

Polymeric nanostructures for biomedical applications

Efficient conjugation of dendrimers to ligands of biomedical interest



EU Project [SC1-BHC-09: A clinically applicable non-viral gene delivery technology – “ENDOSCAPE”](#)



CiQUS

Center for Research
on Biological Chemistry and
Molecular Materials



Megia Lab

Bioconjugation and Click Chemistry

- **Affidendrons.** Multivalent affinity protein-dendrimer conjugates: enhanced multivalent recognition of pathogens.

Therapeutic and diagnostic applications for COVID-19.

ACS Appl. Mater. Interfaces **2019**, *11*, 21391.

Delivery to the Brain

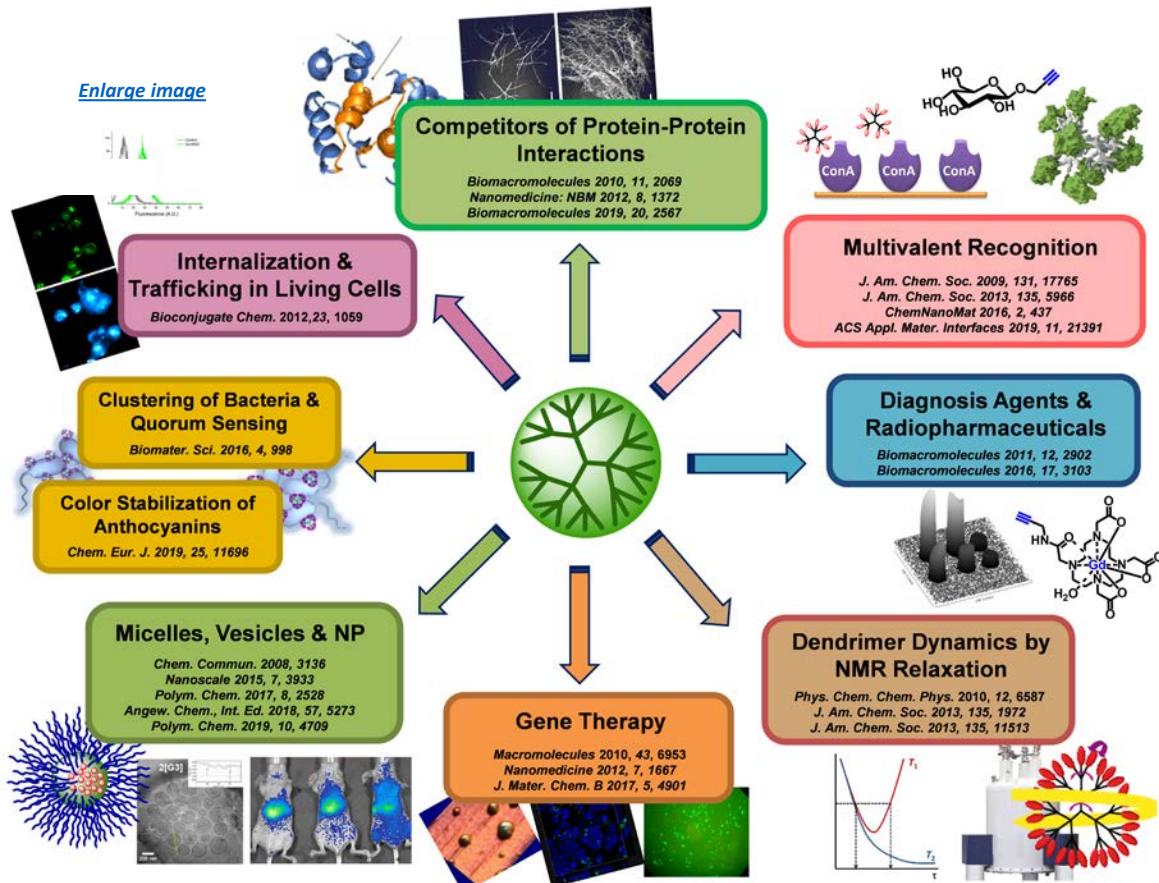
- **Intranasal delivery of anti-Alzheimer drug** (in vivo results).

ACS Nano, **2021** *15*, 3, 4678–468

- **Targeted Brain Delivery (peptides)**: Biocompatible chitosan.

Neurotrophic Factors - Methods & Protocols **2018**, 443

[Enlarge image](#)



Gene Delivery

- **siRNA Vectors:** Biodegradable PEG–dendritic copolymers.

J. Mater. Chem. B **2017**, *5*, 4901.

- **Gene carriers:** Dendritic polymers.

J. Nanomedicine **2012**, *7*, 1667.

Dendritic Polyion Complex Nanoassemblies

- **Vesicles with tunable size**

Angew. Chem. Int. Ed. **2018**, *57*, 5273.

- **Micelles with tunable environmental sensitivity**

Polym. Chem. **2017**, *8*, 2528.