Annex 04 CTO_4/2025

	Scientific disciplinary area (SSD):	AGRI-07/A
	Contract duration (max 24 months):	24 months
	Profile of the researcher to be recruited:	1. The candidate must hold a PhD in Food Science or a similar subject, and must have completed at least four months of study at a foreign university. 2. Demonstrated proficiency in the use of HPLC and NMR techniques. Experience of solid-liquid and liquid-liquid extractions and partitioning for the use of molecules as cancer treatment compounds.
	Description of the research project on which the postdoctoral researcher will be working:	Many current therapeutic strategies for the clinical management of cancer rely on the use of molecules that induce DNA damage, thereby sensitizing cancer cells to drug treatment but unfortunately generating "off-target" effects. Recently, it has been demonstrated that *BRCA*-negative (*BRCA*-/-) breast cancer cells are much more sensitive to treatment with PARP1 inhibitors (olaparib) compared with normal cells, thus defining the phenomenon of synthetic lethality. Although the mechanism of homologous recombination is crucial for the efficacy of certain treatments (such as of olaparib in *BRCA*-/- tumors), it can sometimes lead to drug resistance, after its initial efficacy. This research project focuses on identifying novel natural molecules for cancer therapy for use in breast cancer cell models resistant to PARP1 inhibitors and antibody-drug-conjugates (ADCs).