

# Medicinal Chemistry Group @ Ri.MED

Our research focus is the design and synthesis of novel small molecules with potential biological activity toward therapeutic targets of interest.



 **FOCUS**

- Design and synthesis of new chemotypes
- Identification of new hit compounds
- Family hit expansion and structure optimization
- Structure-activity relationship (SAR) investigation
- Hit-to-lead optimization
- Planning, set-up, optimization and scale-up of synthetic routes
- Retrosynthetic analysis
- Structure characterization of new chemotypes
- Design and synthesis of novel potential non-covalent inhibitors of NLRP3 inflammasome

 **OUTCOME**

- Building blocks and small molecules collections
- Production of scientific papers in peer-review journals
- Active collaborations with academic and industrial partners

 **AIMS**

- Discovery of new potential targets modulators
- Early drug discovery toward disease therapeutic treatment

 **EXPERTISE AND RESOURCES**

- Drug discovery
- Peptides, peptidomimetics and small molecules chemistry
- In solution and solid-phase synthesis
- (Microwave-assisted) organic synthesis
- Fragment growth
- Compounds isolation from complex mixture and purification
- Structure elucidation and analytical characterization of molecules
- Purity grade assessment

 **COLLABORATIONS**

- University of Palermo, ITA
- University of Campania "Luigi Vanvitelli", Naples, ITA