Stefania Lamponi

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EDUCATION

1993-1996 **PhD in Biomaterials**
Siena – Italy University of Siena, Italy

1991-1992 **Qualification for the profession of Biologist**
Siena – Italy University of Siena, Italy

1985-1991 **Degree in Biological Sciences**
Siena – Italy University of Siena, Italy

1980-1985 **Scientific high school diploma**
Grosseto - Italy Liceo Sientifico “C. Cattaneo”, Follonica (GR), Italy

Languages: **English :** B1
French : Scolastic

Software : Microsoft office ; ImageJ ; Adobe photoshop ; Origin.

WORK EXPERIENCE

July 2022- present **UNIVERSITY OF SIENA – Department of Biotechnology, Chemistry and Pharmacy**
Associate professor of Inorganic Chemistry

Missions or tasks realized :
Realization of co-cultures in vitro using primary and tumor cells on microstructured surfaces with chemical heterogeneity and topographical domains. In vitro evaluation of cellular behavior within 3D polysaccharide scaffolds. In vitro study of cytotoxicity, cytocompatibility and genotoxicity of new materials intended for the realization of medical devices and new molecules with pharmacological activity. In vitro evaluation of the antioxidant activity of natural extracts through the use of cell cultures. Cytotoxicity test of face masks. Determination of phytochemical composition and bioactivity of natural plant extract.

Nov. 2001 – June 2022
Siena, Italy

UNIVERSITY OF SIENA – Department of Biotechnology, Chemistry and Pharmacy
Assistant professor of Inorganic Chemistry

Missions or tasks realized :
Realization of co-cultures in vitro using primary and tumor cells on microstructured surfaces with chemical heterogeneity and topographical domains. In vitro evaluation of cellular behavior within 3D polysaccharide scaffolds. In vitro study of cytotoxicity, cytocompatibility and genotoxicity of new materials intended for the realization of medical devices and new molecules with pharmacological activity. In vitro evaluation of the antioxidant activity of natural extracts through the use of cell cultures. Cytotoxicity test of face masks. Determination of phytochemical composition and bioactivity of natural plant extract.
Supervisor of undergraduates and PhD students. Academic tutor for Master students.

Aug. 1998 – Oct 2001
Siena, Italy

UNIVERSITY OF SIENA - Department of Chemical and Biosystems Sciences and Technologies; Interuniversity Research Center for Advanced Medical Systems (CRISMA)
Research specialist

Missions or tasks realized :
Analysis of cell behavior in terms of adhesion, growth and movement on microstructured surfaces characterized by chemical and topographical heterogeneity. Study of the interaction of cells, both primary and line, with new polymeric materials.
Additional didactic activity for the Stoichiometry and General and Inorganic Chemistry Courses for the Degree Course in Pharmaceutical Chemistry and Technology (Faculty of Pharmacy, University of Siena) and for the Biopolymer Course (Degree Course in Chemistry, Faculty of SMF).
Supervisor of undergraduates and PhD students.

Nov. 1996 – July 1998
Siena, Italy

UNIVERSITY OF SIENA - Department of Chemical and Biosystems Sciences and Technologies; Interuniversity Research Center for Advanced Medical Systems (CRISMA)
Research fellow

Study of the interaction between platelets and polymeric surfaces in conditions of psychological stress. Analysis of platelet adhesion, aggregation and platelet activation in conditions of psychological stress and correlation with the type and quantity of adsorbed proteins. In vitro evaluation of the

	pro-angiogenetic effects of the Zn (II) and Cu (II) - polysaccharide complexes.
Nov. 1993 – Oct. 1996 ***Siena, Italy***	**UNIVERSITY OF SIENA - Interuniversity Research Center for Advanced Medical Systems (CRISMA)** PhD student In vitro evaluation of the biocompatibility of heparin-like molecules.

SCIENTIFIC EXPERIENCES IN OTHER COUNTRIES

Sept. 1995 – Oct. 1995 **And July 1996**	Department of Clinical Engineering of the University of Liverpool (UK)

MAIN RESEARCH TOPICS

1. Materials and surfaces :
   In vitro biocompatibility evaluation of polymeric materials for biomedical applications; biological characterisation of polymeric hydrogels for biomedical applications.

2. Polysaccharides :
   evaluation of biological properties of natural and derivatised polysaccharide ; polysaccharide-metal complexes as angiogenetic and antibacterial agents; polysaccharide-based hydrogels as scaffolds for cell cultures and tissue engineering, and drug delivery systems.

3. Micro and nano-patterned systems for tissue engineering :
   in vitro cell characterisation of micro and nanostructured surfaces for cell guidance (tissue engineering)

4. New drugs, natural compounds and nanoparticles :
   in vitro biological evaluation of citotoxicity, citocompatibility and genotoxicity of new drugs, antioxidant molecules of natural origin and nanoparticles.

5. Scanning Electron Microscopy :
   evaluation of polymeric materials and hydrogel morphology and structure ; correlation of surface and bulk structure of polymeric material and hydrogel with cell morphology.

6. Plant extracts and their phytochemical and biological characterization.

PUBLICATIONS

Author of 135 scientific papers published on international journals (ORCID ID : https://orcid.org/0000-0002-2788-8797).