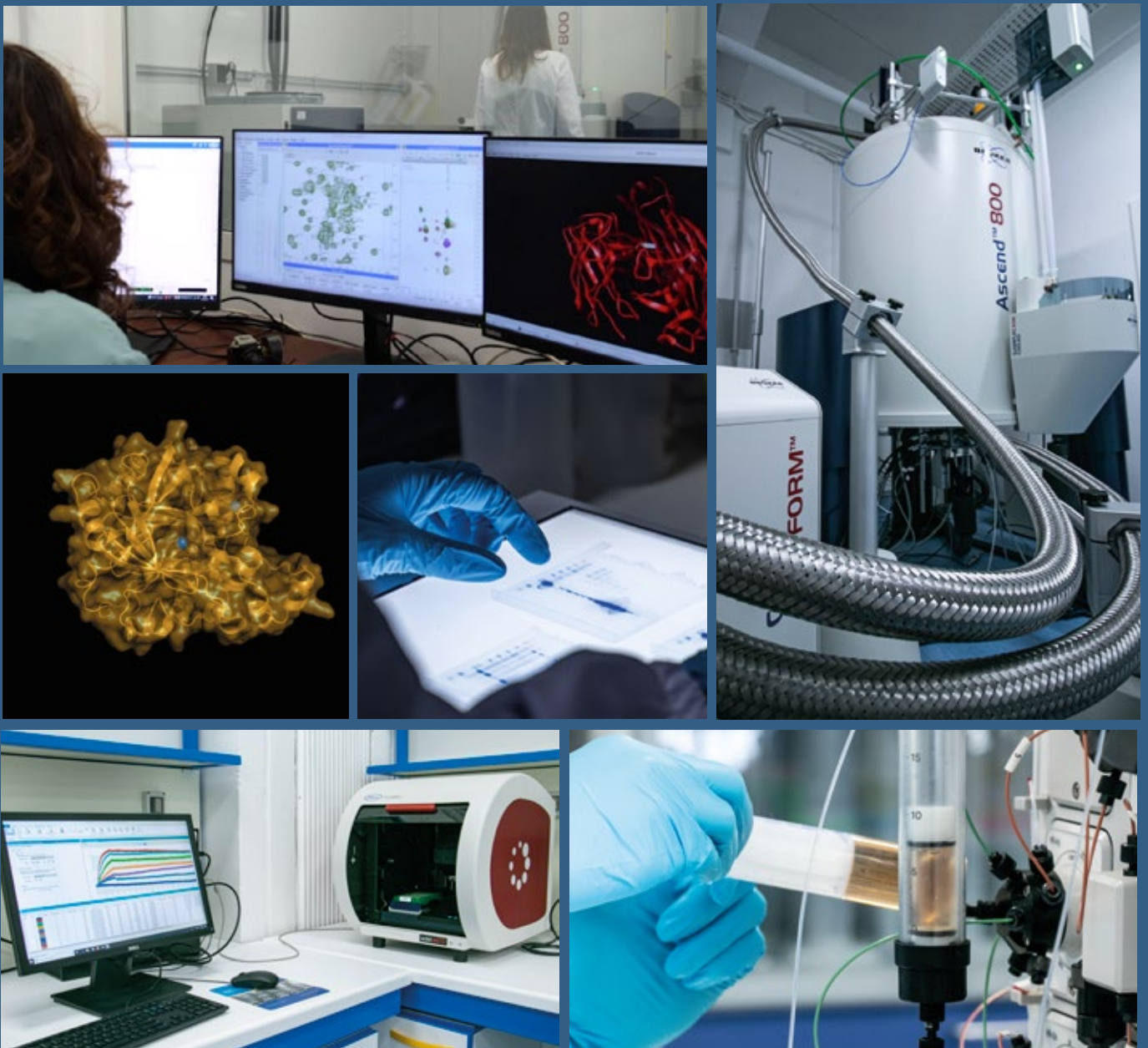


Structural Biology and Biophysics Group @ Ri.MED

The Structural Biology and Biophysics group provides biophysical and structural information of biological phenomena guided by the folding, aggregation, and interaction of proteins with the ultimate goal of understanding the molecular mechanisms underlying serious pathologies. The group is also engaged in small molecules-based drug discovery, and development of recombinant therapeutic proteins.





FOCUS

- Identification of new therapeutic targets
- Development of therapeutic proteins with particular emphasis on therapeutic antibodies
- Biophysical screening for the discovery of new therapeutic candidates for preclinical studies
- Structure determination of proteins and protein complexes
- Implementation of NMR-based diagnostic tools



AIMS

- Unravel molecular mechanisms behind human diseases
- Develop novel preclinical candidates for unmet medical needs
- Contribute to define next generation therapeutic treatments
- Facilitate the creation and consolidation of local biotech companies
- Contribute to consolidate Structural Biology in South Italy and Mediterranean Area



OUTCOME

- Active collaborations with national and international partners
- Publications in peer-reviewed journals
- Contribution to academic courses and training in Structural Biology and Protein aggregation



EXPERTISE AND RESOURCES

- Design, production, and biophysical characterization of engineered proteins
- Structural and biophysical characterization of biomolecules
- Kinetic, thermodynamic, and structural studies of protein-protein and protein-ligand interactions
- BLI-based and NMR-based fragment screening
- NMR metabolomics
- Development of customized analytical assays



COLLABORATIONS

- National Research Council (CNR), Palermo, ITA
- University of Palermo, ITA
- University of Campania "Luigi Vanvitelli", Naples, ITA
- The Mediterranean Institute for Transplantation and Advanced Specialized Therapies (ISMETT-IRCCS), Palermo, ITA
- European Brain Research Institute Rita Levi-Montalcini, Roma, ITA
- King's College London, Londra, UK



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Structural Biology and Biophysics Group

c/o ATeN Center – University of Palermo
Viale delle Scienze Ed. 18/A - 90100 Palermo, ITALY

Group Leader: Caterina Alfano, PhD
calfano@fondazionerimed.com