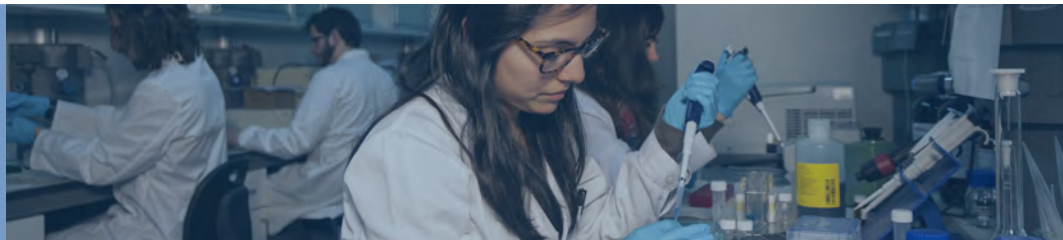




Universidad
de Alcalá



DESIGN, INTERACTION AND SYNTHESIS OF BIOACTIVE COMPOUNDS

Code
664

DISCOBAC

RESEARCH AREA

Experimental Sciences
Health Sciences

COORDINATORS

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KEY WORDS

Cancer, Alzheimer,
Multifunctional organic
and metallo-organic
ligands, G-quadruplex
DNA, RNA, Modeling and
interaction studies

AIM

- Chemical sector,
pharmaceutical and
healthcare

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ABOUT US

We are an interdisciplinary group of professional researchers covering inorganic and organic chemistries as well as biochemistry and molecular biology related aspects, working together in the discovery of novel and enhanced theragnostic molecules with a special focus on cancer and neurodegenerative diseases.

RESEARCH LINES

- Synthesis and interaction studies of selective G-quadruplex DNA ligands by the design of multifunctional metallo-organic molecules. Examples include carbohydrate or oligonucleotide conjugates for their use as therapeutic agents and the study of the structure-activity relationships and interactions of synthesized compounds with higher-order DNA/RNA structures.
- Design and synthesis of novel biologically active molecules using molecular modeling. Building up of three-dimensional models of receptors and ligands to study the nature and magnitude of the interatomic forces that govern their interactions.

OFFERED SERVICES

- Synthesis, characterization and reactivity studies of organic, organometallic and coordination compounds.
- Design and structural characterization of nucleic acids and/or protein ligands.
- Biomolecular interaction studies by theoretical and experimental methods, such as competition equilibrium dialysis, FRET melting assays, viscometric titrations, circular dichroism, fluorescence-based techniques, UV-visible, etc.

MARKETABLE RESULTS

