

Barbara RICHICHI

Barbara Richichi is an Associated Professor at the Department of Chemistry “Ugo Schiff” of the University of Florence (UNIFI) in Italy.

She is the Principal Investigator of the GlycoFluoNano Lab and her lab is engaged in three main areas of Glycoscience, at the interface between Glychochemistry and Glycobiology:

- i) Synthesis of glycomimetics and glycan-based therapeutics*
- ii) Synthesis and ad hoc functionalization of (glyco)nanomaterials*
- iii) Synthesis of (glyco)fluorescent probes*

She has co-authored 78 peer-reviewed publications, 7 Book Chapters and is co-inventor of 3 patents, one of which has been granted in the United States. She currently serves as Chair of the Patent and Intellectual Property Commission of the University of Florence and Member of the Scientific Advisory Board of the National Early Drug Discovery Technology Transfer Cluster (EXTEND: <https://extend-tthub.com/it/>).

She was involved in diverse EU projects: (i) management committee member of two COST Actions (MultiGlycoNano, ERNEST), (ii) Scientific Representative and Leader of the Working Group 3 (Glycan dependent fine tuning of immunity) of the COST Action INNOGLY; (UNIFI was the Grant Holder), (ii) member of the research Unit of the MSCA-RISE (Horizon 2020) SUPRO-GENE.

She is currently involved in glycoscience-oriented projects as member (UNIFI is beneficiary partner) in the MSCA-DN Acinetwork, and as coordinator of two MSCA-DN: (ii) GlyCanDrug, mainly focused on the creation of precision therapeutics (including glycomimetics) for cancer treatments; (ii) CanGoNano focused on the development and engineering of glyconanomaterials as anticancer-vaccine platforms. She is also involved as a co-PI in a research project founded by the NOVO Nordisk Foundation, working at the development of vaccine for autoimmune diseases.

She received her PhD in Pharmaceutical Sciences in 2002. Shortly thereafter, she was introduced to carbohydrate chemistry under the mentorship of Alessandro Dondoni (University of Ferrara, Italy), where she focused on the synthesis of C-glycosides and their conversion into constrained peptidomimetics through thiazole-based aminohomologation.

From 2004 to 2005, she worked at the spin-off company Protera S.r.l. (Florence, Italy), contributing to the development of glycan-based therapeutics, with particular emphasis on the synthesis of monosaccharides bearing Matrix Metalloproteinase (MMP) inhibitors.

Following two years of postdoctoral research at the Department of Chemistry of the University of Florence, where she further developed expertise in the synthesis of glycomimetics, she was awarded a fellowship in 2007 within a strategic project of the Tuscany Tumor Institute. Her research focused on the synthesis of complex oligosaccharide epitopes related to glycosylphosphatidylinositol (GPI) anchors.

In 2007, she was appointed Assistant Professor at the Department of Chemistry (UNIFI) and was promoted to Associate Professor in 2017. In 2015, she obtained the Diplôme d'Habilitation à Diriger des Recherches (Université Grenoble Alpes, France), and in 2023 she achieved the Italian National Scientific Habilitation for Full Professorship. Since 2013 she was *Visiting Scientist* (Andalusian Centre for Nanomedicine & Biotechnology, School of Chemistry of The University of Bristol, Université Joseph Fourier Grenoble-Alpes CERMAV-CNRS, University College of Dublin, Center for Synthesis and Chemical Biology) and *Courtesy Associate Professor* (Herbert Wertheim College of Medicine of the Florida International University and Harvard Medical School in Boston) in some international institutions.