

***Curriculum vitae* of Marialaura Amadio**

Birth date 10/22/1976

A. Education and training

2000: Degree in Pharmacy, Pavia University (Italy).

2004: 4-year specialization in Applied Pharmacology, Pavia University.

2007: 3-year international Doctorate in Biomolecular Sciences and Biotechnologies – Centre of Excellence for Applied Biology, IUSS, Pavia.

B. Positions, professional experiences, honors

- Positions

1/2001-9/2001: Employed as a pharmacist at the Farmacia dott. Grossi, Orio Litta (Lodi).

9/2001-10/2007: Fellowships at the Department of Drug Sciences, Pharmacology section, at Pavia University.

12/2007-12/2008: Postdoc at the Department of Drug Sciences, Pharmacology section, at the Pavia University.

1/2009-1/2020: Assistant Professor at the Dept. of Drug Sciences, Pharmacology Section, Pavia University.

2/2020-present: Associate Professor at the Dept. of Drug Sciences, Pharmacology Section, Pavia University.

- Stages in national and international research centers:

- Blanchette Rockefeller Neurosciences Institute, Rockville (USA) (2 months, 2002);
- Inst. of Human Virology, Univ. of Maryland, Baltimore (USA) (5 months, 2002-2003);
- Laboratory of Metabolomics and Systems Biology, European Centre of Magnetic Resonance, Univ. of Florence, Italy (4 months, 2004-2005);
- Neuroinflammation Research Center, Dept of Psychiatry, Mount Sinai School of Medicine, New York (USA) (4 months, 2005);
- Department of Ophthalmology; University of Eastern Finland, Kuopio University Hospital (1 month as Visiting Professor, 2015);
- Department of Physiology, Faculty of Medical Sciences in Katowice, Medical University of Silesia, Katowice, Poland (1 week as Visiting Professor, 2021).

- Current Academic assignments at the Pavia University (2010-present):

- “Applied Pharmacology” for the degree in Pharmacy
- “The new antitumor drugs” for the Schools of Pharmacy, Pharmaceutical Chemistry & Technology, and Biotechnologies.

2021 – present: Lecturer at the Master in Nanomedicine and technologies, University of Pavia, Italy
Since 2018, M.A. is also involved in initiatives related to Innovation of Teaching and Digital Communications.

- **Professional Memberships and Participation to Scientific Editorial Boards:**

2013 - Peer Review Committee, National Science Center, Poland
2009, 2013-2019, 2022 - Member, European Association for Vision and Eye Research
2015 - Member, European Foundation for the Study of Diabetes
2019 - Member, The Association for Research in Vision and Ophthalmology
2010, 2017 - Associate Editor, Journal of Alzheimer's Disease
2017 - Lead Guest Editor, Oxidative Medicine and Cellular Longevity
2020-2022 - Lead Guest Editor, Topic Editor, Antioxidants
2020-2023 – Member, Società Italiana di Farmacologia
2021-2023 – Member of the Editorial Board of Future Pharmacology

M.A. served as a reviewer for several journals, including Biochemical Pharmacology, International Journal of Molecular Sciences, Scientific Reports, PlosOne, Acta Ophthalmologica, European Journal of Pharmacology, Antioxidants, Frontiers in Pharmacology, Experimental Eye Research, Clinical and Experimental Ophthalmology, Cell Biology and Toxicology, Tumor Biology, Neurobiology of Aging, Biochimica et Biophysica Acta - Gene Regulatory Mechanisms, Neurochemistry International, Cytokine, Cells, Antioxidants.

- **Honors and Scientific Communications**

5/2002: Fellowship from Italian Society of Pharmacology for a 2-month stage in USA.
5/2003: Invited for oral communication for “Involvement of ELAV-like mRNA binding proteins in Alzheimer's disease” in the “VII ITINAD Annual Meeting” (Sorrento, Italy).
6/2004: “The best poster” in the “VIII ITINAD Annual Meeting” (Sorrento, Italy) with “Role of the ELAV-like proteins in the encoding phase of spatial learning and their potential involvement in memory deficits”.
2004-2007: Scholarship from “Catholic University Center” for a research entitled “ELAV-like and PKC: a novel molecular cascade in learning and memory”.
11/2007: Fellowship from the “European Social Fund” on the theme: “Role of ELAV in Alzheimer's disease: studies performed in vitro and in *post-mortem* human samples”.
10/2013: Travel grant for the oral communication entitled “ELAVL1/HuR-mediated accumulation of SQSTM1/p62 during proteasomal inhibition in human ARPE-19 cells” at the international EVER Congress in Nice (France).
10/2014: Travel grant for the oral communication entitled “Silencing HuR: a new potential pharmacological strategy to target VEGF” at the international EVER (European Association for Vision and Eye Research) Congress in Nice (France).
3/2015: First classified for the Erasmus travel grant “Mobility for teaching” at Pavia University.
6/2016: Invited for oral communication entitled “Modulating VEGF: new and old avenues, direct experience and literature survey” at the “Retina in Progress” congress in Firenze (Italy).
9/2017: Award for basic research by the Italian Ministry, program “Fondo Ricerca Nazionale” - FFABR
9/2018: Invited for oral communication at the “ELAVENICE 2018 - ELAV proteins in physiology and disease” workshop that will take place in Venezia (Italy).
9/2019: Invited for oral communication entitled “ELAV proteins and neurodegeneration: which role in Alzheimer's disease?” at the 14th International Congress of the Polish Neuroscience Society, Katowice (Poland)
9/2019: Award for basic research by the Italian Ministry, program “Fondo Ricerca Nazionale” - FFABR

7/2020: Invited for oral communication (webinar), entitled “Potential involvement and target identification of HuR/ELAVL1 in age-related ocular pathologies – Back to the origin” at the NeuroEYEscience, Bristol University - <https://www.youtube.com/watch?v=yXKaoaEKg0I&feature=youtu.be>

3/2021: Oral communication entitled “Nrf2-pathway, RPE, and stress response: in search of the biological signature and a new potential pharmacological strategy for Age-related Macular Degeneration” at the 40° national congress of Italian Society of Pharmacology.

8/2021: Invited for oral communication entitled “The role of HuR/ELAVL1 in age-related ocular pathologies – updating the puzzle” at the 2021 Polish Physiology Society Symposium, online.

10/2022: Invited for oral communication entitled “HuR/ELAVL1 pathway in cellular stress response – which role in ocular pathologies?” at the IBRO Neuron Congress, Krakow (Poland).

10/2022: Oral communications entitled “Repurposing dimethyl fumarate? *In vitro* evidence of Nrf2-pathway activation and cytoprotective effects in human retinal endothelial cells” and “Activation of Nrf2-Mediated Protective Pathways by Nature-Inspired Hybrids Improves Proteostasis in Retinal Pigment Epithelial Cells” at the EVER Congress in Valencia (Spain).

C. Research activity and projects

- Research activity

M.A. started her research in 2001 at the Dept. of Drug Sciences, Pharmacy Faculty, Pavia University; here, since 2018 she directs the laboratory of “Biology & Pharmacology of Age-related Ocular Pathologies”. The research activity is mainly focused on the biology of aging and retinal diseases, by studying neurodegeneration and neuroprotection mechanisms. Main interest is for cellular and molecular pharmacology, especially for the RNA-binding ELAV proteins in various physio-pathological contexts (Alzheimer's disease and other neurodegenerative pathologies, diabetic retinopathy, age-related macular degeneration, glaucoma) and, more recently, for the Nrf2 pathway in ocular diseases.

M.A. attended numerous under-graduated students and a few PhD students in the elaboration of their experimental thesis, training them in the practical execution of the experiments, in statistical evaluation and scientific interpretation of obtained data. She also supervised post-doc collaborators.

M.A. also performed scientific research and counselling activities for public and private companies [e.g. HEXAL Italia (2004); Consortium for Biological and Pharmacological Evaluations in Pavia (<http://www.farmacistinetwork.it/>) (2004-2006); Abiogen Pharma S.p.A. (2005); Roeder 1956 Farmaceutici S.p.A. (2007); Bausch & Lomb IOM S.p.A. (2016); scientific publication on this topic: Amadio et al. Pharmacol Res 2016; Fidia Farmaceutici S.p.A. (2021)].

- Participation to funded research projects

- Three PRIN projects funded by the Italian Ministry of Research (2004 prot. n° 2004061375_004; 2007 prot. n° SXKWSA_003; 2009-10 prot. n° BM7LJC_002) (PI: Prof. F. Drago; Responsible of Pavia Unit: Prof. A. Pascale) for the study of PKC/ELAV/VEGF pathway in diabetic retinopathy. Scientific publications on this topic: Amadio et al. Pharmacol Res 2008; Amadio et al. Biochem Pharmacol 2010; Amadio et al. Mol Vis 2012; Amadio et al. Pharmacol Res 2016.

- “Biologic and biophysical determinants of cellular response to electromagnetic fields: effects of the frequency, intensity, time of exposure, and their implications in clinics and occupational medicine”, funded by INAIL [prot. n° 4/2010; PI: Prof. G. Ricevuti] in the field “Occupational diseases and injuries” (01/09/2011- 01/09/2013). Scientific publications on this topic: Osera et al. *Tissue Eng Part A* 2011; Marchesi et al. *J Cell Physiol* 2014; Osera et al. *Bioelectromagnetics* 2015; Falone et al. *Radiat Biol* 2016.
- “Autophagy as therapy target in experimental AMD models” funded by the Academy of Finland to Prof. K. Kaarniranta, University of Kuopio (Finland) (2016-2020). Scientific publications on this topic: Marchesi et al. *OMCL* 2018; Felszeghy et al. *Redox Biol.* 2019.
- “*Eye-light on Age-related Macular Degeneration: Targeting Nrf2-pathway as a Novel Therapeutic Strategy*”. Blue Sky Research program - established investigators (Funded by the Pavia University) – project n. 1744747 (10/2017 – 10/2019). Role: Principal Investigator. Scientific publications on this topic: Catanzaro et al. 2020; Fagiani et al. 2020; Rossino et al. 2021; Koskela et al. 2022; Manai & Amadio 2022.
- “Development of the novel experimental gene therapy approach for glaucoma treatment: focus on the role of HuR protein” funded by the Academy of Poland to Prof. A. Smedowski, Medical University of Silesia, Katowice (Poland) (2018-2021). Scientific publication on this topic: manuscript in preparation.