

Call for UNCAN.eu Expert Working Groups

The **Mission on Cancer Board** and the **European Beating Cancer Plan** launched a pan-European initiative to **UNderstand CANcer, UNCAN.eu**, with the ultimate goal of “improving the lives of more than 3 million people, living longer and better, by 2030”. In order to define a strategic road-map for UNCAN.eu, the European Commission has supported the creation of a Coordination and Support Action (CSA), **4.UNCAN.eu**, that will identify **research programs of priority in translational cancer research**.

The European partners that integrate **4.UNCAN.eu** (CCI-Europe, ECPC, France, Spain, Germany, Hungary, Italy, Nederland, and Associated/Consulting partners), aim to identify scientific leaders and patient representatives in different areas of cancer research to form the **Expert Working Groups (EWG)**. Experts appointed to the EWGs will be asked to participate in one or several Delphi processes related to their selected area(s) of expertise. These research priorities are intended to serve as guidelines for the European Scientific Community (including the Cancer Mission Board), to propose specific calls for funding programs.

These programs will also represent use cases feeding a **European Federated Cancer Research Data Hub** that will collect data from experimental models as well as longitudinal, high-quality data obtained from patients. It will enable the accessibility, interoperability, and re-use of collected information (FAIR principles) and their integration with innovative tools, models and technologies at a level that will be unique in Europe.

Within the scope of this initiative, **4.UNCAN.eu** has identified **six areas of research**. The keywords and concepts that are listed below next to each of the research areas, are intended to help experts select the areas most related to their field(s) of expertise.

- 1. Cancer Prevention:** epidemiology and data science (eg: EHRs, real-world data); cancer genomics (eg: genetic predisposition, polygenic risk scores, GWAS); microbiome and diet; obesity and metabolism; exercise biology; environmental carcinogens (eg: alcohol, tobacco, exposome); infectious agents and vaccines; interception approaches; chronic inflammation.
- 2. Early Diagnosis:** computational biology and multi-modal data integration; immune monitoring; pre- and early cancer mechanisms; cancer and regeneration; non-invasive approaches for diagnosis (eg: liquid biopsy); digital pathology and imaging.
- 3. Sensitivity and Resistance to Therapy:** biomarkers and technologies for disease monitoring (eg: ctDNA, radiomics); pre-clinical systems and platforms for cancer modeling; immune-based therapeutic approaches (eg: immune checkpoint inhibitors, adoptive cell therapy, vaccines); immune system-microbiome interactions; cancer (epi)genomics and tumor evolution; cancer cell and tissue plasticity; tumor heterogeneity and microenvironment; cancer stem cell biology and reprogramming; gene editing; medicinal chemistry and drug delivery systems.
- 4. Pediatric Cancer:** (epi)genetic mechanisms of cancer; oncogenic translocations; cancer and development; cancer predisposition syndromes; benign neoplasia; cell of origin.
- 5. Cancer and Ageing:** age-dependent biology and longevity; ageing and senescence; senolytic compounds; telomere biology; cachexia; nutrition and metabolism.
- 6. Survivorship:** secondary neoplasia; treatment-associated neurotoxicity; immune-related adverse events; cognitive effects of anti-cancer therapy in children; effects of cancer and anti-cancer treatment on reproductive functions and cardiorespiratory fitness; interactions between cancer and the nervous system (eg: pain, depression, vision loss).

Interested applicants may select up to **2 research areas** to participate. Experts will be appointed following **systematic criteria of scientific production and international research experience. EWGs will have a balanced representation of scientists at different stages of their career**. An internal scientific committee will review all submitted applications and notify selected experts appointed to the EWGs. The Delphi consensus processes will consist of two online consultation rounds expected to take place between **September 2022 – February 2023**, and one face-to-face meeting to be held between **March – May 2023** whose expenses will be covered by **4.UNCAN.eu**.