

## ***Curriculum vitae Dr. Emanuela Monari***

Date and place of birth: June 10, 1962 Novellara (Reggio Emilia), Italy.

Marital status: married (1 child)

Nationality: Italian

Education: 1988: degree in Biological Sciences, University of Modena

Post graduate training: 1994: PhD in Biomaterials - University of Trento (thesis: Biodegradation and biocompatibility of biodegradable and bioactive systems) " tutor Prof. Claudio Migliaresi. University of Trento, Italy co-tutor Dr. Antonietta M. Gatti Laboratory of Biomaterials (Dental Clinic - Faculty of Medicine -University of Modena, Italy

Fellowship: 4/1995-4/1997 Post-doctoral scholarship "Biocompatibility of implant materials" Center for Study of Biomaterials, Dpt. Surgery, University of Modena.

Academic career: 1997-2023: Research Technician , University of Modena and Reggio Emilia, 2003-today Researcher in Medicine and Laboratory Technical Sciences (MED46) at the Department of Diagnostic, Clinical and Public Health Medicine, Associate Professor (MED 46) Dipartimento Chirurgico, Medico, Odontoiatrico e di Scienze Morfologiche con interesse Trapiantologico e di Medicina Rigenerativa , University of Modena and Reggio Emilia

### Research experience and work:

- 1/1989-6/1990: research contracts funded by Tecnobionica SPA, Pomezia, Rome, as part of the CNR 0512 "New components / systems for extracorporeal circulation" program held at the Center for Study of Biomaterials at the University of Modena.
- 7/1990-1994: research contracts funded by Sorin Biomedica SpA, Saluggia Turin, concerning "Evaluation of the biocompatibility of materials and cardiovascular prostheses using in vivo tests on animal" held at the Center for Study of Biomaterials at the University of Modena
- 1990 – 1993: PhD in Biomaterials on "Biodegradation and biocompatibility of biodegradable and bioactive systems" held at Laboratory of Polymer Composites (Department of Materials Engineering - Faculty of Engineering - University of Trento and Center for Study of Biomaterials, University of Modena, Italy
- 4/1995-04/1997: Post-doctoral in Biocompatibility of implant materials, Center for Study of Biomaterials, University of Modena, Italy;
- 4/1997-2008: Biocompatibility of implant materials, Centre for the Study of Biomaterials, Faculty of Medicine, University of Modena and Reggio Emilia.
- 2008-today Proteomic-based research for biomarker discovery, Department of diagnostic, Clinical and Public health Medicine, and Dipartimento Chirurgico, Medico, Odontoiatrico e di Scienze Morfologiche con interesse Trapiantologico e di Medicina Rigenerativa, University of Modena and Reggio Emilia.

Book writing: She participated in book writing of "Biomedical Materials: Basic and Applied Studies. (IOS Press, Amsterdam ISBN: 905199365X) as co-author of the chapter: "Bioactivity of the active glasses".

### Research topics:

- Biocompatibility of new components/systems for extracorporeal circulation and materials and cardiovascular prostheses by in vivo tests.
- Biodegradation and biocompatibility of bioactive glass materials (Bioglass, tricalcium phosphates and hydroxyapatite) in collaborations with several foreign universities and new composite materials based on glass for dentistry.
- Biodegradation and biocompatibility of biodegradable polymeric materials (polylactic acid of different molecular weights.)
- Research on new models of biocompatibility assessment for biomedical materials in relation to the various sites of implant. (Bone, sub-cutis, muscle) within the project Prin 1998 (Ex 40%) - Cytotoxicity assay (cell

- culture) and in vivo biocompatibility of dental materials - Biofunctionality in vivo vascular prostheses (grafts) and coronary stents.
- Osseointegration of titanium screws for dental implant.
- Biocompatibility in vitro (cell culture) and in vivo (muscle) of nanoparticles within the research project "Role of micro and nanoparticles in biomaterial-inducing pathologies" (EU project Nanopathology QLRT-2002- 147)
- Proteomic analysis of biomarkers predictive of nephropathy in patients with type 1 diabetes and type 2 (PRIN 2008) in collaboration with Prof. G. Cappelli -Nefrologia, AOU Policlinico-MO
- Proteomics and headaches: molecular mechanisms in the pharmacological response in collaboration with Prof. LA Pini - Headache Center, AOU Policlinico-MO
- Proteomic analysis of serum markers in metastatic non-small cell lung cancer (NSCLC) in collaboration with prof. U. Morandi- Thoracic Surgery, AOU Policlinico-MO, (Grant by Fondazione di Vignola, 2009 and 2011)
- Proteomics analysis of serum and urine sample in prostate cancer in collaboration with prof. Bianchi-Urology, AOU Policlinico-MO
- Definition and characterization of target molecules used by new hemodialysis systems by means of proteomic analysis in collaboration with Bellco as part of the FARE project funded by the Emilia Romagna region.
- Proteomic profile of periodontal pocket tissue and healthy gingival tissue in collaboration with Dr. C. Bertoldi, Dental Unit, University of Modena and Reggio Emilia.
- Evaluation of proteomic profile in mensturually-related migraine with Dr A. Ferrari - Headache Center, AOU Policlinico-MO
- Analysis of serum levels and correlation with age, migraine years and frequency, Dott. Rustichelli Cecilia e dott. Ferrari Anna
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The research activity of Dr. Emanuela Monari is documented by 80 publications in extenso mostly on peer reviewed international journal and 178 meeting abstracts.

Skill and expertise:

- Conventional and scanning electron microscopy (SEM), X-ray microanalysis.
- Cell culture and viability and proliferation tests.
- Mono and two-dimensional electrophoresis
- Mass spectrometry: SELDI-ToF proteome profiling and ESI Q ToF for the identification of proteins.
- Western blotting analysis and ELISA test

Teaching:

- From 2007- Course of "Clinical Pathology" in the School of Nursing. The course is attended every year by about 120 students.
- From 2008 - Course of "Clinical Pathology" in the School of Cardiocirculatory Pathophysiology and Cardiac - Perfusion Techniques. The course is attended every year by about 10 students.

Other teaching activities:

- From 2008 -Seminaries and internship for Schools of Specialization in Clinical pathology, Clinical Biochemistry, Pathology and internal Medicine;
- 2008-2014 Seminaries and internship for PhD School in Clinical and Experimental Medicine.

Reggio Emilia- March 3 2026

*Emanuela Monari*