Curriculum Vitae et Studiorum

Eugenio Redolfi Riva, PhD
Biomedical Engineer

• Personal Informations

Name/Surname: Eugenio Redolfi Riva
Place of Birth: Piombino (Li)
Citizenship: Italian

• Profile Sumary

Biomedical Engineer and PhD in BioRobotics. Expert in the fields of Bio-Nanotechnology and Biomaterials applied to Pharmacology and Tissue Engineering. Competent in the field of Medical Devices and Medical Robotics. Very prone to verbal communication. Interested in Technological Innovation in all its aspects (R&D, Market Analysis, Technology Transfer). Experience in Writing Research or Industrial Projects

• Work experience

1. **Type of employment:** Fellow Researcher
   Institution: Consiglio Nazionale Delle Ricerche, IOM-CNR, Monserrato (Ca)
   Research project: *Fabrication of Polymer/Porous Silicon hybrid Nanostructured Materials*

2. **Adjunct Professor**
   Bio-Mechanics teaching at the Faculty of Medicine of University of Cagliari

3. **Scientific Disclosure:** Participation at **FameLab Talking Science 2017**. ***Winner of local selections in Cagliari***. Participation to a Scientific Communication Masterclass (Perugia, April 2017).

4. **Type of employment:** Fellow Researcher
   Institution: Istituto Italiano di Tecnologia (IIT@SSSA), Pontedera, Pisa
   Research project: *Fabrication and characterization of Magnetic Liposomes and Plasmonic/Magnetic nanoassembly for drug delivery controlled Photothrmal treatment of cancerous massess.*

5. **Type of employment:** PhD Student in Biorobotics
   Institution: Scuola Superiore Sant'Anna, Pisa
   Qualification obtained: Doctor of Philosophy in Biorobotics (100/100 cum laude)
   Research project: *Overcoming the limitation of traditional medical therapies: design of functional nanostructured materials*

• Abroad work experience:

1. **European School On Nanosciences & Nanotechnologies (ESONN)**.
   2012 session: August 26th – September 16th / Grenoble, France

2. **Visiting Student at Waseda University (Tokyo, Japan):** (March 2014 – April 2014). Fabrication and characterization of antibody-functionalized Magnetic Liposomes for drug delivery

3. **Visiting Student at Vigo University (Spain):** (October 2014 – December 2014). Development of a Plasmonic-Magnetic Nanoparticles assembly for photothermal ablation of tumor masses

• University Career

1. **Degree of study:** Master Degree in **Biomedical Engineering**
   Date of Master Thesis defense: 27/09/2011
   Marks: 110/110
   Institution: University of Pisa

Master Thesis title: Study and development of a Drug Delivery system based on nanofilms and polymeric nanoparticles

2. **Degree of study:** Bachelor Degree in **Biomedical Engineering**
Date of Bachelor Thesis defense: 22/07/2008
Marks: 103/110
Institution: University of Pisa
Master Thesis title: DNA Microchip for characterization of genetic mutations on p53 protein and their implications in tumoral disease

• Technical Skills

1. ***Nanostructured Materials Fabrication technique***:
   a. **Polymeric ultra-thin Films** (Spin-coating, Dip-coating)
   b. **Liposomes** (Lipidic thin film evaporation)
   c. **Solid Lipid Nanoparticles** (Hot emulsion)
   d. **Polymeric Nanoparticles** (Nanoemulsion, Nanoprecipitation, Ionotropic gelation)
   e. **Gold Nanoparticles, Gold Nanorods, Gold Nanoshells, Silica Nanoparticles**
   f. **Magnetic Nanoparticles** (Massart tecnique)
2. ***Drug encapsulation tecniques***
3. **Surface functionalization** with polymers and targeting ligands (antibodies)
4. **Materials characterization** with Atomic Force Microscopy (**AFM**), Scanning Electron Microscopy (**SEM**), Fluorescence Microscopy for cell imaging and photostimulation with NIR laser, Dynamic Light Scattering (**DLS**), gel chromatography for protein purification, **UV-Vis Light Spectroscopy** and Fourier-Transform Infrared Spectroscopy (**FT-IR**), Optical and probe surface profilometry,
5. **Basic knowledge of cell culture techniques, cytotoxicity assays and ELISA test**
6. **Microfabrication of silicon materials with electrochemical etching tecniques**

• Scientific Backgroung

- Background in **Nanotechnology for Nanomedicine** (Biomaterials and *Smart Materials*, Surface chemistry and colloidal chemistry, Biology, Drug encapsulation techniques, Background in Material Science, Organic/Inorganic Chemistry, Thermodynamics and Physical Chemistry.
- Background in **Oncology**
- Background in **Biomedical Engineering** (Prosthesis implants and Biomedical devices, Medical Robotics, Tissue Engineering, Microfabrication Techniques, Bio-mechanics, Physiology)

• Publications: https://scholar.google.it/citations?user=A1WxePAAAAAJ&hl=it&oi=ao

• Computer skills:

Competent with COMSOL Multiphysics (Structural Mechanics Module), MATLAB 7.0 and Microsoft Office programs. Experience in Object Oriented Programming (C# and Java) and SQL language.
Basic knowledge of imaging software (ImageJ and Adobe Photoshop) and Microcontroller programming.

• Language skills:

1. **English**: "Speaking" and "Listening" C1, "Writing" B2+
2. **Spanish**: "Speaking" and "Listening" B2, "Writing" B1

Other interests and skills: Many experiences as Guitarist and Singer in various bands. Participation in various workshops with nationally recognized musicians. Experiences as a guitar teacher.

I hereby authorize the use of my personal data in compliance with the Italian law N° 675/96

Yours sincerly, Eugenio Redolfi Riva