



Name: Italo Cirone

Contacts:

e-mail: Italo.cirone@phd.uni.it

Supervisors: Professor Simona Rapposelli

PhD Project Title: Modulating protein-protein interactions to fight cancer

Research summary: As cancer has globally become a leading cause of death, there is a pressing need for new therapeutic approaches. Protein-Protein Interactions (PPI), which have always been overlooked as a target due to poor understanding of their mechanism, are getting more attention by researchers as an attractive new anticancer strategy. PPI are involved in the regulation of many key pathways in carcinogenesis and a single protein can interact with a plethora of partners defined as interactome. The modulation of the activity of a family of regulatory hub proteins, called 14-3-3, has recently sparked attention since all their seven isoforms interact with proteins involved in the regulation of cell proliferation, cell cycle, apoptosis, and DNA synthesis. My PhD project is mainly focused on the design, synthesis, characterisation, and biological evaluation of novel small molecules which aim to modulate PPI between 14-3-3 and their interactome via stabilisation or destabilisation of the protein-protein complex.

