



Laboratory of Protein-Inspired Biomaterials
Department of Chemistry "A.M. Tamburro"
University of Basilicata

The research activity of the lab is mainly focused on the synthesis, the conformational and supramolecular studies of protein-inspired polypeptide sequences.

Antonio Mario Tamburro founded the lab where the unified model of molecular elasticity was proposed, based on the concept that not one but many interconverting structures are the common basis for the high entropy state responsible for the elasticity of the elastomeric proteins.

Useful insights were given by some elastin-derived polypeptide sequences demonstrated to be amyloidogenic "in-vitro". These findings led to the study of enhancers as well as inhibitors of the amyloidogenic process .



As future perspective and on the basis of previous structure-function studies, it is planned to design and produce protein-inspired biomaterials. The potential applications could be the vascular prostheses as well as materials of particular, modulable, mechanical properties.



Staff:

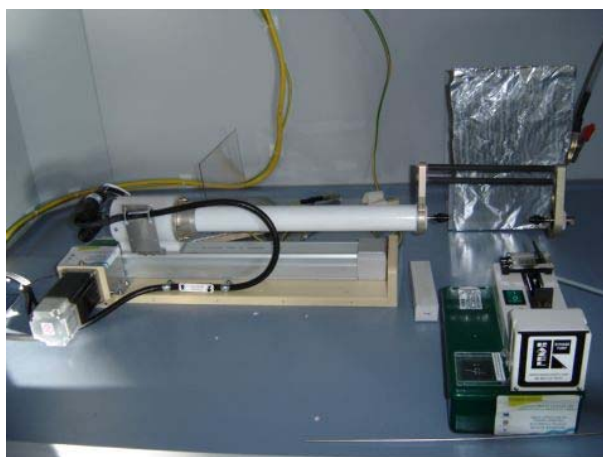
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Collaborations:

2. **Professor Colette Lacabanne**,
Laboratory of Polymer Physic of Paul Sabatier University, Toulouse-France.
Project title: The development of biomimetic hybrid material for stimulating bone remodelling” .
3. **Professor Manuel Dauchez**, Laboratoire SirMa, Université de Reims Champagne-Ardenne, Reims (France).
4. **Professor Carlos Rodriguez-Cabello**, G.I.R. BIOFORGE (Group for Advanced Materials and Nanobiotechnology), University of Valladolid (Spain) in the framework of Italy-Spain Integrated Actions granted by Italian MIUR. Project Title: Synthesis of bio-inspired polypeptides”.

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- **Professor Giovanni Marletta**, University of Catania, Italy
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