

5 per Mille – Preannouncement of CALL FOR PROPOSALS 2026

From Tumor Complexity to Precision Oncology

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Foreword

Cancer is a complex disease. The complexity arises from the interplay of genetic mutations, epigenetic changes, and environmental influences that shape the tumor and its microenvironment and vary between different types of cancer and among patients as well as within a single tumor. This heterogeneity makes diagnosis, prognosis, and therapy highly challenging, necessitating personalized and multi-disciplinary approaches to effectively manage and treat the disease. Recent technological advances have accelerated the understanding of such complexity, opening the way to personalized approaches.

To accelerate interdisciplinary collaboration across Italian institutions and tackle unmet translational challenges and clinical needs, Fondazione AIRC per la Ricerca sul Cancro ETS (AIRC) has launched special initiatives funded by the "5 per mille" tax designation program. Building on the success of previous "5 per mille" Programs, AIRC is now launching a new Call dedicated to deciphering **the tumor ecosystem, its biology and complexity** to advance **precision oncology approaches** for the benefit of patients.

The goal of this Call is to generate or exploit insights that inform the rational design of innovative precision medicine approaches (including diagnostic, prognostic and therapeutic applications). Fondazione AIRC seeks to support research efforts that integrate molecular and cellular understanding with spatial and systems-level analyses to more accurately elucidate pathways underlying tumor progression, immune evasion, and drug resistance.

Proposals should tackle **the most urgent clinical needs**, including cancers with limited diagnostic or therapeutic options, those associated with high mortality rates ("big killers"), or recurrent/refractory tumors. Proposals should integrate **comprehensive mechanistic studies** with a clear trajectory towards clinical impact, spanning diagnostic innovation and therapeutic development in real-world oncology settings. Ultimately, these efforts should drive precision oncology approaches that are both biologically informed and clinically actionable.

Planned activities are expected to represent the cutting edge of technological innovation and to require interdisciplinary and complementary expertise within the research team. Activities should be structured along a «bench-to-bedside» continuum, with tangible plans for clinical implementation i.e. initiating clinical trials, integrating discoveries into diagnostic workflows, or establishing new therapeutic strategies. Such evidence of translational potential will be considered a key criterion for funding.

Fondazione AIRC also recognizes the importance of fostering innovation through **high-risk**, **high-gain activities** dedicated to supporting hypothesis-driven, bold leading-edge approaches. AIRC encourages consortia to welcome **young promising investigators to lead such activities**, ensuring their full integration into the program with appropriate resources and mentorship. Such activities should clearly state



the innovative nature of the research, the underlying hypothesis, anticipated impact, and risk mitigation within their application.

Successful applications could be funded for up to **6 years** with a yearly assessment of progress and a midterm interview in year 3. According to the outcome of year 3 assessment, programs might be further evaluated in subsequent years by a Scientific Review panel via the submission of a detailed progress report. Applicants should be aware that renewal will be granted upon accomplishment of anticipated milestones and funding will be granted only to those programs ensuring clinical translation of reported discoveries. Funding beyond year 3—and subsequently beyond year 4—will be contingent upon positive evaluations.

The **budget allocated for this initiative is in the range of € 10 million/year**, the number of funded programs will depend on the ranking established by peer review and the evaluation of budget requests.

How to Apply

The Call foresees a three-step selection process. Applicants must first submit a **pre-submission enquiry** comprising a Letter of Intent (LOI), and a detailed team description, including the bio sketches of the team leader (hereafter referred to as **Principal Investigator (PI)**, and co-investigators acting as **Group Leaders (GL)**. Pre-submission enquiries will be evaluated by an ad-hoc appointed Scientific Review Panel composed of renowned international experts with complementary expertise in precision oncology research. Teams whose pre-submissions are ranked as most competitive will be invited to submit a **full proposal**. Following review, shortlisted PIs will be invited for a final interview before a dedicated Study Section.

Eligibility Criteria

Applicants

Proposals must be structured under the coordination of a **PI** and include the participation of **GLs** with complementary and interdisciplinary expertise relevant to the specific application. The PI and GLs (**Program members**) must be affiliated with and operate within Italian Hosting Institution(s) throughout the duration of the entire proposed program. The PI will be responsible for the management of scientific and administrative activities for the entire duration of the grant.

PIs and GLs may hold more than one academic affiliation, provided they meet the requirement for substantial presence in Italy—*i.e.*, spending at least 50% of their time in the country. Official documentation confirming substantial presence will be required from all institutions with which the PIs and the GLs are affiliated. Applicants who do not meet this requirement will be deemed ineligible.

Team's size should be commensurate with the proposed activities and enable close interaction among program members and efficient management of resources. A **program manager (PM)** will be required to



ensure program coordination and active communication within the team. He/She will be responsible for communication with AIRC.

Applicants who are current recipients of an AIRC grant may apply to this Call either as Principal Investigator (PI) or Group Leader (GL), provided that the proposed program has no or minimal overlap. Applicants participating in this Call as Principal Investigators (PIs) are not permitted to act as Group Leaders in other consortia within this Call. Acting as Group Leader in multiple applications is discouraged. Budget requests and time allocation will be carefully reviewed. PIs must dedicate at least 30% of their effort to the program, while GLs are required to commit a minimum of 20%.

Hosting Institutions

The Call is open to proposals from both single and multiple Institutions, according to the needs of the proposed research. Program members must operate in Italian Hosting Institution(s), *i.e.* a research organization (such as university, hospital or other research center), irrespective of their legal status (organized under public or private law), whose primary goals are to conduct independent non-economic biomedical research and are committed to disseminate research results. Research organizations, by definition, must completely reinvest possible revenues coming from non-economic research activity in the non-economic research activities. Hosting Institutions must promote the highest standards of integrity in research, in compliance with the <u>AIRC policy on research integrity</u>

Research Plan

Programs must be interdisciplinary and require a collaborative approach. Proposed activities should aim to address the evolving cancer landscape, focusing on understanding tumor heterogeneity and vulnerability.

The research plan should adopt a translational approach—encompassing diagnostic, prognostic and/or therapeutic goals—and be clearly directed toward a common objective, rather than reflecting a collection of individual activities. Proposals should target specific cancer types and/or defined patient sub-groups.

AIRC has interest in the following cancer research areas, although this focus is not exclusive, and proposals outside these areas will also be considered, provided they align with AIRC's mission and scientific priorities:

- Personalized therapeutic strategies for rare and difficult-to-treat cancers: development of clinical trials using molecular profiling to match patients with tailored therapies
- Expansion of Immunotherapy and Precision Medicine Approaches: Identification of novel immunerelated biomarkers and development of personalized immunotherapy regimens
- Integration of Artificial Intelligence in Biomarker Discovery and Patient Stratification: Use of Al and advanced analytics to analyze large-scale omics data.

Despite the broad scope of this Call, the following proposals will not be eligible for this funding scheme:



- Basic research-proposals, i.e. lacking a translational application of the proposed research within the funding period;
- Clinical research-only proposals, without innovative laboratory, research-based components;
- Translational Proposals including Phase III or IV clinical trials;
- Generic «brain gain» programs, *e.g.* programs aimed at recruiting Italian or International scientists within the Hosting Institution, unless recruitment is instrumental to the proposed research;
- Non-hypothesis-driven or generic proposals lacking measurable outputs;
- «Core» funding for enabling basic or clinical institutional research activities;
- Open-ended research programs unlikely to be realistically concluded within the funding period;

All proposals must include appropriate provisions for study design, statistical analysis, and sample size. Documentation of approval/s from competent authorities are mandatory for all studies involving human subjects, human biological samples, and experimental animal experimentation. AIRC reserves the right to monitor compliance with these requirements during and after the funding period. AIRC accepts no liability for harm to participants enrolled in AIRC-funded clinical trials.

Resources generated through research programs - such as biospecimens or datasets - are expected to become shared assets of the AIRC Scientific Community. Applicants must provide a sustainability plan describing how these resources will be shared and maintained beyond the funding period (for example, through incorporation and continued support by the Host Institution, or additional fundings).

Deadlines

Preliminary Deadlines for applications (Deadlines might be subjected to changes; final deadlines will be communicated in the Call for Proposals).

Pre-submission enquiry (Letter Of Intent)	Publication of Call and online form release	February 5, 2026
	Electronic submission deadline	March 15, 2026
	Notification of results	May 15 2026
Full Proposals (if pre-submission approved)	Electronic submission deadline	June 30, 2026
	Digitally signed submission deadline	July 10, 2026
	Papers in press (*)	September 15, 2026
	Interview	mid-November (more details will be provided)
	Notification of results	December 21, 2026
	Start of grants	January 2, 2027