

HORIZON 2020 - Partner Profile Form Expression of Interest

1) ORGANISATION INFORMATION

Organisation name (English)	Ruđer Bošković Institute
Organisation name (Croatian)	Institut Ruđer Bošković
Organisation acronym (English)	IRB
Organisation acronym (Croatian)	IRB
Organisation address	Bijenička cesta 54 10000 Zagreb Croatia
Organisation website	http://www.irb.hr/eng
Type of organisation (Enterprise, SME, Academic, Research institute, Public body, Other - specify)	research institute
Department/Unit/ Laboratory	Division of Physical Chemistry
Contact person (incl. Title)	Dr. Marija Luić
Position (Function)	Head of the Laboratory for chemical and biological crystallography
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Description of the organisation (up to 500 characters)

The Ruđer Bošković Institute (IRB) is regarded as Croatia's leading scientific institute in the natural and biomedical sciences as well as marine and environmental research, owing to its size, scientific productivity, international reputation in research, and the quality of its scientific personnel and research facilities. The IRB is the leading and internationally most competitive Croatian institute by virtue of its participation in international research projects, such as for example EC FP5-7 programs.

Description of the department/unit/laboratory (up to 500 characters)

Research teams of the Division of physical chemistry have expertise and exceptional research productivity in chemical kinetics, structural chemistry, spectroscopy, theoretical chemistry, modeling of substance properties as well as physical and chemical processes, risk assessment, and structural and chemical analyses. Several research teams have applied their expertise and extended research activities into various areas of the biosciences.

2) SPECIFIC INTEREST (Call, Topic) and EXPERTISE OFFERED

Relevant topic(s) in the Work Programme (Thematic area, Call, Topic)

Blue growth: Unlocking the potential of seas and oceans

Topic BG-3-2014: Novel marine derived biomolecules and industrial biomaterials

H2020-BG-2015-2 Sub call of: H2020-BG-2014-2015

Description of the expertise offered related to the topic (up to 1000 characters)

Laboratory for chemical and biological crystallography accumulated knowledge and experience in single-crystal X-ray crystallography (determination and interpretation of small and macromolecular crystal structures). It is well known that the knowledge gained from analysis of crystallographic structures is a key underpinning of modern science and technology. Our expertise in chemical crystallography is very important for structural characterization, structure/activity correlation and mechanisms of chemical reactions at the molecular level. In the near future we plan to study mechanisms of biocatalysis and biological pathways by the methods of dynamic crystallography. In the field of biological macromolecules in addition to the expertise in macromolecular crystallography, our team (chemists, physicists, crystallographers, biochemists, molecular biologists) has expertise in molecular biology and genetics, biochemistry and biophysics, and bioinformatics. We have investigated different classes of enzymes, and DNA-binding proteins.

Keywords describing the expertise offered related to the topic (up to 10 words)

Chemical and biological crystallography, dynamic crystallography, molecular biology, bioinformatics, molecular modelling

Experience in previous Framework Programmes (participation in projects)

(Thematic area, Call, Topic, Project full title & acronym, Role in the project)

none

**Experience of cooperation with the industry - incl. SMEs
(Programme, Thematic area, Project full title & acronym, Type of cooperation)**

none

I agree to have this partner profile (expression of interest) published and shared

YES