



### Organisational / managerial skills

She is author of **51** scientific publications on international journals (citations=**706**, hindex=**16**-Scopus) and of numerous communications at national and international congresses. This activity was developed as part of national projects (MURST and COFIN) and in projects for young scientists (University and CNR) where she was responsible.

The research activity has been focused on the study of natural substances and on the environmental study by the following research lines:

- Studies on the mechanisms of interaction between DNA and natural compounds with potential biological activity by Nuclear Magnetic Resonance spectroscopy (NMR).
- Isolation and structural determination of natural products by NMR.
- 3D Structure of oligopeptides and study of reactivity of metal proteins by NMR.
- 3D Structure of oligonucleotide aptamers by NMR.
- Re-use of phosphorus-based fertilizers from animal manure to prevent water eutrophication. Speciation of the phosphorus by NMR after anaerobic digestion.
- Role of biofilm in the conservation of cultural heritage. Study of water absorption in rock materials.

### ADDITIONAL INFORMATION

#### Representative Publications

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Benedetta Riva, Ruben Ferreira, Loana Musso, Roberto Artali, Leonardo Scaglioni, Stefania Mazzini "Molecular recognition in naphthoquinone derivatives – G-quadruplex complexes by NMR" *Biochimica et Biophysica Acta* 1850 (2015) 673-680.

Maria Tintoré, Stefania Mazzini, Laura Polito, Marcello Marelli, Alfonso Latorre, Álvaro Somoza, Anna Aviñó, Carme Fàbrega and Ramon Eritja "Gold-Coated Superparamagnetic Nanoparticles for Single Methyl Discrimination in DNA Aptamers" *Int. J. Mol. Sci.* **2015**, 16, 1-15; doi:10.3390/ijms161126046.

Leonardo Scaglioni, Rosanna Mondelli, Roberto Artali, Federico Riccardi Sirtori, Stefania Mazzini "Nemorubicin and doxorubicin bind the G-quadruplex sequences of the human telomeres and of the c-MYC promoter element Pu22" *Biochimica et Biophysica Acta (BBA) - General Subjects*, **2016**, 1860, 1129-1138; doi:10.1016/j.bbagen.2016.02.011.

Loana Musso, Stefania Mazzini, Anna Rossini, Lorenzo Castagnoli, Leonardo Scaglioni, Roberto Artali, Massimo Di Nicola, Franco Zunino, Sabrina Dallavalle "c-MYC G-quadruplex binding by the RNA polymerase I inhibitor BMH-21 and analogues revealed by a combined NMR and biochemical Approach" *Biochimica et Biophysica Acta*, **2018**, 1862, 615-629

<https://doi.org/10.1016/j.bbagen.2017.12.002>

Eritja, Ramon; Aviñó, Anna; Mazzini, Stefania et al. "Naturally occurring quaternary benzo[c]phenanthridine alkaloids selectively stabilize G quadruplexes". *Physical Chemistry Chemical Physics. Phys.Chem.Chem.Phys.*, **2018**, 20, 21772

### National Project manager

- 2009 management of: Programmi di Ricerca Scientifica di Rilevante Interesse Nazionale (**PRIN09**). Prot.2009J54YAP\_005. Title: "Molecular recognition of RNA and DNA: synthesis of modified oligonucleotides and studies of their interactions with active molecules. National Coordinator: Prof. Piccialli.
- 2000 **Agenzia 2000 Youth project** - CNR.
- 1999 "**Giovani Ricercatori**" of Università degli Studi di Milano. Title "Synthesis of camptothecin analogues and study of interactions with model oligonucleotides by nuclear magnetic resonance".

### Grants:

- 2010 Short-term fellowship funded by COST at the IRB (Institute for Biomedical Research of Barcelona with the group of Prof. R. Eritja
- 2008 Collaboration with Prof. Isabel Haro, Unitat de Síntesi i Aplicacions Biomèdiques de Pèptids, Departament de Química Biomèdica, IQAC-CSIC of Barcelona (Spain). Fellowship by Catalunya region at the Parque Científic de Barcelona (Spain) with Prof. R. Eritja on the theme "Solid-phase synthesis and NMR studies of modified oligonucleotides forming triplex helix and oligonucleopeptides mimicking the topoisomerase I-DNA covalent complex".
- 2007-2008 Visiting professor at the Consell Superior d'Investigacions Científiques of Barcelona with the group of Prof. R. Eritja.
- 2005 Short-term fellowship funded by HFSP at the Department of Mathematical Biology of the National Institute for Medical Research in London. Supervisor: Prof. J.Taylor.

2002

### Projects

#### Participation to national projects

- 2017 **Cariplo2017 Project** "Erisimo a Milano" (PI: Prof.ssa A. Bassoli). Natural compounds from Erisimo. Regione Lombardia - "Programma Operativo Regionale 2014-2020 Project: Economia Circolare: Renewable fertilizer from organic waste (**ECONOVA 1992- : National Projects** (MURST, COFIN, FIRB, FIRST, PUR e PRIN)
- 2014-2020 **Regione Lombardia. PHA-STAR** - Development of new products for the design sector from sustainable bioplastics. (BANDO SMART FASHION AND DESIGN) (P.I. F. Adani)
- 2015-2017 P.I. Prof.ssa F. Tambone). **Cariplo Project**, title: "Renewable P-fertilizer from livestock effluent to prevent water eutrophication". POWER (rif. 2014-1276) Dipartimento Scienze Agrarie ed Ambientali. PI: Prof.ssa F. Tambone.

#### Participation to international projects

- 2016-2017 **Horizon 2020 H2020-IND-CE-2016-17** Proposal number: 730400-2-Systemic large scale eco-innovation to advance circular economy and mineral recovery from organic waste in Europe (**SYSTEMIC**) (PI Prof. F. Adani)
- 2014 **Proyectos de I+D "Excelencia"** Gobierno de Espana. Ministerio de Economia y competitividad. Title: "Acidos nucleicos sinteticos y sus aplicaciones biomedicas". PI: Prof. R.Eritja
- 2010-2011 **Integrated Spanish Italian action (IT2009-0067)**. Title: "Structural study of peptide domains of GB virus C with inhibitory properties of HIV-1 and study of RNA aptamers that bind PrP protein". Coordinators: Prof. E. Ragg, Prof. I. Haro. PI : Prof.R. Eritja
- 2001-2003 **Integrated Germany Italian action. Vigoni Program**. Title: "Synthesis and DNA binding properties of NoveBenzo[b]isoquino[2,3-h]-naphthyridines". Coordinators: Prof. R. Mondelli and Prof. S. Laschat.

#### Research activities carried out abroad

- 2010 IRB (Institute for Biomedical Research) di Barcelona (Spain).
- 2007-2008 Parque Científic de Barcelona (Spain).
- 2004-2005 Consell Superior d'Investigacions Científiques (CSIC) di Barcelona (Spain).
- 2002 Department of Mathematical Biology del National Institute for Medical Research (NIMR) . London (UK).
- Award:** Most cited paper 2003-2006 Award. Bioorganic & Medicinal Chemistry for the paper entitled: S. Mazzini, M.C. Bellucci, R. Mondelli. "Mode of binding of the cytotoxic alkaloid berberine with the double helix oligonucleotide d(AGAATTCTT)<sub>2</sub>". *Bioorg. & Med. Chem.*, **2003**, *11*, 505-514
- 2008:- Referee for the Agència de Recerca (AGAUR) Catalunya.
- 1999:- **Teaching activity**  
Course in: Organic Chemistry, Chemistry of Natural Organic Substances, General and Inorganic Chemistry.

## Personal information

I authorize the handling of personal information in this curriculum, according to D.Lgs n. 196/03 and following modifications and Regulations EU 679/2016 (General Regulations concerning Data Protection or GRDP) and art. 7 of University Regulations concerning protection of personal information.

I authorize, according to D.lgs 14/03/2013 n. 33 concerning transparency, in case of conferment of the position and of the fellowship, the publication of this curriculum in the web site of Università degli Studi di Milano in the section "Amministrazione trasparente", "Consulenti e collaboratori".

Date 13/11/2018

Signature

Stefania Mazzini

A handwritten signature in black ink, appearing to read "Stefania Mazzini", is centered on a light blue rectangular background.