoratti, M., Biasutto, L. Pharmacokinetics of Pterostilbene in the Rat. A Map of Distribution in Major Organs. *Molecular Nutrition & Food Research*. 58(11), 2122-32 (2014). IF: 4.603.
24. Biasutto, L., **Mattarei, A.**, Sassi, N., Azzolini, M., Romio, M., Paradisi, C., Zoratti, M. Improving the efficacy of plant polyphenols. *Anticancer Agents in Medicinal Chemistry*. 14(10), 1332-1342 (2014). IF: 2.469.
25. Sassi, N., **Mattarei, A.**, Azzolini, M., Szabò, I., Paradisi, C., Zoratti, M., Biasutto, L. Cytotoxicity of mitochondria-targeted resveratrol derivatives: interactions with respiratory chain complexes and ATP synthase. *Biochimica et Biophysica Acta*. 1837(10), 1781-1789 (2014). IF: 5.353.

26. Sassi, N., **Mattarei, A.**, Azzolini, M., Bernardi, P., Szabò. I., Paradisi, C., Zoratti, M., Biasutto, L. Mitochondria-targeted resveratrol derivatives act as cytotoxic pro-oxidants. *Current Pharmacological Design*. 20, 172-179 (2014). IF: 3.452.

27. **Mattarei, A.***, Azzolini, M.*, Carraro, M., Sassi, N., Zoratti, M., Paradisi, C., Biasutto, L. Acetal Derivatives as Prodrugs of Resveratrol. *Molecular Pharmaceutics*. 10, 2781-2792 (2013). IF: 4.787.

28. Durante, M., Sgaragli, G., Biasutto, L., **Mattarei, A.**, Fusi, F. Quercetin Mitochondriotropic Derivatives Antagonize Nitrate Tolerance and Endothelial Dysfunction of Isolated Rat Aorta Rings. *Planta Medica*. 79, 465-467 (2013). IF: 2.339.

29. Biasutto, L., **Mattarei, A.**, Zoratti, M. Resveratrol and Health: The Starting Point. *ChemBioChem*. 13, 1256-1259 (2012). IF: 3.74.

30. Sassi, N., Biasutto, L., **Mattarei, A.**, Carraro, M., Giorgio, V., Citta, A., Bernardi, P., Garbisa, S., Szabò, I., Paradisi, C., Zoratti, M. Cytotoxicity of mitochondriotropic quercetin derivative: Mechanisms. *Biochimica et Biophysica Acta*. 1817, 1095–1106 (2012). IF: 4.624.

31. **Mattarei, A.**, Sassi, N., Biasutto, L., Durante, C., Sandonà, G., Marotta, E., Garbisa, S., Gennaro, A., Zoratti, M., Paradisi, C. Redox Properties and Cytotoxicity of Synthetic Isomeric Mitochondriotropic Derivatives of the Natural Polyphenol Quercetin. *European Journal of Organic Chemistry*. 28, 5577-5586 (2011). IF: 3.329.

32. Biasutto, L., Sassi, N., **Mattarei, A.**, Marotta, E., Cattelan, P., Toninello, A., Garbisa, S., Zoratti, M., Paradisi, C. Impact of mitochondriotropic quercetin derivatives on mitochondria. *Biochimica et Biophysica Acta*. 1797, 189-196 (2010). IF: 5.132.

33. **Mattarei, A.**, Biasutto, L., Rastrelli, F., Garbisa, S., Marotta, E., Zoratti, M., Paradisi, C. Regioselective *O*-derivatization of quercetin via ester intermediates. An improved synthesis of rhamnetin and development of a new mitochondriotropic derivative. *Molecules.* 15, 4722-4736 (2010). IF: 1.988.

34. Biasutto, L., Marotta, E., Bradaschia, A., Fallica, M., **Mattarei, A.**, Garbisa, S., Zoratti, M., Paradisi, C. Soluble polyphenols: Synthesis and bioavailability of 3,4',5-tri($\alpha$-D-glucose-3-O-succinyl) resveratrol. *Bioorganic & Medicinal Chemistry Letters*. 19, 6721-6724 (2009). IF: 2.65.

35. Biasutto, L., Marotta, E., **Mattarei, A.**, Beltramello, S., Caliceti, P., Salmaso, S., Bernkop-Schnurch, A., Garbisa, S., Zoratti, M., Paradisi, C. Absorption and Metabolism of Resveratrol

Carboxyesters and Methanesulfonate by Explanted Rat Intestinal Segments. *Cellular Physiology and Biochemistry*. 24, 557-566 (2009). IF: 3.563.

36. Biasutto, L.*, **Mattarei, A.***, Marotta, E., Bradaschia, A., Sassi, N., Garbisa, S., Zoratti, M., Paradisi, C. Development of mitochondrial-targeted derivatives of resveratrol. *Bioorganic & Medicinal Chemistry Letters*. 18, 5594-5597 (2008). IF: 2.531.

37. **Mattarei, A.**, Biasutto, L., Marotta, E., De Marchi, U., Sassi, N., Garbisa, S., Zoratti, M., Paradisi, C., A mitochondriotropic derivative of quercetin: a strategy to increase the effectiveness of polyphenols. *ChemBioChem*. 9, 2633-2642 (2008). IF: 3.322.

***** *First authorship shared* **-** **#** *Corresponding author*

***Patents***

**1. Mattarei, A.**, Biasutto, L., Zoratti, M., Paradisi, C., Marotta, E., Garbisa, S., Azzolini, M., Bradaschia, A., Carraro, M., Sassi, N. New derivatives of Resveratrol. Italian Patent N. 0001416513 issued June 19, 2015.

**2.** Carraro, M., Zoratti, M., Paradisi, C., **Mattarei, A.**, Biasutto, L. Nanocostrutti comprendenti nanoparticelle lipidiche solide rivestite da un guscio idrofilo. Italian Patent N. 0001421549 issued March 22, 2016.

**3.** Szabò, I., Paradisi, C., **Mattarei, A.**, Leanza, L., Trentin, L., Semenzato, G., Romio, M., Managò, A. Psoralen derivatives as selective tumor-killing agents. Italian Patent N.0001428283 issued April 20, 2017.

***Principal Investigator in granted calls***

**1. Supporting Talent in Research @University of Padova – STARS Grants 2017** from the University of Padova – STARTING GRANTS. Title of the project: “Development of new chemical probes for organelle-specific real-time calcium imaging”. 139.186,00 € - 2 years.

**2. Progetti di Rilevante Interesse Dipartimentale PRID 2017** from the Italian Ministry of education, universities and research (MIUR). Title of the project: "New modulators of myosin super-relaxed state to contrast obesity and associated diseases". 20.000,00 € - 2 years.

**3. Finanziamento delle Attività Base di Ricerca FFABR 2017** from the National Agency for the Evaluation of the University system and Research (ANVUR). 3.000,00 €

***Participation in granted projects***

**Excellence Project CARIPARO 2008-2009** from the Foundation Cassa di Risparmio di Padova e Rovigo (PI: Dr. Mario Zoratti). Title of the project: "Development of a pharmacology of polyphenols".

**Progetti di Rilevante Interesse Nazionale PRIN 2010** from the Italian Ministry of education, universities and research (MIUR) (PI: Prof. Paolo Bernardi – 20107Z8XBW). Title of the project: "Mitochondrial mechanisms of carcinogenesis".

**Investigator Grant AIRC IG2011** from the Italian Association for Cancer Research (PI: Prof. Ildikò Szabò – n°11814). Title of the project: "Induction of apoptosis via mitochondrial Kv1.3 potassium channel as a therapeutic perspective".

**Investigator Grant AIRC IG2014** from the Italian Association for Cancer Research (PI: Prof. Ildikò Szabò – n°15544). Title of the project: "New anti-cancer agents targeting a mitochondrial potassium channel: *in vivo* studies".

**Investigator Grant AIRC IG2017** from the Italian Association for Cancer Research (PI: Prof. Ildikò Szabò). Title of the project: "Pharmacological targeting of mitochondrial ion channels to selectively induce apoptosis in cancer cells: *in vivo* studies".

**Investigator Grant AIRC IG2017** from the Italian Association for Cancer Research (PI: Prof. Luca Scorrano). Title of the project: " Enhancing cancer cell death and reducing cancer angiogenesis by Opa1 inhibition".

**Progetti di Rilevante Interesse Nazionale PRIN 2017** from the Italian Ministry of education, universities and research (MIUR) (PI: Prof. Patrizia Diana – 2017E84AA4). Title of the project: "Development of Natural and Synthetic Compounds as Kinases Inhibitors Targeting Cancer Cells and Cancer Stem Cells".

**Supporting Talent in Research @University of Padova – STARS Grants 2017** from the University of Padova – STARTING GRANTS. Title of the project: "A novel strategy to speed up fragment-based drug discovery combining Supervised Molecular Dynamics with NMR data".

**Research contracts with companies (Scientific Leader)**

**1. Research contract with MGGM LLC (Company)**. Title: "Design and Synthesis of Novel NMDA receptor modulators". 34.000,00 € - 1 year (from December 17, 2018 – to December 16, 2019)

**2. Research contract with MGGM LLC (Company)**. Title: "Design and synthesis of novel serotonergic agents able to down-regulate NMDA receptor activity. A dual drug approach". 35.000,00 € - 1 year (from May 21, 2019 – to May 20, 2020)

**Occasional research collaboration with companies**

**1. Research collaboration with NOOS srl (Company).** Title: "Reversible protection of resveratrol by carbamoyl-linked groups to increase stability and versatility for formulations and in applications". (From October 10, 2012 to June 19, 2015)

**2. Research collaboration with NOOS srl (Company).** Title: "Encapsulated solid lipid nanoparticles for drugs, parapharmaceuticals and food supplements delivery and method of making the same". (From October 10, 2012 to July 25, 2014)

***Awards***

**Best poster Award** at the EMBO Workshop Mitochondria, Apoptosis and Cancer: Targeting Mitochondria to defeat Cancer. Prague, Czech Republic, October 1-3, 2009. Poster: P35 Title: "Oxidation potentials and radical-scavenging properties of novel mitochondrion-targeted quercetin derivatives", Abstracts p. 88.

**Best poster Award** at the 6$^{th}$ International Conference on Polyphenols and Health. Buenos Aires, Argentina, October 16-20, 2013. Poster: P2-1-07 Title: "Improving the properties of plant polyphenols", Abstracts p. 53.

**"Giovani Studiosi" Award** from the University of Padova for the project "Synthesis of Lipid-Mimetic Derivatives of Active Natural Compounds for a Novel Approach to Treat Obesity and Associated Diseases". DR 3210/2013 Prot.N.104444 del 10/12/2013.

**Best poster Award** at the European Workshop in Drug Synthesis (EWDSy). Certosa di Pontignano, Italy, May 20–24, 2018. Title: "Development of a mitochondria targeted fluorescent probe for real-time calcium imaging".

***Lecturer in university courses***

**Academic year 2018-2019 (84 hours).** Lecturer of the course *Drug Analysis 2 (12 CFU)* for the Degree in Pharmacy, University of Padova.

**Academic years 2016-2017 (45 hours) and 2017-2018 (60 hours).** Lecturer of the course *Drug Analysis 1 (12 CFU)* for the Degree in Pharmacy, University of Padova.

**Academic year 2016-2017 (20 hours) and 2017-2018 (20 hours).** Lecturer of the course *Drug Analysis 2 (12 CFU)* during the Summer Courses at the Free University of Bozen (Brixen) for the Degree in Pharmacy, University of Padova.

***Teaching assistant and tutoring in university courses***

**Academic years 2012-2013, 2013-2014, 2014-2015, 2015-2016.** Teaching assistant for the laboratory module of the course *Applied Organic Chemistry* for the Bachelor Degree in Industrial Chemistry at the Department of Chemical Sciences, University of Padova.

**Academic year 2011-2012.** Teaching assistant for the laboratory module of the course *Preparation and Characterization of Materials II* for the Master Degree in Material Science at the Department of Chemical Sciences, University of Padova.

**Academic years 2008-2009, 2009-2010 and 2010-2011.** Teaching assistant for the laboratory module of the course *Organic Chemistry I* for the Bachelor Degrees in Chemistry and in Industrial Chemistry at the Department of Chemical Sciences, University of Padova.

**Academic year 2008-2009.** Tutor for the course *General Chemistry* for the Bachelor Degrees in Chemistry and in Industrial Chemistry at the Department of Chemical Sciences, University of Padova.

**Supervision of thesis work**

Since 2008 Dr. Mattarei has been strongly involved (as supervisor, co-supervisor or responsible of the research activity) in planning the work, training and supervising many students (more than 30) doing their internship for the obtainment of bachelor, master and Ph.D. degrees.

***Major collaborations with groups at the University of Padova***

- **Prof. Cristina Paradisi**, Organic Chemistry, Department of Chemical Sciences, University of Padova. (Italy)
- **Dr. Mario Zoratti**, Molecular Biology, Neuroscience Institute, National Research Council. (Italy)
- **Dr. Lucia Biasutto,** Molecular Biology, Neuroscience Institute, National Research Council. (Italy)
- **Prof. Ildiko Szabò**, Biochemistry, Department of Biology, Univesity of Padova. (Italy)
- **Prof. Cesare Montecucco**, Toxicology, Department of Biomedical Sciences, University of Padova. (Italy)
- **Prof. Tullio Pozzan**, Cell Biology, Department of Biomedical Sciences, University of Padova. (Italy)
- **Dr. Diana Pendin,** Cell Biology, Neuroscience Institute, National Research Council. (Italy)
- **Prof. Luca Scorrano**, Biochemistry, Department of Biology, University of Padova. (Italy)
- **Prof. Diego De Stefani**, Cell Biology, Department of Biomedical Sciences, University of Padova. (Italy)
- **Prof. Sara Richter,** Microbiology and Clinical Microbiology, Department of Molecular Medicine, University of Padova. (Italy)

***Major collaborations with groups at foreign Universities***

- **Prof. Erich Gulbins**, Biochemistry, Department of Molecular Biology, Universitats Klinikum Essen und Medizinische Fakultat. (Germany)
- **Dr. Edmondo Maria Benetti,** Material Science, Department of Materials, Eidgenossische Technische Hochschule, Zurich. (Switzerland)
- **Prof. Karin Nowikovsky,** Cell Biology, Medical University of Vienna. (Austria)
- **Dr. Sabine Amslinger,** Institute of Organic Chemistry of the University of Regensburg. (Germany)

***Association with research Institutions***

- **May 2016 – March 2017**: Associated with the Institute of Biomolecular Chemistry of the National Research Council for the participation to the Project: "Molecular recognition and biological consequences – Padova"

***Memberships of Scientific Societies***

- **2017 – Present:** Member of the Italian Society of Chemistry (SCI, Societa Chimica Italiana) – Medicinal Chemistry Division.
- **2010 – 2014:** Member of the Italian Society of Chemistry (SCI, Societa Chimica Italiana) – Organic Chemistry Division.

***Contribution to Conferences***

1. **A. Mattarei**, R. Norante, A. De Nadai, C. Paradisi, T. Pozzan, D. Pendin: "Development of a mitochondria targeted fluorescent probe for real-time calcium imaging". European Workshop in Drug Synthesis (EWDSy), Certosa di Pontignano (Italy), May 20th – 24th 2018, P95 Abstracts. (poster presentation)
2. A. Rossa, R. Norante, A. De Nadai, C. Paradisi, D. Pendin, T. Pozzan, **A. Mattarei**: "Design and synthesis of mitochondria-targeted small molecules to report on or to affect mitochondrial function and dysfunction". PhD-forum, University of Padova, Padova (Italy), June 18th 2018. (poster presentation)
3. A. Rossa, R. Norante, A. De Nadai, C. Paradisi, D. Pendin, T. Pozzan, **A. Mattarei**: "Design and synthesis of mitochondria-targeted small molecules to report on or to affect mitochondrial function and dysfunction". Organic meeting, University of Padova, Padova (Italy), July 16th 2018. (oral communication: A. Rossa)
4. A. De Nadai, D. Pendin, T. Pozzan, C. Paradisi, **A. Mattarei**: "Synthesis and characterization of a new fluorescent mitochondria-targeted sensor for ratiometric imaging of Calcium in live cells". European Winter School on Physical Organic Chemistry (E-WISPOC 19-21), Bressanone (Italy),

January 27th - February 1st 2019. (poster presentation)

5. **A. Mattarei**, V. Bombardelli, M. Azzolini, L. Biasutto, M. Zoratti, C. Paradisi: "Lipid mimetic prodrugs of natural phenolic compounds for a new treatment of obesity and associated diseases" 16th Tetrahedron Symposium: Challenges in Bioorganic & Organic Chemistry, Berlin, Germany, June 16 – 19, 2015 P3.125. (poster presentation)
6. **A. Mattarei**, M. Zoratti, L. Biasutto, E. Marotta, M. Romio, C. Paradisi: "Development and synthesis of mitochondriotropic organic compounds for therapy and imaging" The Second China-Italy Bilateral Symposium on Organic Chemistry, Padova, Italy, April 19-24 2015. (oral communication: **A. Mattarei**)
7. D. A. Tehran, **A. Mattarei**, M. Pirazzini, G. Zanetti, O. Leka, C. Paradisi, C. C. Shone, T. Binz, O. Rossetto, C. Montecucco: "EGA prevents the neuronal toxicity of BoNT/A and BoNT/B" Basic Science and Clinical Aspects of Botulinum and Other Neurotoxins, TOXINS 2015, Lisbon, Portugal, January 14 – 17, 2015. (poster)
8. M. Barattin, **A. Mattarei**, S. Bersani, C. Paradisi, S. Salmaso, P. Caliceti: "Liposomes with pH-controlled cell penetrating activity for site-specific anticancer drug delivery" Nanomedicine: pharmacokinetic challenges, targeting and clinical outcomes, Firenze, Italy, November 6 – 8, 2014. P3 Abstracts, p. 7. (poster. The poster was awarded a prize)
9. **A. Mattarei**, V. Bombardelli, L. Biasutto, M. Zoratti, C. Paradisi: "Synthesis of lipid mimetic derivatives of active natural compounds. An innovative tool for anti-obesity therapy" Recent Advances in Synthesis and Chemical Biology XIII, Dublin, Ireland, December 12, 2014. Abstracts, P48. (poster)
10. **A. Mattarei**, M. Azzolini, M. La Spina, C. Paradisi, M. Zoratti, L. Biasutto: "Amino acid carbamate ester prodrugs of pterostilbene. Synthesis, evaluation and map of distribution in major organs of rat compared with pterostilbene" 7th International Conference and Exhibition on Nutraceuticals and Functional Foods, Istanbul, Turkey, October 14-17, 2014. P318 Abstracts, p. 337. (poster)
11. M. Azzolini, M. La Spina, **A. Mattarei**, C. Paradisi, L. Biasutto, M. Zoratti: "Sugar-decorated prodrugs for intestinal delivery of resveratrol" 7th International Conference and Exhibition on Nutraceuticals and Functional Foods, Istanbul, Turkey, October 14-17, 2014. P325 Abstracts, p. 340. (poster)

12. **A. Mattarei**, M. Azzolini, L. Biasutto, M. Romio, M. Zoratti, C. Paradisi: "Improving the properties of plant polyphenols". 6th International Conference on Polyphenols and Health. Buenos Aires, Argentina, October 16-20, 2013. P2-1-07, Abstracts, p. 53. (poster. The poster was selected as one of the 15 best presented at the congress)

13. **A. Mattarei**, M. Azzolini, L. Biasutto, M. Romio, C. Paradisi, M. Zoratti. Synthesis and evaluation of new derivatives of natural polyphenols to improve oral bioavailability. Annual meeting of the CNR Institute of Neuroscience, Cagliari, Italy, Sept. 18-20, 2013. P70, Abstracts, p. 108. (poster)

14. N. Sassi, L. Biasutto, **A. Mattarei**, M. Azzolini, M. Romio, C. Paradisi, M. Zoratti. Cytotoxicity of mitochondriotropic quercetin and resveratrol derivatives: mechanisms. Annual meeting of the CNR Institute of Neuroscience, Cagliari, Italy, Sept. 18-20, 2013. P77, Abstracts, p. 115. (poster)

15. L. Biasutto, **A. Mattarei**, M. Azzolini, N. Sassi, M. Romio, C. Paradisi, M. Zoratti: "Acetal and carbamoyl derivatives as prodrugs of resveratrol". Annual meeting of the CNR Institute of Neuroscience, Cagliari, Italy, Sept. 18-20, 2013. P56, Abstracts, p. 94. (poster)

16. L. Biasutto, N. Sassi, **A. Mattarei**, M. Azzolini, M. Romio, C. Paradisi, M. Zoratti: "Cytotoxicity of mitochondriotropic quercetin and resveratrol derivatives". International PSE Symposium on Natural Products in Cancer Therapy, Naples, June 25-28, 2013. Abstracts, O19. (oral communication: L. Biasutto).

17. **A. Mattarei**, M. Azzolini, L. Biasutto, M. Romio, M. Zoratti, C. Paradisi: "Synthesis and Characterization of New Derivatives of Natural Bioactive Polyphenols to Improve Oral Bioavailability". XXXV Convegno della Divisione di Chimica Organica della Società Chimica Italiana, Sassari, Italy, Sept. 9-13, 2013 (oral communication: **A. Mattarei**).

18. M. Romio, **A. Mattarei**, M. Azzolini, L. Biasutto, M. Zoratti, C. Paradisi. "Synthesis of new derivatives to improve the bioactivity of natural polyphenols". XXXV Convegno della Divisione di Chimica Organica della Società Chimica Italiana, Sassari, Italy, Sept. 9-13, 2013 (oral communication: M. Romio).

19. N. Sassi, **A. Mattarei**, M. Azzolini, C. Paradisi, M. Zoratti, L. Biasutto: " Mitochondria-targeted Resveratrol derivatives act as cytotoxic pro-oxidants". Annual Meeting of the Italian Group of Biomembranes and Bioenergetics (GIBB). Padova, 20-22 June 2013 Abstracts, Page 55. (oral communication: N. Sassi)

20. L. Biasutto, N. Sassi, **A. Mattarei**, M. Azzolini, P. Bernardi, I. Szabo, C. Paradisi, M. Zoratti: ”Cyototoxicity of mitochondria-targeted Resveratrol derivatives: interactions with respiratory chain complexes and ATP synthase”. Annual Meeting of the Italian Group of Biomembranes and Bioenergetics (GIBB). Padova, 20-22 June 2013 Abstracts, Page 56. (oral communication: L. Biasutto)

21. L. Biasutto, N. Sassi, **A. Mattarei**, M. Azzolini, M. Romio, C. Paradisi, M. Zoratti: "Improving the properties of plant polyphenols". 5e Symposium International "Nutrition, Biologie de L'Oxygène et Médecine", Paris, 5-7 Juin 2013. P6, Abstracts, Page 40. (poster)

22. L. Biasutto, **A. Mattarei**, M. Azzolini, A. Bradaschia, M. Carraro, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: “Acetal prodrugs of resveratrol”. Resveratrol 2012 – 2nd international conference of resveratrol and health, Leicester, UK, Dec. 5-7, 2012. P6, Abstracts, p. 61. (poster)

23. M. Azzolini, **A. Mattarei**, L. Biasutto, A. Bradaschia, M. Carraro, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: “Prodrugs of Polyphenols”. Copenhagen/Roskilde, Denmark, Workshop and PhD course on Resveratrol and anti-inflammatory compounds in human health, Aug.27-29, 2012. (oral communication: M. Azzolini)

24. M. Carraro, **A. Mattarei**, M. Azzolini, L. Biasutto, M. Zoratti, C. Paradisi: Nanocapsules with core-shell structure for delivery of polyphenols. XXXIV National Meeting of the Organic Chemistry Division of the Italian Chemical Society. Pavia, Sept. 10-14, 2012. Abstract P52. (poster)

25. **A. Mattarei**, A. Bradaschia, L. Biasutto, M. Azzolini, M. Carraro, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: “Synthesis of acetal derivatives of resveratrol: a method to improve the oral bioavailability of polyphenols”. XXXIV National Meeting of the Organic Chemistry Division of the Italian Chemical Society. Pavia, Sept. 10-14, 2012. Poster P53. (poster)

26. **A. Mattarei**, L. Biasutto, A. Bradaschia, M. Azzolini, M. Carraro, E. G. Rodríguez Velo, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: “Acetal prodrugs of polyphenols”. Annual meeting of the CNR Institute of Neuroscience. Bressanone/Brixen, Feb. 29-March 3, 2012. (poster)

27. N. Sassi, L. Biasutto, **A. Mattarei**, M. Carraro, V. Giorgio, P. Bernardi, S. Garbisa, C. Paradisi, M. Zoratti: “Cytotoxicity of a mitochondriotropic quercetin derivative: mechanisms”. Annual meeting of the CNR Institute of Neuroscience. Bressanone/Brixen, Feb. 29-March 3, 2012. (poster)

28. L. Biasutto, N. Sassi, **A. Mattarei**, I. Szabò, C. Paradisi, M. Zoratti: "Mitochondriotropic resveratrol derivatives: cytotoxicity mechanisms". Berlin, Germany, Nov. 8-9, 2012. Abstracts, p. 51. (poster)

29. **A. Mattarei**, A. Bradaschia, L. Biasutto, E. G. Rodrìguez Velo, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: Acetal Prodrugs of polyphenols. 5th International Conference on Polyphenols and Health. Sitges, Barcelona, Spain, October 17-20, 2011. (poster)

30. **A. Mattarei**, N. Sassi, L. Biasutto, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti, Mitochondria-targeted quercetin and resveratrol derivatives. 5th International Conference on Polyphenols and Health, Sitges/Barcelona, Spain, Oct. 17-20, 2011. P553, Abstracts, p. 255. (poster)

31. N. Sassi, L. Biasutto, **A. Mattarei**, E. Marotta, V. Giorgio, C. Paradisi, M. Zoratti, In vitro toxicology of mitochondriotropic quercetin derivatives. Annual meeting of the CNR Institute of Neuroscience, Cavalese (TN), Jan. 19-22, 2011. (poster)

32. N. Sassi, L. Biasutto, **A. Mattarei**, S. Garbisa, C. Paradisi, M. Zoratti: The prooxidant behavior of mitochondriotropic quercetins accounts for their cytotoxicity. National congress "Annual meeting of the Italian Group of Biomembranes and Bioenergetics". Rome, Italy, May 24-27, 2011. Abstracts, page 36. (oral communication: N. Sassi)

33. **A. Mattarei**, N. Sassi, C. Durante, G. Sandonà, E. Marotta, S. Garbisa, A. Gennaro, C. Paradisi, M. Zoratti, L. Biasutto: "Redox properties and cytotoxicity of synthetic isomeric mitochondriotropic derivatives of the natural polyphenol quercetin". 2nd world congress on Targeting Mitochondria, Berlin, Germany, Oct. 20-21, 2011. Abstracts, p. 48. (poster)

34. N. Sassi, L. Biasutto, **A. Mattarei**, M. Carraro, S. Garbisa, C. Paradisi, M. Zoratti: Cytotoxicity of a mitochondriotropic quercetin derivative. 2nd world congress on Targeting Mitochondria, Berlin, Germany, Oct. 20-21, 2011. Abstracts, p. 73. (poster)

35. **A. Mattarei**, L. Biasutto, N. Sassi, E. Marotta, C. Durante, A. Gennaro, M. Zoratti, C. Paradisi: Redox behavior and biological action of novel mitochondrion-targeted quercetin and resveratrol derivatives. National congress "Convegno 2010 della Divisione di Chimica dei Sistemi Biologici della SCI". S. Vito di Cadore (BL), Italy, Sept. 9-11, 2010. (poster)

36. **A. Mattarei**, R. Ratan, A. P. Kozikowski: Synthesis and characterization of novel daidzein derivatives. A Dual Drug Approach to improve the activity toward Arginase 1 expression.

National congress “Convegno 2010 della Divisione di Chimica dei Sistemi Biologici della SCI”. S. Vito di Cadore (BL), Italy, Sept. 9-11, 2010. (poster)

37. N. Sassi, **A. Mattarei**, L. Biasutto, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: “Mitochondriotropic resveratrol derivatives: radical scavenging and cytotoxicity”. Resveratrol 2010 – 1st international conference of resveratrol and health, Elsinore, Denmark, Sept. 13-15, 2010. (poster)
38. N. Sassi, L. Biasutto, **A. Mattarei**, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: Mitochondriotropic quercetin and resveratrol derivatives. International congress “WineHealth 2010”. Rosazzo (UD), Italy, October 3-6, 2010. Abstracts, page 58. (oral communication: N. Sassi)
39. L. Biasutto, **A. Mattarei**, A. Bradaschia, S. Beltramello, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: Prodrugs of polyphenols. International congress “WineHealth 2010”. Rosazzo (UD), Italy, October 3-6, 2010. Abstracts, page 48. (oral communication: L. Biasutto)
40. L. Biasutto, **A. Mattarei**, A. Bradaschia, S. Beltramello, M. Carraro, F. Bello, E. Marotta, S. Garbisa, C. Paradisi, M. Zoratti: *Prodrugs of resveratrol: carbamates*. Resveratrol 2010 – 1st international conference of resveratrol and health, Elsinore, Denmark, Sept. 13-15, 2010. (poster)
41. N. Sassi, L. Biasutto, **A. Mattarei**, S. Garbisa, C. Paradisi, M. Zoratti: “The pro-oxidant behaviour of mitochondriotropic quercetins accounts for their cytotoxicity”. Annual Meeting of the Italian Group of Biomembranes and Bioenergetics, Rome, Italy, 24-27 May 2011. Abstracts, p.36. (poster)
42. **A. Mattarei**, L. Biasutto, N. Sassi, E. Marotta, C. Durante, A. Gennaro, M. Carraro, M. Zoratti, C. Paradisi: “Redox properties of novel mitochondrion-targeted quercetin and resveratrol derivatives”. 8th Spanish-Italian Symposium on Organic Chemistry (SISOC-VIII), Padova, Italy, July 3-6, 2010. (poster)
43. N. Sassi, L. Biasutto, **A. Mattarei**, E. Marotta, C. Paradisi, M. Zoratti: “*In vitro* toxicology of mitochondriotropic polyphenols”. Annual Meeting of the Italian Group of Biomembranes and Bioenergetics, Bertinoro (FC), Italy, June 10-12, 2010. Abstracts, p.26. (poster)
44. L. Biasutto, **A. Mattarei**, E. Marotta, N. Sassi, S. Garbisa, C. Paradisi, M. Zoratti: Mitochondriotropic polyphenols: effects on mitochondria. International congress “4th

International Conference on Polyphenols and Health". Harrogate, UK, Dec. 7-11, 2009. Abstracts, P392, page 382. (poster)

45. L. Biasutto, **A. Mattarei**, N. Sassi, E. Marotta, U. De Marchi, S. Garbisa, C. Paradisi, M. Zoratti: "Targeting Mitochondria by new derivatives of polyphenols: An exciting challenge" 5th International Conference on Polyphenols Applications: Bridging Bioefficacy to Innovations & Applications, Malta, Oct. 29-30, 2009. Abstracts, p. 24. (oral communication: L. Biasutto)
46. L. Biasutto, **A. Mattarei**, E. Marotta, N. Sassi, S. Garbisa, C. Paradisi, M. Zoratti: "Mitochondriotropic polyphenols: effects on mitochondria". 4th International Conference on Polyphenols and Health, Harrogate, UK, Dec. 7-11, 2009. Abstracts, P392, p. 382. (poster. The poster was selected as one of the 8 best of the congress).
47. L. Biasutto, M. Zoratti, **A. Mattarei**, A. Bradaschia, S. Beltramello, N. Sassi, S. Garbisa: Developing prodrugs of polyphenols. International congress "4th International Conference on Polyphenols and Health". Harrogate, UK, Dec. 7-11, 2009. Abstracts, P161, page 253. (poster)
48. **A. Mattarei**, L. Biasutto, E. Marotta, S. Garbisa, M. Zoratti, G. Sandona', C. Paradisi, A. Gennaro, C. Durante: Novel mitochondrially targeted quercetin derivatives: synthesis, oxidation potential, radical-scavenging properties and cytotoxicity. International congress "EMBO Workshop Mitochondria, Apoptosis and Cancer: Targeting Mitochondria to defeat Cancer". Prague, Czech Republic, Oct. 1-3, 2009. P35 Abstracts, p. 88. (poster. The poster was awarded a prize)
49. M. Zoratti, L. Biasutto, **A. Mattarei**, S. Beltramello, A. Bradaschia, N. Sassi, E. Marotta, S. Garbisa, C. Paradisi: Mitochondrially targeted polyphenols: antioxidants or chemotherapeutic drugs? International congress "EMBO Workshop Mitochondria, Apoptosis and Cancer: Targeting Mitochondria to defeat Cancer" Prague, Czech Republic, Oct. 1-3, 2009. ST9 Abstracts, p.46. (oral communication: M. Zoratti)
50. L. Biasutto, **A. Mattarei**, U. De Marchi, A. Toninello, S. Garbisa, M. Zoratti: "Polyphenols and mitochondria: a complex interaction". Annual Meeting of the Italian Group of Biomembranes and Bioenergetics, Udine, June 14-16, 2009. Abstracts, p.38. (poster)
51. M. Zoratti, L. Biasutto, E. Marotta, **A. Mattarei**, M. Fallica, U. De Marchi, A. Bradaschia, S. Garbisa, C. Paradisi: Bioavailability-enhancing prodrugs of polyphenols. International congress "COST Action 926 Conference – Benefits and risks of bioactive plant compounds" Krakow,

Poland, March 27-28, 2008. Acta Biochim. Pol. 55 (1, Suppl), 26 (O2.3). (oral communication: M. Zoratti)

52. L. Biasutto, **A. Mattarei**, E. Marotta, U. De Marchi, A. Bradaschia, S. Garbisa, C. Paradisi, M. Zoratti: "Mitochondriotropic polyphenol derivates". International congress "COST Action 926 Conference – Benefits and risks of bioactive plant compounds" Krakow, Poland, March 27-28, 2008. Acta Biochim. Pol. 55 (1, Suppl), 12 (P1.18). (poster)

53. L. Biasutto, **A. Mattarei**, E. Marotta, U. De Marchi, A. Bradaschia, S. Garbisa, C. Paradisi, M. Zoratti: "Mitochondriotropic polyphenol derivates". International congress "International Symposium on Mitochondrial Physiology and Pathology IUBMB Symposium S1/2008", Bari, Italy, June 22-26, 2008. (poster)

54. L. Biasutto, A. Bradaschia, **A. Mattarei**, E. Marotta, S. Garbisa, M. Zoratti, C. Paradisi: "The fate of polyphenols and their mitochondriotropic derivatives in blood - accumulation by mitochondria slow metabolic conjugation". International congress "International PSE Symposium on Natural Products in Cancer Therapy" Napoli, Italy, September 23-26, 2008. (poster)

55. **A. Mattarei**, L. Biasutto, E. Marotta, A. Bradaschia, U. De Marchi, N. Sassi, S. Garbisa, C. Paradisi, M. Zoratti: Mitochondria-targeted polyphenol derivatives. International congress "International PSE Symposium on Natural Products in Cancer Therapy" Napoli, Italy, September 23-26, 2008. (oral communication: M. Zoratti)

56. **A. Mattarei**, L. Biasutto, E. Marotta, A. Gennaro, C. Durante, M. Zoratti, C. Paradisi: Oxidation potentials and radical-scavenging properties of novel mitochondrion-targeted quercetin derivatives. International congress "International PSE Symposium on Natural Products in Cancer Therapy" Napoli, Italy, September 23-26, 2008. (poster)

57. L. Biasutto, **A. Mattarei**, E.Marotta, U. De Marchi, A. Bradaschia, S. Garbisa, C. Paradisi, M. Zoratti: "Mitochondriotropic polyphenol derivatives". Annual Meeting of the Italian Group of Biomembranes and Bioenergetics, Bari, June 20-21, 2008. (poster).

58. **A. Mattarei**, L. Biasutto, E. Marotta, U. De Marchi, S. Garbisa, M. Zoratti, C. Paradisi: "Synthesis and characterization of mitochondriotropic derivatives of quercetin". European school "E-WISPOC European-Winter School in Physical Organic Chemistry", Bressanone, Italy, January 27-31, 2008. (oral communication: **A. Mattarei**)

***Dissemination activities***

Dr. Mattarei has taken part in numerous dissemination activities organized by the Department of Pharmaceutical and Pharmacological Sciences and the Department of Chemical Sciences of the University of Padova, contributing to the planning stage and to the realization of the specific events (demonstrations, lectures, dedicated laboratories, supervision of stages in research laboratories). Important yearly dissemination events, to which Dr. Mattarei has contributed, are "La notte dei Ricercatori" (2018, 2019) and "Non è Magia è Chimica" (2009, 2010, 2011) which are dedicated to the public, to children and youngsters in particular. Another important program in which Dr. Mattarei has been and continues to be involved is the national project "Progetto Lauree Scientifiche" (formerly "Piano Lauree Scientifiche") of the Italian Ministero dell'Istruzione, dell'Università e della Ricerca. Within the framework of this nationwide program, which aims at stimulating the interest of 4$^{th}$ year high school students in scientific disciplines. Dr. Mattarei has been engaged in many activities over the years 2008 to present. These include demonstrations, lectures and tutoring of high school students for short research stages during their school summer holidays.

**Padova, May 28$^{th}$ 2020**

**Andrea Mattarei**