The research activity of the Bio-Organic Chemistry group is focused on the exploitation of
peptides and conformationally constrained peptides for applications in organic, physical,
biophysical and supramolecular chemistry. The group is currently engaged in the following
research lines:

- synthesis, conformation, mechanism of action and bioactivities (antibacterial and
  antitumor) of the naturally-occurring peptaibiotics;
- textiles functionalized with antibacterial peptides for biomedical applications;
- peptide nanotechnology: peptido-rotaxanes, self-assembled peptide polymers, peptide-
  decorated metal nanoparticles for nanomedicine;
- synthesis and conformation of peptides with rigid and well-defined 3D-structure as
  structural elements for spectroscopic studies and for electron transfer and photovoltaic
  applications.

  2242.
- Enhanced EGFR Targeting Activity of Plasmonic Nanostructures with Engineered
- A terminally protected dipeptide: from crystal structure and self-assembly, through co-
  assembly with carbon-based materials, to a ternary catalyst for reduction chemistry in
  water, Soft Matter, 2016, 12, 238-245.
- The peculiar N- and C-termini of trichogin GA IV are needed for membrane interaction
  and human cell death induction at doses lacking antibiotic activity, BBA
  Biomembranes, 2015, 1848, 134-144.
- Cotton functionalized with peptides: characterization and synthetic methods, J.