

## Emanuela Cova - Curriculum Vitae

### Education and training

- Born in Milan, Italy, on October 27, 1967.
- **1981-1986**: High school, Classic lyceum (“liceo classico”) “Cardinal Ferrari”, Milan.
- **1986-1990**: Degree in Biological Sciences at the University of Pavia, graduation: 110/110 cum laude.
- **1992**: habilitation to the profession of biologist.
- **1994**: PhD in Physiology at the University of Pavia with a thesis on pathological mechanisms of *Helicobacter pylori* on gastric mucosa. During her PhD she acquired techniques of cell biology and physiology and collaborated at several research projects.
- **2015**: Residency in Clinical Biochemistry, University of Milan.

### Employment and research experience

- **2011-present**: Senior researcher in the Laboratory directed by Prof. Meloni of the IRCCS Policlinico S. Matteo for research projects on pulmonary diseases (Bronchiolitis Obliterans Syndrome, Malignant Pleural Mesothelioma, Interstitial Lung Disease associated to Systemic Scleroderma)
- **2003-2011**: Senior researcher in the Laboratory of Experimental Neurobiology, at the Foundation C. Mondino, Pavia for research projects on the pathogenic mechanisms in Amyotrophic Lateral Sclerosis (ALS) and other neurodegenerative diseases.
- **1999-2003**: Post-doctoral research fellow at the Institute of Human Physiology, University of Pavia as responsible of a project on intestinal transepithelial transport of water and cations.
- **1998-1999**: Consultant at the Biosearch Italia, Gerenzano, Varese, Italy, for the Report on the European laws about the toxicity tests performed on laboratory animals and in vitro cell tests.
- **1997-1998**: Post-doctoral research fellow in the Laboratory of Gastroenterology, directed by Dr. Nicholas F. LaRusso, at the Mayo Clinic and Foundation, Rochester, Minnesota, USA.
- **1995-1996**: Contract professor for the teaching of Human Physiology at the course of Rehabilitation therapists of the University of Pavia.
- **1992-1993**: Junior Researcher in the Laboratory of Molecular Oncology at the Ospedale San Raffaele, Milan, Italy.

### Selected publications

1. Di Carlo S, Rossi E, Politano G, Inghilleri S, Morbini P, Calabrese F, Benso A, Savino A, **Cova E**, Zampieri D, Meloni F. Identification of miRNAs Potentially Involved in Bronchiolitis Obliterans Syndrome: A Computational Study. *PLoS One*. 2016 Aug 26;11(8):e0161771. **I.F. 3.057**
2. Piloni D, Magni S, Oggionni T, Benazzo A, Stella G, Scudeller L, Morosini M, **Cova E**, Meloni F. Clinical utility of CD4+ function assessment (ViraCor-IBT ImmuKnow test) in lung recipients. *Transpl Immunol*. 2016 Jul;37:35-9. **I.F. 1.317**
3. **Cova E**, Colombo M, Inghilleri S, Morosini M, Miserere S, Peñaranda-Avila J, Santini B, Piloni D, Magni S, Gramatica F, Prospero D, Meloni F. Antibody-engineered nanoparticles selectively inhibit mesenchymal cells isolated from patients with chronic lung allograft dysfunction. *Nanomedicine (Lond)*. 2015 Jan;10(1):9-23. **I.F. 5.824**
4. Cereda C, Leoni E, Milani P, Mazzini G, Guareschi S, Alvisi E, Ghiroldi A, Diamanti L, Bernuzzi S, Ceroni M, **Cova E**. Altered intracellular localization of SOD1 in leukocytes from patients with sporadic amyotrophic lateral sclerosis. *PLoS One*. 2013 Oct 14;8(10):e75916. **I.F. 3.73**.
5. Guareschi S, **Cova E**, Cereda C, Ceroni M, Donetti E, Bosco D, Trotti D, Pasinelli P. An over-oxidized form of superoxide dismutase found in sporadic amyotrophic lateral sclerosis with bulbar onset shares a toxic mechanism with mutant SOD1. *Proc Natl Acad Sci U S A*. 2012 Mar 27;109(13):5074-9. **I.F. 9.681**.
6. Milani P, Gagliardi S, Bongioanni P, Grieco GS, Dezza M, Bianchi M, Cova E, Ceroni M, Cereda C. Effect of the 50 bp deletion polymorphism in the SOD1 promoter on SOD1 mRNA levels in Italian ALS patients. *J Neurol Sci*. 2012 Feb 15;313(1-2):75-8. **I.F. 2.243**.
7. Milani P, Gagliardi S, Cova E, Cereda C. SOD1 Transcriptional and Posttranscriptional Regulation and Its Potential Implications in ALS. *Neurol Res Int*. 2011;2011:458427.

8. Gagliardi S, Ogliari P, Davin A, Corato M, Cova E, Abel K, Cashman JR, Ceroni M, Cereda C. Flavin-Containing Monooxygenase mRNA Levels are Up-Regulated in ALS Brain Areas in SOD1-Mutant Mice. *Neurotox Res.* 2011 Aug;20(2):150-8. I.F. 2.439
9. Corrado L, Carlomagno Y, Falasco L, Mellone S, Godi M, Cova E, Cereda C, Testa L, Mazzini L, D'Alfonso S. A Novel Peripherin (PRPH) gene mutation identified in one amyotrophic lateral sclerosis sporadic patient. *Neurobiol Aging.* 2011 Mar;32(3):552.e1-6. I.F. 5.959.
10. Armentero MT, Sinforiani E, Ghezzi C, Bazzini E, Levandis G, Ambrosi R, Zangaglia R, Pacchetti C, Cereda C, Cova E, Basso E, Celi D, Martignoni E, Nappi G, Blandini F. Peripheral expression of key regulatory kinases in Alzheimer disease and Parkinson disease. *Neurobiol Aging.* 2011 Jan 25. [Epub ahead of print]. I.F. 5.959.
11. Cova E\*, Ghiroldi A\*, Guareschi S, Mazzini G, Gagliardi S, Davin A, Bianchi M, Ceroni M., Cereda C. G93A mutant SOD1 alters cell cycle in a cellular model of Amyotrophic Lateral Sclerosis. *Cell Signal.* 2010. I.F. 4.305. \*, questi autori hanno contribuito ugualmente alla stesura del lavoro.
12. Cova E, Bongioanni P, Cereda C, Metelli MR, Salvaneschi L, Bernuzzi S, Guareschi S, Rossi B, Ceroni M. Time course of oxidant markers and antioxidant defences in subgroups of Amyotrophic Lateral Sclerosis patients. *Neurochem Int.* 2010 Apr;56(5):687-93. I.F. 3.228
13. Bianchi M, Emanuele E, Davin A, Gagliardi S, Cova E, Meli V, Trotti R, Cereda C. Comparison of three methods for genotyping of prothrombotic polymorphisms. *Clin Exp Med.* 2010 Dec;10(4):269-72. I.F. 1.600
14. Gagliardi S.\*, Cova E.\*, Davin A., Guareschi S., Abel K., Alvisi E., Laforenza U., Ghidoni R., Cashman J.R., Ceroni M., Cereda C. SOD1 mRNA expression in Sporadic Amyotrophic Lateral Sclerosis. *Neurobiol Dis.* 2010 Aug;39(2):198-203. I.F. 4.852 \*, questi autori hanno contribuito ugualmente alla stesura del lavoro.
15. Corato M, Ogliari P, Cecilian F, Cova E, Bellotti V, Cereda C, Merlini G, Ceroni M. Doxorubicin and Congo Red Effectiveness on Prion Infectivity in Golden Syrian Hamster. *Anticancer Res.* 2009 Jul;29(7):2507-12. I.F. 1.390.
16. Cereda C, Baiocchi C, Bongioanni P, Cova E, Guareschi S, Metelli MR, Rossi B, Sbalsi I, Cuccia MC, Ceroni M. TNF and sTNFR1/2 plasma levels in ALS patients. *J Neuroimmunol.* 2008 Feb;194(1-2):123-31. I.F. 2.920
17. Corato M, Cereda C, Cova E, Ferrarese C, Ceroni M. Young-onset CJD: age and disease phenotype in variant and sporadic forms. *Funct Neurol.* 2006 Oct-Dec;21(4):211-5. Review. I.F. 0.569.
18. Cereda C, Gabanti E, Corato M, De Silvestri A, Alimonti D, Cova E, Malaspina A, Ceroni M. Increased incidence of FMO1 gene Single Nucleotide Polymorphisms in Sporadic Amyotrophic Lateral Sclerosis. *Amyotrophic Lateral Sclerosis.* 2006 7:227-34. I.F. 1.755.
19. Cova E, Cereda C, Galli A, Curti D, Finotti C, Di Poto C, Corato M, Mazzini G, Ceroni M. Modified expression of Bcl-2 and SOD1 proteins in lymphocytes from sporadic ALS patients. *Neurosci Lett.* 2006 399:186-90. I.F. 2.092.
20. Cereda C, Cova E, Di Poto C, Galli A, Mazzini G, Corato M, Ceroni M. Effect of nitric oxide on lymphocytes from sporadic amyotrophic lateral sclerosis patients: toxic or protective role?. *Neurol Sci.* 2006 27:312-6. I.F. 0.894.
21. Laforenza U, Cova E, Gastaldi G, Tritto S, Grazioli M, Larusso NF, Splinter PL, D'Adamo P, Tosco M, Ventura U. Aquaporin-8 is involved in water transport in isolated superficial colonocytes from rat proximal colon. *J Nutr* 2005 135:2329-36. I.F. 3.689.
22. Laforenza U, Gastaldi G, Grazioli M, Cova E, Tritto S, Faelli A, Calamita G, Ventura U. Expression and immunolocalization of aquaporin-7 in rat gastrointestinal tract. *Biol Cell.* 2005 97:605-13. I.F. 3.232.
23. Laforenza U, Gastaldi G, Rindi G, Leiter A, Cova E, Marchetti A, Candusso ME, Autelli M, Orsenigo MA, Ventura U. PYY-Tag transgenic mice displaying abnormal H<sup>+</sup>-K<sup>+</sup>-ATPase activity and gastric mucosal barrier impairment. *Lab Invest* 2003 83:47-54. I.F. 4.418
24. Cova E, Laforenza U, Gastaldi G, Sambuy Y, Tritto S, Faelli A, Ventura U. Guanidine transport across the apical and basolateral membranes of human intestinal Caco-2 cells is mediated by two different mechanisms. *J Nutr.* 2002 Jul;132(7):1995-2003. I.F. 3.689
25. Cova E, Gong A, Marinelli RA, LaRusso NF. Water movement across rat bile duct units is transcellular and channel-mediated. *Hepatology.* 2001 Sep;34(3):456-63. I.F. 8.096
26. Gastaldi G, Cova E, Verri A, Laforenza U, Faelli A, Rindi G. Transport of thiamin in rat renal brush border membrane vesicles. *Kidney Int.* 2000 57:2043-2054. I.F. 4.371.
27. Sommi P, Ricci V, Fiocca R, Romano M, Ivey KJ, Cova E, Solcia E, Ventura U. Significance of ammonia in the genesis of gastric epithelial lesions induced by *Helicobacter pylori*. An in vitro study with different bacterial strains and urea concentrations. *Digestion* 1996 57:299-304. I.F. 1.442.