

<b>Department: Chemistry</b>
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**Group name:** *Protein Bioconjugation*

**Acronym:** *BioLink*

**Group Coordinator:** Corzana López, Francisco

**ANEP Area/s:** Chemistry

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**Department Report:** 01/11/2017

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**RESEARCH TEAM**
**No. of researchers: 4**

<u>Researcher</u>	<u>Department</u>	<u>Professional Category</u>
Corzana López, Francisco	Chemistry	Associate Professor
Busto Sancirán, Jesús Héctor	Chemistry	Associate Professor
García Marquina, Guillermo	Chemistry	Pre-doctoral
Jiménez Moreno, Ester	Chemistry	Post-doctoral

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**COLLABORATORS**
**No. of collaborators: 0**

<u>Collaborators</u>	<u>Department</u>	<u>Professional Category</u>
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### Research areas

- 1) Design of new chemical reactions to selectively and effectively bind drugs and fluorescent probes and anti-tumour antibodies.
- 2) Development of a new generation of antibodies that present a "smart" connection to release and generate the drug "in situ", once at the tumour site.
- 3) Design of a new array of anti-MUC1 antibodies with high antigen affinity and selectivity for use in the transport of drugs to malignant tissues.
- 4) Antigen-antibody molecular recognition through advanced Nuclear Magnetic Resonance experiments and molecular modeling.
- 5) Application of Nuclear Magnetic Resonance to the study of microbiological processes.

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### Scientific and technological offer

- 1) Solid phase synthesis of peptides and glycopeptides in milligrams.
- 2) Protein expression and purification.
- 3) Conformational analysis of biomolecules by NMR and molecular dynamics calculations, both in the free state and associated with the corresponding biological targets.
- 4) Nuclear Magnetic Resonance of  $^1\text{H}$  and  $^{13}\text{C}$ . Application to the food world and in particular to the study of wine.

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### National and International Relations

Dr Corzana is the lead researcher of the project "ProteinConjugates" at the University of La Rioja, this is a European Innovative Training Networks (ITN) project funded with 2.5 million euros from the Marie Skłodowska-Curie programme, Excellent Science pillar of the European Union's Horizon 2020. The consortium is composed of 8 research centres - the University of Cambridge (UK), the UCL University in London (United Kingdom); the University of Ulm (Germany); the University of Lisbon (Portugal); the Curie Institute (France); the University of Vienna (Austria); and the University of La Rioja (Spain)- two pharmaceutical companies, Hovione (Portugal) and Pharmamar (Spain).

In addition, Dr. Corzana's group has a wide range of collaborators, both nationally and internationally.

He actively collaborates at the national level with the following researchers:

- 1) Jesús Jiménez-Barbero (CIC bioGUNE).
- 2) Juan Luis Asensio (Institute of General Organic Chemistry, CSIC).
- 3) Javier Cañada (Centre for Biological Research, CSIC).
- 4) John Mareque (CIC biomaGUNE).
- 5) Ramon Hurtado-Guerrero (BIFI).
- 6) Emilio Cocinero (UPV).

On the other hand, he maintains collaborations with the following groups at foreign universities and centres:

- 1) Ben Davis (University of Oxford).
- 2) Gonçalo Bernardes (University of Cambridge).
- 3) Cristina Nativi (University of Florence).
- 4) Roberto Fiammengo (Italian Institute of Technology).
- 5) Geert-Jan Boons (University of Georgia).