Partner Search Form
Horizon Europe
Health

Date	12/01/2026	Deadline	14th April 26 (depot)

CONTACT

Organisation	CEA	**Department**	DRF/IRIG/IBS/MEMBRANE
Contact person	EU affairs: Nathalie Picollet-D'hahan Research: Hugues Nury	**Email**	Nathalie.picollet-dhahan@cea.fr
City	Grenoble	**Website**	https://www.ibs.fr/en/research/membrane-proteins-and-glycobiology/membrane-transport-group-h-nury/nury-team/?lang=en
Country	France		

Organisation type

Research organisation type	☒ Research Organisation ☐ University ☐ Company ☐ Other	**Is your company a Small and Medium Sized Enterprise (SME*)?** **Number of employees:**	☐ YES ☒ NO

Your enterprise is an SME if:
- it is engaged in **economic activity**
- it has **less than 250 employees**
- it has either an **annual turnover not exceeding €50M**, **or an balance sheet total not exceeding €43M**
- it is **autonomous**

For the definition of SMEs, look at: http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

Short introduction of key areas of institute's research:

The mission of the Structural Biology Institute (IBS) is to develop research in **integrated structural biology** to address questions in basic and applied science.

The MEMBRANE group's research at IBS focuses on membrane proteins that play crucial roles in health and disease. We aim to better understand how membrane machines operate at the molecular scale, using structural biology and we mainly work with **pentameric neurotransmitter-gated channels**. This part of our research could lead to the development of **more specific and degradable insecticides** for the environment.
Indeed, a large fraction of current insecticides target the insect nervous system. Specifically, the ones that target pentameric neurotransmitter-gated channels (nAChRs, GABAARs) represent ~40% of the market. The structural characterization of these receptors will allow the **improvement of current insecticides** and will open perspectives for **more specific insecticides,** safe for non-target organisms.

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Former participation in an FP European project?	☒ YES ☐ NO
Project title / Acronym:	ERC-POC: ***More specific insecticides: harnessing knowledge of insect receptors***
Activities performed:	- Insect receptor expression, purification and labelling. - Yeast Display technology to screen large libraries of proteins or peptides for their binding affinity to a target receptor. - A.I structure prediction, sequence and scaffold design of high-affinity binders with insecticidal properties.

Expertise / Commitment offered

Description of your expertise:	- Biology of Insect neuroreceptor and gut receptors: Expression, purification and visualization by cryoEM of some receptors in complex with representative insecticides. - *De novo* design of target-specific peptides for crop protection - Peptides screening affecting the receptors via yeast displays
Keywords specifying your expertise:	Protein design, receptor, biochemistry, cryoEM, design pipeline, nicotinic receptor, GABAA receptor
Commitment offered:	☒ Research ☐ Demonstration ☐ Training ☐ Technology ☐ Dissemination ☐ Other:

Interested in participation in project types:			
	☒ Research & Innovation Action	☒ Innovation Action	☒ EIC Pathfinder

Work Programme research areas: indicate your interest

Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

***Destination 2*: Fair, healthy and environment-friendly food systems from primary production to consumption**

- Early-detection methods and predictive modelling (including AI-driven approaches)
- Innovative strategies that reduce resistance risks by expanding non-chemical preventive and curative options

***Destination 4* : Clean environment and zero pollution**

- Replace hazardous active substances used in insecticides biocidal products to control mosquitos.
- Innovative Bio-based substances

Call topic(s): **HORIZON-CL6-2026-02-FARMFORK-02:** Tackling pesticide resistance: early detection, management strategies and foresight.

HORIZON-CL6-2027-01-ZEROPOLLUTION-01 : replacing hazardous substances in biocidal products

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Do you have other partners for this topic (which partners/country)?	Existing partners in computational physics, molecular modelling (France), in drug design and pharmacology (Copenhagen), industrial companies providing solutions in crop protection.

Profile of partner sought

Role	☒ technology development	☒ research	☐ training
	☐ dissemination	☒ demonstration	☐ other _____
Country /region	☒ Any : EU		
Expertise required	• End-users partners such as farmers (private individuals, • organisations, companies): will benefit from increased yields due to targeted crop protection • Industrial partners with activities in producing /commercialising insecticides and interested in co-development of new generation of insecticides with no off-target effects • Partners in regulation, exploitation, and socio-economics in agro industry: market access, regulatory frameworks, social acceptance		

I agree with the publication of my contact data: ☒ YES ☐ NO