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**AIRC**  
Associazione Italiana  
per la Ricerca sul Cancro



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## Call for Proposals 2017

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My First AIRC Grant (MFAG) – *Transition to independence*

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## Foreword

The Associazione Italiana per la Ricerca sul Cancro (AIRC) is inviting applications for My First AIRC Grants (MFAG) in the area of Cancer Research. These grants are intended to encourage talented young researchers with a strong commitment in cancer research, who have never obtained an AIRC grant before, to submit their research proposals. The scientific activity must be carried out in a research organization located in Italy, organized under public or private law, whose primary goal is to independently conduct biomedical research (university, hospital or other research center). This grant will start on January 2<sup>nd</sup> 2018 and will provide support for a period of 3+2 years (provided that AIRC has available funds and the evaluation of the third year progress report has been positive). The grant is up to € 100.000/year and will be awarded only once in a lifetime.

With this “transition to independence” program, AIRC supports junior scientists and allows them to establish a record of independent research: to this aim, the grantee must be the last and corresponding author of all publications originating from the research carried out with the MFAG. Failure to respect this commitment may result in withdrawal of the grant.

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## 1. How to Apply

**A presubmission inquiry is mandatory for MFAG grants. The presubmission should contain a three-page Letter of Intent (LOI)** with the description of the proposed work and of the projected achievements, together with a description of the qualifications of the applicant, henceforth defined Principal Investigator (PI). Three aspects have to be addressed: 1) the commitment of the PI to cancer research; 2) his/her potential to become scientifically independent and to acquire leadership in the proposed field of study; 3) the impact of the project on the oncology field. A complete list of publications in the last five years must be provided, along with the presubmission inquiry. Applicants who meet the eligibility requirements and who present the most competitive presubmissions will be invited to submit a full proposal.

## 2. Eligibility Criteria

**Applicants.** Applicants can be of any nationality and are expected to have operated to the highest standards of integrity during their whole career. To be eligible applicants must meet the following requirements:

**Be 40 years old or younger by the time of the presubmission application’s deadline;** (born on or after March 2<sup>nd</sup> 1976). Exceptions to the age limit are allowed only in case of research interruptions (see the “Research Interruptions and Justifications” section of this Call for details).

**Have at least three primary research papers as first/co-first or last/co-last author,** in press or published in the last five years in high level peer-reviewed journals; papers in press must be accepted for publication, not just submitted, by the presubmission deadline. Reviews, editorials, letters to the editor without data do not count for eligibility.

A significant research experience in a competitive laboratory outside of Italy is not mandatory but is considered a plus.

Applicants who do not meet the requirements will be triaged out. Moreover, AIRC reserves the right not to fund proposals from PIs who, even if jointly affiliated to an Italian and a foreign institution, do not meet criteria for continuous presence in Italy for at least 70% of their time. To make sure this requirement is met, supporting official documentation will be requested from all institutions the PI is affiliated with (see “Declaration on affiliation” section). Researchers who have previously been awarded an AIRC grant in any category – Start-Up, MFAG, Investigator Grant (IG), TRansforming IDEas in Oncological research award (TRIDEO) – are not eligible for this Call.

Only one application, either IG, MFAG or Start-Up per applicant can be submitted within the 2017 AIRC Calls.

**Hosting Institutions.** For the entire duration of the grant applicants must operate in the Hosting Institution, *i.e.* a research organization (such as university, hospital or other research center), irrespective of its legal status (organized under public or private law), whose primary goal is to independently conduct non-economic biomedical research and to disseminate its results. Possible revenues coming from non-economic research activity must be completely reinvested in the non-economic research activities. Where the Hosting Institution also pursues economic activities, the financing, the costs and the revenues of those economic activities must be accounted for separately. Shareholders, members or other individuals that can exert a decisive influence upon the Hosting Institution cannot enjoy a preferential access to the intellectual property of the results generated by the non-economic research activity.

The Hosting Institution must promote the highest standards of integrity in research, in compliance with the [AIRC policy on research integrity](#).

There are no restrictions on the type of position held by the PI at the Hosting Institution (research contract, fellowship, etc.). Any change occurring in the relationship between the applicant and the Hosting Institution (*e.g.* termination, leave of absence, sabbatical etc.) or in the Hosting Institution legal entity or organization (*e.g.* changes in institution name, merging, Legal Representative turn-over, changes in addresses) must be promptly notified to AIRC.

The Hosting Institution will actively favour the independence of the PI and his/her group and provide proper working spaces, laboratories, equipment, qualified personnel and resources to allow the project execution. AIRC reserves the right to verify that these conditions are met. The Scientific Director or equivalent (*e.g.* Department Head) will serve as the guarantor of the entire operation. The guarantor must provide a letter that confirms the commitment of the Hosting Institution to foster the growth and scientific independence of the research unit, together with a description of laboratories, qualified personnel and resources that will be available to the PI. In addition, the letter must clearly indicate the guarantor's commitment not to be first, last or corresponding author in publications stemming from research carried out by the PI with MFAG funds (see "Institutional Commitments" in the Guide to presubmission preparation).

**Research plan.** A proposal that has been rejected twice (from the same or other applicants) in the past cannot be resubmitted a third time. See "Resubmission of revised applications" for further details.

The same research project cannot be presented by two or more applicants within the 2017 AIRC Calls.

### 3. The Research Plan

All proposed research plans must have a clear objective that is consistent with the AIRC mission and will likely lead to advances in cancer biology, in monitoring, diagnosis, or treatment of tumors in the near term.

Research plans should fall into one of the following research areas:

1. Angiogenesis
2. Cancer genetics
3. Cancer stem cells
4. Cell adhesion, migration, invasion and metastasis
5. Cell cycle control and cell division
6. Cell death and apoptosis
7. Chemotherapy
8. Computational biology
9. Control of gene expression and epigenetics
10. Diagnosis
11. DNA damage and repair
12. Epidemiology and prevention

13. Gene therapy
14. Hormone therapy
15. Imaging
16. Immunotherapy
17. Infection, inflammation and cancer
18. Metabolism
19. Prognosis
20. Radiobiology and radiotherapy
21. Resistance to therapy
22. Signal transduction and intracellular trafficking
23. Structural biology
24. Targeted therapy and new therapeutics
25. Tumor immunology
26. Tumor microenvironment

In principle, AIRC believes that rigid guidelines on the research plan should not be provided for this type of grant since investigator-driven discovery is one of the most potent engines of scientific progress.

At the same time, AIRC feels that phenomenological, descriptive-at-best, proposals should be discouraged. The following kinds of proposals will receive **low priority and have marginal chances of being funded**:

- studies that are essentially confirmatory in nature or represent marginal “variations-on-the-theme” of well-established concepts in cancer research;
- studies contemplating descriptive screenings of molecules and/or phenotypes without mechanistic insights and/or elements of innovative discovery. These include purely descriptive microarray and proteomic profiling studies that are not associated with a strong strategy for clinical application, or the generation of chemical compounds without validating their anti-tumor activities in pharmacological and biological studies;
- generation of reagents and/or optimization of technologies, or creation of services/technological facilities in the absence of a coherent and innovative research plan;
- chemical and/or viral carcinogenesis studies not embodied in the framework of mechanistic studies;
- requests for on-going routine collection of current statistics, such as cancer registry;
- descriptive epidemiology studies;
- health economics proposals;
- all phase three clinical trials;
- all phase one and two clinical trials that are company-driven, with the PI or the Hosting Institution deprived of the intellectual property, of the possibility of publishing the results and of freely exchanging data, reagents and information. This does not exclude collaborative studies with industry.

As for clinical and epidemiological studies, AIRC has interest in the following type of studies:

- a) proposals aimed at studying:
  - interactions between environmental risk factors, genetic profiles and intermediate biomarkers;
  - the natural history of cancer by linking different phases of the disease to specific biological/genetic profiles;
- b) clinical studies of innovative procedures (e.g. molecular, imaging etc.), aimed at evaluating in clinical practice the efficacy of diagnostic and therapeutic approaches, in terms of outcome and quality of life;
- c) pilot clinical studies of new therapeutic drugs, procedures or strategies;
- d) proposals aimed at a critical evaluation of last generation drugs and at elucidating their activity by mechanistic insights;
- e) clinical trials on types of cancer or treatment that generally receive low financial support from other

funding agencies, such as studies on rare tumors and/or orphan drugs.

All proposals must contain appropriate provisions for study design, statistical analysis and sample size (whenever applicable), in particular for studies with human subjects (clinical and epidemiological).

For studies involving human subjects, human biological samples or for animal experimentation, the approval of the competent authorities is mandatory; funds will not be granted in the absence of such documentation, even if the research proposal is scientifically approved. See the “Bio-ethical requirements” section of the Guide to proposal preparation for further details on the documentation required. AIRC does not accept any liability for harm to participants in AIRC funded trials.

Proposals of clinical studies that are property of companies producing drugs or diagnostic tools and that receive economic support from such companies will not be accepted. Drug supply and economic support from companies do not preclude AIRC evaluation, provided that the PIs have the full property of data and results, and that companies have no right to veto the publication of results at any time. A statement that the management of the study, data acquisition and analysis and data property are completely independent of any company producing/marketing drugs or diagnostic tools or with any type of economic interest in the study must be included in the application (see the “Personnel involved in the research” section of the application form), together with the indication on whether the company provides its product(s) to the PI for free or not. Projects will not be funded without such information.

## 4. Intellectual Property

For inventions arising from an AIRC funded project, grant money can be used to cover the costs for filing a patent application within the European Union (EU), but not to extend a patent to non-EU countries. Intellectual property and patents resulting from research carried out with AIRC grants will be solely owned and managed by the grantee and the Hosting Institution. All royalties and revenues deriving from the results of an AIRC grant must be reinvested in independent and non-economic oncological research by the Hosting Institution.

## 5. Funding

Grants are for a five-year (3+2) period: they will officially start on January 2<sup>nd</sup> 2018 and terminate on January 1<sup>st</sup> 2023. **The grant is up to € 100.000/year.** Renewal requests must be submitted yearly (see “Deadlines” below), through appropriate online forms, and will be automatically approved for the second and third year, provided that AIRC has available funds. **At the end of the third year, the PI’s research activity and his/her achievement of a true scientific independence and leadership will be evaluated through a detailed progress report (scientific and administrative) and a site visit, whenever needed.** Instructions regarding the progress report and site visit will be communicated to the PI in due time. Funding for the last two years will be granted only if the PI has demonstrated scientific independence and productivity.

► **This grant is meant to cover research costs, the salary for up to two fellows and 50% of the PI’s salary.** Applicants must indicate the requested support in the budget section of the application, providing a detailed financial breakdown of the anticipated expenditures.

The following costs are permitted:

- **direct research costs**, inclusive of consumables and supplies, “small” bench instrumentation, services, maintenance contracts, publication costs, meetings/travel costs. Such costs should correlate with the number of components of the research unit;
- **salary for the PI** (partial). This award can cover maximum half of the salary of the PI and can be requested only if strictly necessary, *i.e.* only in case the Hosting Institution cannot afford to pay the stipend in full. In this case, the portion of the salary paid with the grant will be given to the PI by the

- Hosting Institution, which will have all the administrative responsibility of the entire salary;
- **support for fellows (personnel costs).** Support will be provided only for fellows (maximum two) at 100% of time on the project. Applicants should ascertain that the Hosting Institution can take on fellows;
  - **indirect costs.** These are generated by the research project, but cannot be attributed directly and quantitatively to a specific activity. For example, they may include core facilities, personnel of the research team not directly involved in research activities (e.g. secretaries and core-facilities personnel, etc.). Indirect costs are up to 15% of the direct research costs (personnel included) incurred, not of the total amount that will be granted;
  - **overheads.** These are expenses that the Hosting Institution must cover so that the research can be carried out. They may include, for example, grant management costs, utilities, administrative costs etc. Overheads are up to 10% of the sum of direct (personnel included) and indirect costs incurred.

Once awarded, the grant is assigned to the PI to carry out the project described in the application. Funds will be made available to the Hosting Institution under terms and conditions that AIRC will provide once the application is approved. Funds must be at the grantee's disposal within 30 days from the time the Hosting Institution has access to them.

Transfer of grant money to other laboratories either in Italy or abroad is not allowed.

At the end of the fifth and last year, a scientific final report will be required and will strongly impact on the evaluation of future AIRC grant applications. An administrative final report must be submitted within three months after the termination of the grant (see "Deadlines" section). Further information about the terms and conditions of the grant, including renewal requests, scientific and administrative final reports, will be provided once the application is approved.

Please note that AIRC reserves the right to audit the administrative management of the project at any time.

## 6. The Review Process

All applications are subjected to an administrative review to verify the compliance with guidelines and eligibility criteria; those that do not conform are triaged out. Eligible applications undergo a peer review process that ensures a fair, independent and expert evaluation of their scientific quality. Only the most scientifically meritorious applications, identified through the peer review process in a rigorous and objective manner as described below, will be funded.

AIRC has appointed a dedicated Study Section composed of outstanding non-Italian experts with complementary expertise covering the various cancer research areas. The Study Section is in charge of the entire review process, including the evaluation of the presubmissions.

Each presubmission is evaluated by two members of the Study Section who select the most meritorious, based on the review criteria listed below, indicating whether the applicant should or should not be invited to submit a full proposal. All applicants will be notified on the outcome of the first round of evaluation. No detailed feedback will be provided to applicants rejected at this stage.

Full proposals are independently reviewed by three members of the Study Section with expertise in the specific area of the research plan, who act as *primary reviewer*, *secondary reviewer* or *discussant*. The *primary reviewer* might also ask to recruit a *reviewer specialist*, should he/she think that the expertise available within the Study Section may not be sufficient for a thorough assessment of the research proposal. The *reviewer specialist* is recruited from a panel of more than 600 well established international investigators working in institutions outside of Italy. Each member of the Study Section provides a score, while the *reviewer specialist* only expresses a priority for funding.

The review criteria are:

1. significance and impact on cancer;
2. innovation;
3. approach and feasibility;
4. international standing of the investigator in cancer research, leadership and track record adequate to establish an independent line of research and successfully complete the proposed study;
5. Hosting Institution's standing at the international level, resources and facilities available, commitment to support the independence of the PI;
6. adequacy of the budget requested.

When all reviews are completed, applications are ranked in order of scientific merit (the *preliminary score*, which is used to rank the applications at this stage, is calculated as the mean of the scores received from the three reviewers who evaluated the application). Proposals are thoroughly discussed by all members of the Study Section during the plenary session. The final ranking, which is based on the *final score* of each application, is calculated as the mean of the scores received from all reviewers during the discussion.

To confirm the ranking of the applications, shortlisted PIs might be interviewed.

The final ranking and the financial availability of AIRC will determine the recommendation for funding, to be endorsed by the AIRC Board of Directors.

In all stages of the review process, reviewer assignments will be made in compliance with conflict of interest and appearance of conflict rules to ensure a review free from inappropriate influence. When accepting to evaluate an application, reviewers agree that they will maintain the confidentiality of the application and associated materials they have received. The [AIRC policy](#) on conflict of interest is available in our website.

All applicants will be notified of the final decision on their application with an official communication from AIRC (the notification date is reported in the “Deadlines” table), and they will have access to the reviewers' comments. The identity of the reviewers will not be disclosed. **The decision concerning the funding of an application cannot be appealed.**

Please note that after the awarding of a grant, AIRC reserves the right to site-visit the PIs laboratories and Hosting Institutions, at any time.

## 7. Revised Applications

► Revised applications that do not meet all eligibility requirements described in this Call will not be sent out for review.

The revised application must include a response to the reviewers' comments in the “Revision” section of the online form. Please keep in mind that - starting this year - the grant will have a duration of five years (3+2), not three: the revised research plan should be adapted accordingly.

► AIRC allows only one resubmission for applications that were not funded, regardless of whether they were presented in the context of different funding schemes.

Applicants who fail to receive funding after two submissions (*i.e.* the original and the revised application), even after addressing all the issues raised by the reviewers, **may submit a new application only if its research plan is fundamentally different** in content and scope. More specifically:

- a new application should include substantial changes in all sections of the research plan;
- there should be fundamental changes in the questions being asked and/or the outcomes examined;
- changes to the research plan should produce a significant change in the direction and approach for



the research project;

- rewording of the Title and Abstract does not constitute substantial changes in scope, direction or content.

## 8. Deadlines

DEADLINES ARE STRICTLY ENFORCED: applications submitted after the deadline will not be accepted.
Deadlines for applications (by 17:00 Central European Time, of the indicated dates).

Presubmission enquiry (mandatory)	online form release	February 2, 2017
	<b>electronic submission deadline</b>	<b>March 2, 2017</b>
	notification of results	May 22, 2017
Proposals (only if presubmission approved)	<b>electronic submission deadline</b>	<b>June 19, 2017</b>
	paper submission (postmark) deadline (*)	June 28, 2017
	notification of results	November 30, 2017
	start of grants	January 2, 2018

(\*) Only the following pages are required in paper format and must be mailed by the indicated deadline:

- Title page, stamped and signed by the PI and the Legal Representative;
- Budget form, stamped and signed by the PI and the Legal Representative;
- Bio-Ethical requirements page, stamped and signed by the PI;
- Declaration on affiliation, stamped and signed by the PI and the Legal Representative;
- AIRC policy on research integrity, stamped and signed by the PI and the Legal Representative.

Send all paper documentation to the following address:

AIRC Direzione Scientifica  
via San Vito, 7 – 20123 Milano

Paper documentation marked with “draft” is not valid. Please print the requested pages only after completion of the online submission.

If these documents are not sent by the indicated deadline, or if AIRC does not receive them, applications will not be sent out for review.

**Deadlines for renewals and final reports** (by 17:00, Central European Time, of the indicated dates).

Renewal for 2nd year of funding	online form release	June 4, 2018
	electronic submission deadline	July 25, 2018
Renewal for 3rd year of funding	online form release	June 3, 2019
	electronic submission deadline	July 25, 2019
Renewal for 4th year of funding, and progress report (scientific and administrative)	online form release	June 5, 2020
	electronic submission deadline	July 20, 2020
	digitally signed submission deadline	July 30, 2020
Renewal for 5th year of funding	online form release	June 3, 2021
	electronic submission deadline	July 24, 2021
Scientific final report	online form release	July 4, 2022
	electronic submission deadline	September 5, 2022
Administrative final report	online form release	February 1, 2023
	electronic submission deadline	April 3, 2023
	digitally signed submission deadline	April 13, 2023

The deadlines for renewal requests and final reports may be subjected to changes. In this case, PIs will be notified of the new deadlines by email.

## 9. Guide to Presubmission Preparation

► To apply, click on the “Area Ricercatori” of the site [www.airc.it](http://www.airc.it)

For researchers who already have an AIRC account: access the “Personal Area” with your username and password.

First-time applicants must register in our system: please click on “Register (for applicants only)” and provide the requested information, including your tax code (*codice fiscale*). The registration will be confirmed by e-mail and a username and password will be provided. Log on in your AIRC account with your username and password.

To launch the application form for the first time: click on “Calls”, select “Individual Grants”, then click on “Apply” in the MFAG 2017 section. In the next window, click on “Access the application form”. To access the application in progress: click on “Submissions” and then click on “Access the application form”.

► Below you will find a list of the general features of our online system:

- the system automatically launches the “Principal Investigator” form. All forms that must be filled out are listed on the left side of the page. Click on each one of them and fill in all the mandatory fields (in bold). **Make sure to click on “SAVE” after completing each form;**
- the forms can be filled out in different sessions and the work can be interrupted/resumed at any time;
- a number of forms must be submitted as PDF files. **Each file cannot exceed 2Mb.** Any file exceeding such a limit will be automatically rejected by the system. **Secure PDF files cannot be uploaded.** Documents submitted as PDF files must be written using an A4 format, single spaced, with margins not less than 2 cm and **a font not smaller than 12 point** (preferably Palatino, Times, Arial). **Do not exceed the page limit indicated for each section:** the system will not allow the upload of a number of pages beyond the limit;
- the status of each form is shown on the left: red cross for mandatory forms that are incomplete; yellow circle for not mandatory forms; green mark for completed forms. These same symbols are used in the “Check and Submit” section;
- the “Check and Submit” section (last title in the list of forms on the left) allows applicants to:
  - a) check and see whether each form has been correctly filled out; for mandatory forms that are incomplete, the information that must be provided is listed;
  - b) view and print the application in its incomplete/complete state. By clicking on “Create draft” and then on “Open submission draft” you can download the PDF draft generated by the system;
  - c) submit the application. Once all mandatory forms are complete, please click on “Submit”. Be aware that after clicking on “Submit” it will not be possible to make any further modifications.
- the complete proposal is automatically assembled as a single PDF file at the end of the online procedure;
- applicants may designate a **Grant Officer** from the Hosting Institution to assist in the preparation and submission of the application. However, the PI is fully responsible of the entire proposal content. See the “Research project” section for further details.

The application must be written entirely in English.

Applications that do not conform to all the requirements in these instructions will be rejected.

### 9.1 Principal Investigator (PI)

The PI is the researcher who is primarily responsible for designing and directing the proposed research.

Please provide the PI’s position in the Hosting Institution (examples: assistant professor, staff scientist, etc.) and

his/her ORCID identifier, if available. ORCID (Open Researcher and Contributor ID) provides a persistent digital identifier that distinguishes the PI from every other researcher; for more information visit the website <http://orcid.org/>. Although not mandatory, we encourage PIs to register into the ORCID website and then insert their ORCID identifier in the corresponding box. All other fields are automatically filled out with information provided during the registration into the AIRC website; to modify the information in any of these fields, please click on the link “My personal data” at the bottom of the page and edit the information in the pop-up window.

Please note: to successfully complete this form, it is mandatory to provide the tax code (*codice fiscale*) and personal and contact data of the PI through the “My personal data” section, which has to be completed and updated.

## 9.2 Title Page

► Please fill in the requested fields, entering:

- **the title of the proposal.** The title must not exceed 120 characters, small cases, spaces included. It should be neither too specific (with abbreviations of molecules names such as “Role of PGCI in tumor progression”), nor too vague (such as “Analysis of tumor metastatization”);
- **the research area.** Select one of the 26 Research areas provided in the menu and listed in “The research plan” section of this Call, based on the topic of the research activity that will be carried out with the grant;
- **the Hosting Institution** (*i.e.* the Italian research center where the PI will carry out the research activity). The system automatically lists the institution(s) indicated by the PI in previous applications to AIRC, if any. In case it corresponds to the institution where the research supported with this grant will be carried out, please check the corresponding box, otherwise check the box “Other” and select the correct Hosting Institution from the drop-down menu. The “Address” field is automatically filled in by the system once the Hosting Institution and Department have been selected. If the Hosting Institution is not listed in the menu, please contact our offices [administrative.office@airc.it](mailto:administrative.office@airc.it);
- **the Department:** please select one of the departments listed in the drop-down menu (unless the form indicates “not available”). If the Department is not listed in the menu, please contact our offices [administrative.office@airc.it](mailto:administrative.office@airc.it);
- **the Laboratory (optional):** please indicate the Laboratory, if applicable;
- **Grant Officer (optional):** applicants may designate a Grant Officer from the Hosting Institution to assist in the preparation and submission of the application. The name of the Grant Officer, if not already present in the form and selectable from the drop-down menu, must be communicated to AIRC by e-mail [airc.direzione-scientifica@airc.it](mailto:airc.direzione-scientifica@airc.it). AIRC will create an account for the Grant Officer and send him/her the access codes to it. The name of the Grant Officer will then appear in the drop-down menu of the application form, allowing the PI to select the name. From their Personal Area the authorized Grant Officers will have access to the PI’s application form and will have the possibility of completing and submitting it on behalf of the PI.

## 9.3 Legal Representative and Scientific Director

The Legal Representative (*Legale rappresentante*) of the Hosting Institution will be responsible, along with the PI, of all the legal and administrative duties of the grant. The information regarding the Legal Representative (mandatory) and the Scientific Director (only if applicable) are provided automatically by the system based on the Hosting Institution selected in the “Title page” section. In case the Director of a Department within the Hosting Institution is duly authorized to sign as Legal Representative of the Institution, check the box “*By flagging this check box you are declaring that the Director of the Department is duly authorized to sign on behalf of the Legal Representative of the Institution*”. Please note that by flagging this box the PI certifies that the Director of the Department has power of attorney. Please make sure that all data are correct and up-to-date, and then click on “Save”. If they aren’t, please notify AIRC by e-mail [administrative.office@airc.it](mailto:administrative.office@airc.it) and provide an official record (*e.g.* copy of Appointment Decree) as supporting documentation.

## 9.4 Project Keywords

Project keywords will be used by the AIRC Peer Review Office to assign each application to the most appropriate reviewers. Therefore, **a good choice of keywords is extremely important to ensure that reviewers with the most adequate expertise will evaluate the application.** Avoid keywords that are too generic or too similar with each other; pick a set of keywords that clearly define the key aspects of your research plan.

Keywords are listed at the end of this Call.

To enter the project keywords (at least one, maximum five) please click on “Enter/Edit Keywords”. In the “Manage Project Keywords” pop-up window, keywords are grouped by their first letter: for example, by clicking on the letter “C” in the menu it is possible to visualize all keywords beginning with the letter C, and to select one. Alternatively, type in a specific keyword in the “Search a specific keyword” box and click on “Search”. To select a keyword, click on it (the keyword box will turn from grey to blue) and then click on “Save”. Repeat this process for each keyword. To exit the window, click on “Close”. You will be automatically redirected in the main keywords page: click on “Save” at the bottom of this page to save the record.

## 9.5 Letter of Intent

In this section, please upload a PDF file with the Letter of Intent (maximum three pages; do not include publications, as these will be listed in a separate section of the application form). In the Letter of Intent, applicants are invited to:

- describe the proposed work and the projected achievements focusing on the potential impact on the oncology field;
- describe their background and expertise, highlighting their commitment to cancer research and their qualifications and motivations to become scientifically independent and to acquire leadership in the proposed field of study.

Applicants are also invited to describe significant experiences in research laboratories outside of Italy, if any.

## 9.6 Institutional Commitments

Please upload a PDF file of a letter confirming the institutional commitments, signed by the guarantor of the Hosting Institution (Scientific Director or equivalent, *e.g.* Department Head) and by the Legal Representative. The letter should describe the level of institutional commitment to foster the applicant’s research career and his/her achievement of scientific independence, indicating:

- the extent to which the applicant will be relieved of other responsibilities in order to have at least 50% of his/her time dedicated to the research project;
- the laboratory, resources, facilities and equipment that will be available to the PI;
- opportunities for critical professional interactions with senior colleagues;
- the pledge that in all publications relative to the research carried out with the MFAG, the PI will be listed as last author and will be the corresponding author as well;
- the commitment to assist the PI during this “transition to independence” phase, supporting him/her in all necessary steps to reach a position of scientific independence within the Hosting Institution, possibly by the end of the grant.

Each one of these issues must be clearly addressed in the letter. Failure to do so may result in rejection of the MFAG application.

## 9.7 PI Education and Training

Click on “Add new record” and list degrees of the PI. The form automatically shows the information inserted in previous applications and stored in the “My Profile” section of your AIRC account. By selecting some or all of these

records, they will be uploaded in the current application; please check that all information is present. At any time a record can be modified or completed by clicking on the “Degree” column and filling in the pop-up window. In order to add a new position, click on “Add new record” and indicate the University/Research center, Country, City, Field of research, time frame, and name of the supervisor/mentor (if applicable), then click on “Save”.

Do not list post-doctoral positions here, as they should be included in the “PI Research and Professional Experience” section.

## 9.8 PI Research and Professional Experience

Click on “Add new record” and list all positions held by the PI, including post-doctoral trainings. The form automatically shows the information inserted in previous applications and stored in the “My Profile” section of your AIRC account. By selecting some or all of these records, they will be uploaded in the current application; please check that all information is present. At any time a record can be modified or completed by clicking on the “Position” column and filling in the pop-up window. In order to add a new position, click on “Add new record” and indicate the Institution, City, Country, time frame, position held, and name of supervisor (if applicable), then click on “Save”.

## 9.9 Research Interruptions and Justifications

This section should be completed in case the applicant’s research activity has been interrupted for at least 5 months between 2012 and 2017 due to parental leave, children care, illness or other personal issues. Applicants are invited to describe in detail if/why the career breaks reported may have had a negative impact on their track record. Reviewers are instructed to take this information into account when assessing the scientific productivity of an applicant.

## 9.10 Publications

The PI must provide the list of papers published in the last five years. To do so, a number of options is available; click on any that applies.

Do not include abstracts, conference papers, book chapters and papers published in journals without IF, unless they are new journals.

### **Add PubMed publications**

Within this interface the system launches a PubMed search and provides a list of PubMed-recorded publications spanning from 2012 to 2017. Enter the PI’s first and middle initials, and click on “Find”. If the applicant has published with a different last name than that used to register into the AIRC account (e.g. married vs maiden name), check the “Change surname” box, and then click on “Find”. Alternatively, search for a specific article by entering its PubMedID in the corresponding box. Once the list of all PubMed publications has been generated, please follow these steps:

- a) Select papers to be included in the application:  
from the list of all PubMed publications, select the papers published by the applicant and that the applicant wants to include in the proposal by clicking on the box at the left side of each article. Pay special attention to potential homonyms.
- b) Indicate acknowledgement to AIRC:  
for each publication, please indicate whether it has an acknowledgement to AIRC by checking the box (the default is “NO”).
- c) Certify accuracy of flags, and save records:  
once all selected publications have been flagged, scroll down to the bottom of the page and check the certification box (“I, the undersigned, certify that all publications have been carefully checked and correctly flagged for authorship. I am aware that any mistake or inaccuracy may impact the evaluation of my track record”). The system automatically recognizes the position of the applicant in the list of authors in each publication (if not, the box “not assignable” will be checked). It is possible

to amend this information, if incorrect, by providing supporting documentation from the main page of the Publications (see below). Click on “Add selected publications” and then on “Close” to complete the process.

### **Add Web of Science Core Collection® publications**

From this section it is possible to enter articles that are included in Web of Science Core Collection® but not in PubMed (most journals are present in both databases, but there are few exceptions; the drop-down menu does not list PubMed journals). For each record, please provide the title, list of authors, journal, year and month of publication, volume, pages. Select the journal from the drop-down menu, which provides all journals listed in Web of Science Core Collection®. Mark each paper for authorship and acknowledgement to AIRC. Please upload the page of the article where the role of the author in the published work is certified (not the entire manuscript). Finally, check the certification box and click on “Save” to complete the process.

### **Add papers in press**

Use this section to submit articles already accepted for publication but not yet available online. For each record, please provide the title, list of authors, journal, year. Select the journal from the drop-down menu, which lists all Web of Science Core Collection® indexed journals. Mark each paper for authorship and acknowledgement to AIRC. Please upload a PDF file with the letter of acceptance from the journal. **Please attach only the pages that report the authorship of the PI and make this information clearly visible (e.g. highlighting the name of the applicant). Do not attach the entire manuscript.** Finally, check the certification box and click on “Save” to complete the process.

### **Add from My Profile - Publications**

This interface lists all publications previously entered into the system (either when submitting an application, or when submitting a grant renewal request, or directly into the publication section of the My Profile Area). By selecting some or all of these publications, they will be uploaded in the current application; please make sure the flags are correct.

All publications entered from any of the above sections will be listed in the “Publications” main page. From here, it is possible to edit the information relative to each paper by clicking on the title of the publication. Once in the “Edit publication flags” window, please check the appropriate authorship box and, if different from the default provided by the system, upload the page of the article where the role of the author in the published work is certified (e.g. for a second or third author who is in fact a co-first author, please upload the PDF file of the page where it is stated that the PI “equally contributed to this work”). To complete the process, click on the certification box and click on “Save” to complete the process.

The system will automatically process all publications data to generate the complete **list of publications** reporting the IF and the PI’s **track record summary** in the PDF file of the application. The PI track record summary is intended as a quick assessment of the **productivity in the last five years** and of the international standing of the PI, in order to facilitate the work of reviewers. Active IF is calculated as the sum of IFs of all articles where the applicant is first, last or corresponding author in the last five years.

The PI is responsible for uploading the most accurate information regarding publications and authorship. The IF assigned to each article, regardless of the publication date, is the latest provided by the Journal of Citation Reports (JCR) by Clarivate Analytics (previously the Intellectual Property and Science business of Thomson Reuters). For this Call, the 2015 JCR IF list will be used.

Candidates are required to check all the information and to contact the AIRC Peer Review Office ([airc.direzione-scientifica@airc.it](mailto:airc.direzione-scientifica@airc.it)) before the deadline of the Call in order to correct any possible inaccuracy or mistake.

Even though the Impact Factor is internationally acknowledged as an important objective criterion that allows for an estimate of peer-recognition of the work of a given investigator, AIRC acknowledges that it is not an absolute standard to evaluate scientific productivity. Moreover, several circumstances mitigate the relevance of the IF; for



example, some important, recently established journals may not be impacted yet or have “artificially low” IF. Also, for some research areas with very specialized, limited readership (e.g. medicinal chemistry) the best journals have low IF compared to others in more popular research arenas. **Reviewers are carefully instructed by AIRC to give due consideration to all caveats associated with the IF when assessing an applicant’s track record and scientific productivity.**

In case additional papers are accepted for publication **after the full submission deadline** (not during the presubmission phase), the PI may request permission from the AIRC Peer Review Office to add this supplementary information to his/her application. Please prepare a **single PDF file** containing a copy of the acceptance letter and a copy of the manuscript, and e-mail it to: [airc.direzione-scientifica@airc.it](mailto:airc.direzione-scientifica@airc.it).

All communications made in this regard **by September 1<sup>st</sup> 2017** (23:59 Central European Time) will be made available to the members of the Study Section, during the plenary session. Any communication received after September 1<sup>st</sup> 2017 (23:59 Central European Time) will not be taken into consideration.

### 9.11 Presubmission Online Submission

Applicants are advised to not leave submission to the last minute, as heavy server load might affect system performance.

At any time during the application process a PDF draft file of the presubmission enquiry can be generated and checked: go to “Check and submit” (on the lower left of the main page), click on “Create draft” and then on “Open submission draft”. It is strongly suggested that after all forms have been correctly filled out, and prior to proceeding with the final submission, the PDF Draft and its content are carefully read, controlled and verified.

To submit the application, go to “Check and submit”. All mandatory sections of the application form must be completed and must have the green “OK” label before finalizing the submission. Only after having ascertained that all data are correctly reported in the PDF Draft of the presubmission, please click on “submit”.

**Applicants will receive a confirmation of the submission by e-mail.** The final PDF file of the presubmission enquiry will be available in the “Your submissions archive” section of the Personal Area, and a copy should be saved for future reference.

- ▶ The application cannot be modified after the electronic submission deadline.
- ▶ The evaluation of the proposal is only based on the information present in the application.
- ▶ No detailed feedback will be provided to applicants rejected at this stage.

## 10. Guide to Full Proposal Preparation

This section is only for applicants officially notified that their presubmission enquiry has been successful.

Click on the “Area Ricercatori” of the site [www.airc.it](http://www.airc.it). Log on in the “Personal Area” with your username and password.

To launch the full application form click on “Submissions” and then click on “Access the application form”.

The full submission application comprises:

- the presubmission enquiry forms. All the information entered in these forms during the presubmission phase cannot be changed, with the exception of the Publications form, which can be modified in order to submit updated information with the full proposal;
- a set of new forms. Below is a detailed description of the information required in the new forms.

Please note that the same general instructions described in the Guide to presubmission preparation apply for the full proposal preparation, e.g. do not attach PDF files bigger than 2 Mb, etc.

### 10.1 Declaration on Affiliation

In this section applicants must indicate whether they are already working in the Hosting Institution. It is not mandatory to be located in the Hosting Institution at the submission deadline; however, should the application be funded, PIs are expected to be affiliated with the Hosting Institution from the beginning of the project and for the entire duration of the grant. Applicants are also required to list all institutions (in Italy or abroad) they are affiliated with.

#### Affiliation with the Hosting Institution

Check “yes” if you are already affiliated with the Hosting Institution by the submission deadline. The Legal Representative of the Hosting Institution will have to sign this declaration; by signing it, he/she confirms that the PI is affiliated with the Hosting Institution and declares that, in case the application is funded, the PI will be affiliated with and will be allowed to carry out the research project in the Hosting Institution for the entire duration of the grant.

Check “no” if you are not affiliated with the Hosting Institution by the submission deadline. The Legal Representative of the Hosting Institution will have to sign this declaration; by signing it, he/she confirms that the PI will be affiliated with the Hosting Institution by the start date of the project and declares that, in case the application is funded, the PI will be affiliated with and will be allowed to carry out the research project in the Hosting Institution for the entire duration of the grant.

#### Affiliation with other institutions

If the response to the statement “The Hosting Institution is the only institution I am affiliated with” is “No”, please list any additional institution the PI is involved with (in Italy or abroad), either selecting it from the drop-down menu or indicating it in the text box underneath, and then Click on “Add”.

Repeat the process to list multiple institutions. Applicants must provide the following documentation **in a single PDF file**:

- An official letter signed by the Legal Representative of the Hosting Institution (meaning the Institution where the PI will carry out the project) certifying the amount of time the PI will spend in the Hosting Institution and the percentage of time that the PI will devote to the project.
- For each of the other institutions the PI is affiliated with (in Italy or abroad): an official letter signed by an institution’s official certifying the amount of time the PI will spend in that institution.

If the requested documentation is already available at the time of submission, check the box “I am attaching the following documentation...”, click on “Select” and upload the documents as a single PDF file. If it is not available at the time of submission, check the corresponding box and send the documentation preferably by **December 15<sup>th</sup> 2017 and, in any case, before the project starts**; use the specific link available in the submission section of your personal area in the AIRC website. Please note that, should the application be approved, funds will not be granted

unless all the requested documentation is uploaded.

## 10.2 AIRC Policy on Research Integrity

Please read the AIRC policy on research integrity and check the corresponding box. The PI and the Legal Representative of the Hosting Institution will have to sign this document; by signing it, they certify that they will comply with ethical principles of good scientific practice and engage in honest behaviour, as described in this policy.

## 10.3 Abstract

Extreme care must be placed on the Abstract preparation. The Abstract must provide an immediate understanding as to why the research plan is proposed, which approach will be undertaken and **the potential impact of the whole line of research on cancer**. A particular care must be dedicated to the last aspect: please explain why the proposed research has a clear objective that is consistent with the AIRC mission and will likely lead to advances in cancer biology, in monitoring, diagnosis, or treatment of tumors in the near term. Avoid long introductions and do not include references.

The Abstract must be structured into the following sections: Background, Hypothesis, Aims, Experimental Design, Expected Results and Impact on Cancer. Either type in the text directly into each box, or use a Word processor and then cut and paste each section into the corresponding box. Please note: the system allows plain text only; special characters will be maintained but formatted text (e.g. bold, superscripts, etc.) will be automatically converted into plain text. **The total number of words for the entire abstract must not exceed 500**; for convenience, the total word count is provided at the bottom of the page and is updated in real time. When all sections have been filled out, click on “Save”. All sections will be assembled automatically into one page in the PDF file of the application.

[Information on all research projects funded by AIRC may be made public on AIRC journals and websites.](#)

## 10.4 Revision

Please check the appropriate box (“Yes” or “No”) depending on whether the research project submitted within this application is a revision of a previously rejected proposal or not.

PIs whose last application (either IG, MFAG, Start-Up or TRIDEO) was rejected in the past five years have two options:

[If the new application is a resubmission](#), check “Yes” and upload a document with a point-by-point reply to the criticisms and issues raised by the reviewers, explaining how they have been addressed and indicating all changes (additions, deletions, modifications) introduced in the research plan for this purpose.

► Please do not exceed two pages (approx. 1000 words).

[If the new application is NOT a resubmission](#), check “No” and briefly explain in the dedicated box why the research proposal is fundamentally different in hypothesis, methods and scope from the previously rejected application.

► The total number of words must not exceed 200.

An application submitted for the third time with the same research plan (by the same or other applicants and regardless of the funding scheme) will not be sent out for review.

## 10.5 Proposal Main Body

This section should not exceed 10 pages and should be structured as follow: 8 pages of written text including references (approximately 4000 words), and 2 pages with figures.

The Proposal Main Body must be attached as a single PDF file.

Describe in detail the proposed research, intended to have a duration of five years, according to the following guidelines:

- please provide the background and rationale of the proposed research, along with relevant literature references and explain the impact on cancer; avoid lengthy, paper-like, introductions. The bibliography should be limited to only those citations essential to the application. List all references together at the end of the proposal main body, **employing the format used by the journal *Cancer Research*: for any reference, give the title and authors**. Example: Hanahan D, Weinberg RA. Hallmarks of cancer: the next generation. *Cell* 2011; 144:646-74. When available, we strongly encourage to include a paper identification code (PubMedID or doi);
- please describe the experimental design and the methodologies that will be employed. If the methodology is new or unusual, describe it in sufficient details for evaluation. Description of cumbersome experimental details and protocols, however, is not encouraged and generally detracts from the quality of the proposal. The research plan should be organized in *tasks*. Given existing difficulties in splitting clinical and epidemiological proposals into tasks, these types of studies should be divided into *phases*, whenever possible: this facilitates the work of reviewers and, in general, results in a better appreciation of the real value of the proposal. When the description of the research can be subdivided in tasks/phases, each numbered item must describe a precise part of the project with its own experimental design and methodological approach. The objective (milestone) of each task/phase and the experimental design (including methods and time-frame) should be clearly identifiable and will be examined by the reviewers to evaluate the feasibility of the project;
- make sure to include a section on potential pitfalls and caveats, discussing the potential difficulties and limitations of the proposed procedures, and suggesting alternative approaches to achieve the objectives;
- please describe the feasibility of the project, by providing:
  - preliminary data. Pay particular attention to this point, as reviewers always evaluate whether enough preliminary data are provided to support the working hypotheses. Include figures (not just written descriptions) of relevant preliminary data. Reviewers will be asked whether the preliminary data leading to the proposed work are scientifically sound and whether they represent a solid premise for the proposed experiments;
  - power calculation. For clinical and epidemiological studies, and whenever appropriate, make sure to have adequate sample sizes to ensure meaningful and statistically significant results. Make sure that the power calculation and analysis are clear and accurately described;
  - a description of the PI's expertise, qualification, past experience and accomplishments that are directly relevant to the projected success of the proposal;
  - a description of facilities and major equipment available for the research. This is particularly important, as many international reviewers may not be familiar with Italian research institutions. To this aim, it would be useful to provide a link to the lab and/or Hosting Institution webpage, when available in English;
  - a description of the key expertise available in the research team (it is possible to provide this information in the “Description of the work for every unit of personnel” section).

## 10.6 Personnel Involved in the Research

This form must be filled out for all persons directly involved in the project, including the PI. Do not list secretaries and/or administrative staff, or personnel involved for less than 20% of their time. Please pay particular attention to the allocation of manpower: reviewers will determine whether it is reasonable for the amount and type of work proposed.

The “core research team” is the research unit directed by the PI, comprising the PI and internal staff (fellows, technicians, collaborators working in the Hosting Institution). The term “External collaborations” is used for scientists external to the core team and/or not affiliated with the Hosting Institution and collaborating with the PI, and for companies involved in the project. Even though scientific collaborations are not discouraged, MFAG are awarded to a single PI, who has full responsibility for directing the proposed research. Also, please note that the term

“collaboration” means a scientific collaboration, not a kind of labor contract.

Begin by completing the information relative to the PI: click on the name of the PI, fill in the indicated fields, then click on “Save”. **For MFAG, the PI must be at least at 50% of the time.**

#### Core team members

To insert a new member of the research unit, click on “Add new core team member” and fill in the fields in the pop-up window. In addition to their personal data (name, surname, date of birth, gender, tax code and institution), the following information are required:

**ROLE:** please choose one from the available entries: fellow; technician; internal collaborator (for any personnel working in the same laboratory, Department or Institution as the PI, and working/collaborating with the PI on the proposed research plan). Please note that **financial support for salaries will be provided for a maximum of two fellows** (not for technicians or collaborators) working 100% of their time on the project.

**TO BE DEFINED (TBD):** check this box if a fellow, technician or internal collaborator has not been identified yet, and enter the requested information. Add TBD personnel sparingly, since a high percentage might negatively influence the assessment of the feasibility of the research plan and/or compromise the timely start of the work. For each TBD personnel please upload one page containing a brief description of the qualifications/skills necessary for the project that the TBD should have.

**TITLE:** please choose one from the available entries: Doctor, Professor, Engineer, or leave blank if none applies.

**CLINICIAN:** for each personnel, including the PI, choose “yes” only if directly involved in clinical practice (*i.e.* examining and treating patients). In general, fellowship support should not be awarded to clinical fellows, since it is quite rare that physicians taking care of patients may be involved on a specific research project at 100% of their time. Exceptions may be possible if thoroughly justified in the “Personnel costs justifications” section of the budget form.

#### External collaborations

To insert a collaborating scientist external to the core team and/or not affiliated with the Hosting Institution, or a company involved in the project, click on “Add new external collaboration” and fill in the fields in the pop-up window. In both cases a formal letter of collaboration is required and must be uploaded as PDF file. In the letter of collaboration, the role on project, the expertise and/or reagents that will be provided should be described in detail. Also in this document, the external collaborators should indicate whether specific agreements have already been made with the PI in terms of: a) management of the resources; b) intellectual property rights; c) authorship in publications resulting from the collaborative effort. Letters of collaboration provided by companies should also state that: a) the PI has the full property of data and results; b) the company has no right to veto the publication of results at any time; c) the management of the study, data acquisition and analysis and data property are completely independent of any company producing/marketing drugs or diagnostic tools or of any type of economic interest. The letter should also indicate under what provision (free or not) the company provides its product(s) to the PI.

#### Description of the Work for each Unit of Personnel

Click on “Select” and upload a PDF file; please do not exceed 2 pages (1000 words).

Please divide this document into tasks/phases, reflecting the organization of the proposal main body, and indicate who will do what in each task/phase. Describe in a concise, but complete manner, the work that each unit of personnel (both core team members and external collaborators) will perform. If necessary, provide evidence of the skills of key team members citing a couple of significant papers that attest to their expertise. Please indicate the position held by each person (*e.g.* investigator, post-doc, staff scientist, technician, etc.). Do not list undergraduate students, secretaries and/or administrative staff, but do include scientific personnel that might be involved for less than 20% of their time.

## 10.7 Budget Form and Justifications

In the five columns, one for each year of support, insert the amount needed for each of the categories allowed. **The budget requested cannot exceed € 100.000/year.** If the grant is awarded, AIRC will provide detailed instructions on the dates within which funds must be spent for each year of support.

### Budget categories allowed

**DIRECT RESEARCH COSTS (EXCLUDING PERSONNEL).** The standard way of budget calculation, based on an itemized list of actual costs, must be employed. Enter the amount of money needed for research costs, divided into the following subcategories:

- consumables and supplies (examples: plasticware, reagents, chemicals, animals if applicable, etc.);
- “small” bench instrumentation (examples: electrophoresis power supplies, microcentrifuges, PCR machines, etc.). As indicated in the Eligibility Criteria section, the Hosting Institution must provide the necessary equipment to carry out the research project;
- services (examples: sequencing, microarray, histology, patent filing costs, etc.);
- maintenance contracts (examples: service contracts for large instruments, animal facilities contracts);
- publication costs (most likely none in the first year of the project, as it takes time to obtain publishable data);
- meetings and travel costs.

► **PI SALARY AND PERSONNEL:** This grant is meant to cover the salary for maximum two fellows and half of the PI's.

**PI SALARY.** Please click on “edit costs” to insert the PI costs details.

**Man/Year effort:** please indicate the percentage of time that will be devoted to the actual performance of the work. **The PI must be at least at 50% of the time on the project.**

**Financial Support (partial):** please indicate the amount of financial support requested for the PI's salary, if any. The financial support can cover **maximum half of the PI salary** and can be requested only if strictly necessary, *i.e.* only in case the Hosting Institution cannot afford to pay the stipend in full. In this case, the portion of the salary paid with the grant will be given to the PI by the Hosting Institution, which will have all the administrative responsibility of the entire salary. In the justification notes please indicate the type of financial support (*i.e.* type of contract).

**PERSONNEL EFFORTS/COSTS.** Please click on “edit costs” to insert the Personnel costs details:

**Man/year effort:** please indicate the percentage of time that will be devoted to the work. Fellows for whom a salary is requested must be at 100% of their time on the project. **AIRC discourages the habit of listing many units of personnel at marginal fractions of their time:** therefore, make sure to have a sizable number of units of personnel devoting at least 75% of their time to the project. PhD students (or equivalent) can be listed as 100%, as the time commitments to courses is not taken into account.

**Financial support:** please indicate the amount of financial support (e.g. fellowship or other contracts permitted by the applicable law) requested; support will be provided only for **fellows at 100% of time** on the project (a maximum of two). Applicants should ascertain that the Hosting Institution can take on fellows as indicated in the application, under the type of financial support requested.

The general policy of AIRC is **to provide fellowships to researchers in the early stages of their career;** the financial support requested should be consistent with the gross amount provided to fellows at the same career level at the Hosting Institution. Integration of the AIRC financial support by the Hosting Institution is permitted, but two salaries are not allowed.

In case an AIRC/FIRC fellowship is awarded to one of the unit of personnel for whom financial support has been requested in this grant application, the PI will be allowed to use the financial support for another unit of personnel, if

needed. In case, the name of the new fellowship recipient must be provided when submitting the budget adjustment or the grant renewal request.

**Curriculum Vitae:** please upload a **one page CV in English** as a PDF file. CV must be added only for personnel working at least at 75% of their time on the project, with the exclusion of technical staff.

► The following format must be used for all CVs:

- personal data (name, date and place of birth, citizenship, work address, phone number and e-mail address);
- education (list, in reverse chronological order, all degrees obtained);
- research experience (list, in reverse chronological order, all positions held, describing very briefly – two sentences maximum – the main focus of the research activity);
- technical skills and competences;
- awards;
- publications (please provide only a selection of the most relevant, with a maximum of five).

**INDIRECT COSTS.** As defined in the “Funding” section of this Call, indirect costs will be supported up to 15% of the direct research costs (personnel included). Please enter the percentage charged by the Hosting Institution (from 0 to 15; 0,1 decimals are allowed); the system will automatically calculate the corresponding amount.

**OVERHEADS.** As defined in the “Funding” section of this Call, overheads will be supported up to 10% of the sum of direct (personnel included) and indirect costs. Please enter the percentage charged by the Hosting Institution (from 0 to 10; 0,1 decimals are allowed); the system will automatically calculate the corresponding amount.

The signature of the Legal Representative in the paper copy of the Budget form (see “Deadlines” and “Final Full Proposal submission”) will be considered an official confirmation that the amounts indicated in the “Indirect costs” and “Overheads” are those applied by the Hosting Institution in agreement with the guidelines of this Call.

► For each budget category, a description and justification of the amounts requested in the “Justification notes” box must be provided. More specifically:

- for each section of the “Direct research cost”, provide a financial breakdown, on an item basis;
- for “PI Salary”: the PI salary can be requested only if strictly necessary, *i.e.* only in case the Hosting Institution cannot afford to entirely pay the stipend. Please specify what portion of the full salary is requested (up to 50%);
- for “Personnel costs”: describe under what type of provision (*e.g.* fellowship, contract etc.) the fellows for whom financial support is sought will be hired. Use this section to justify exceptions for requesting financial support for clinicians (see the section “Personnel involved in the research”).

## 10.8 Existing/Pending Support

In this section please list grants that the PI will or might receive from any funding agency during the period of support with the AIRC grant. In particular:

- Existing support: the PI has already obtained a grant;
- Pending support: the PI has applied and he/she is waiting for the decision by the funding agency.

Please list all grants, regardless of whether they overlap with the current proposal or not. For each grant, indicate: the funding agency, project title, duration, total amount of funding (in Euros) and degree of overlap (in terms of research plan) with the project presented with this MFAG application. In case of overlap provide a justification for requesting additional support from AIRC in the apposite box; also, please provide name and percentage of time committed of all personnel listed in the current application (including the PI) that are also involved in the other grant. A single unit of personnel should not be allocated for more than 100% of the time. This applies to the sum of all

grants, including those from agencies other than AIRC. Reviewers will be asked to verify that the proposal does not represent a duplication of projects already funded by or submitted to AIRC or other funding agencies. AIRC reserves the right to ask supplementary documentation to other funding agencies in order to verify possible overlaps.

## 10.9 Bio-Ethical Requirements

► Check boxes as applicable for human and animal experimentation.

### Research on humans

Please note that the term “Research on humans” is not limited to clinical studies with healthy volunteers and/or patients. **It includes use of human biological samples** (commercially available human cell lines *e.g.* from ATCC are exempt), human genetic material and human data collection (*e.g.* genetic information, health, etc.).

If the research plan includes Research on humans, the approval of the local Ethics Committee or Institutional Review Board (IRB) is mandatory.

► **The authorization must be valid for the entire duration of the human studies as planned in the research proposal.**

The approval document issued by the Ethics Committee MUST indicate:

- the date when the IRB meeting was held; **approvals obtained more than 3 years ago, *i.e.* prior to 2014, are NOT acceptable**, unless the study protocol is still active (supporting documentation might be requested to verify this is the case);
- the name of the applicant or of a unit of personnel or of a collaborator included in the application;
- a clear reference to the studies described in the proposal (*e.g.* the title of the application).

In case biospecimens have been obtained by external sources/collaborators, the clearance documents must be provided by the Ethics Committee of the collaborator’s research center.

If the IRB approval is available at the time of submission, check the box “I have obtained the clearance from the competent Ethics Committee/Institutional Review Board...” and upload it as PDF file by clicking on “Select” under the “Research on humans: clearance from Ethics Committee” header. Please indicate the date the approval was released and, if available, the date it expires; check the box “Valid for the duration of the project” if this is the case (supporting documentation might be requested to verify this condition is met).

If the approval from the Ethics Committee is not available by the submission deadline, we encourage PIs to submit their request to the IRB as soon as possible in order to avoid delays in the payment of the grant, if funded: grants will start only after the provision of the approval to AIRC. Check the box “I have not obtained the clearance from the competent Ethics Committee/Institutional Review Board yet, but I will provide it...” and, when available, upload it as PDF file in the “Submissions” section of the AIRC account (click on “The following required actions are pending” and on the link “Upload required document”) possibly by **December 15<sup>th</sup> 2017**.

### Research on animals

Experimentation on animals (vertebrates, cephalopods and foetal forms of mammals) must conform to all regulations protecting animals used for research purposes. The animal protocol(s) must be evaluated and authorized by the competent authorities (*i.e.* the Italian Ministry of Health, if the animal experimentation will be carried out in the Hosting Institution or in the research lab of a collaborator based in Italy, according to the D.Lgs. 26/2014), and a copy of the authorization must be provided.

► **The authorization must be valid for the entire duration of the animal studies as planned in the research proposal.**



If the authorization is available at the time of the application submission, check the box “I have obtained the clearance from the Ministry of Health ...” and upload it as PDF file by clicking on “Select” under the “Research on animals: Clearance from Ethics Committee” header. Please indicate the release and expiration date of the authorization in the appropriate boxes.

If the authorization is not available by the submission deadline, we encourage PIs to submit their request to the Ministry of Health as soon as possible in order to avoid delays in the payment of the grant, if funded: grants will start only after the provision of the approval to AIRC. Check the box “I have not obtained the clearance from the competent Ethics Committee/Institutional Review Board yet, but I will provide it...” and, when available, upload it as PDF file in the “Submissions” section of the AIRC account (click on “The following required actions are pending” and on the link “Upload required document”), possibly by **December 15<sup>th</sup> 2017**.

**Research supported by AIRC that involves animal experimentation must comply with the principle of the Three Rs (3Rs)** to Replace, Reduce and Refine the use of animals in research, as required by national and international rules. Please upload a document in the “Research on animals: Principles of the 3Rs” section, describing how the three Rs have been implemented in the research plan (e.g. explain why the anticipated results and benefits of the proposed research justify the use of animals, and why methods avoiding the use of living animals cannot be used; provide details and justification on the number of animals proposed for the research plan; describe all actions that will be taken to avoid or minimize pain and distress; etc.).

By signing the Bio-Ethical requirements page in the PDF file of the application, the applicant declares that the research studies are accurately described in the proposal and conform to all regulations protecting animals used for research purposes, including those of the D.Lgs. 26/2014, and that the experiments described in the proposal will be performed following the guidelines described in: Wolfensohn S, Lloyd M: "Handbook of Laboratory Animal Management and Welfare, 4th Edition" (Wiley-Blackwell, 2013).

Please note: Ethics Committee(s) approval(s) for human and/or animal research are not necessary for the assessment of the scientific merit of an application, during the review; however, **if the application is approved, funds will be granted only if the required Ethical Committee certifications have been sent to AIRC**. AIRC is not responsible for any inaccuracy in the ethical documentation provided and does not accept any liability for harm to participants in AIRC funded trials.

## 10.10 Final Full Proposal Submission

(online and by regular mail)

### Proposal PDF draft

At any time during the application process a PDF draft file of the proposal can be generated and checked: go to “Check and Submit” (on the lower left of the main page), click on “Create draft” and then on “Open submission draft”. It is strongly suggested that after all forms have been correctly filled out, and prior to proceeding with the final submission, the PDF Draft and its content are carefully read, controlled and verified.

### Online submission

Applicants are advised to not leave submission to the last minute, as heavy server load might affect system performance.

To submit the application, go to “Check and Submit” (on the lower left of the main page). All mandatory sections of the application form must be completed and must have the green flags before finalizing the submission.

Only after having ascertained that all data are correctly reported in the PDF Draft of the proposal, please proceed to the proposal submission by clicking on “submit”.

**Applicants will receive a confirmation of the submission by e-mail.** The final PDF file will be available in the “Your submissions archive” section of the Personal Area, and a copy should be saved for future reference.

- ▶ The application cannot be modified after the electronic submission deadline.
- ▶ The evaluation of the proposal is only based on the information present in the application.

### Paper submission

For paper submission, please print only these pages:

- Title page;
- Budget form;
- Bio-Ethical requirements page;
- Declaration on affiliation;
- AIRC policy on research integrity.

**Sign and stamp in the appropriate spaces:** the signatures of the PI and of the Legal Representative are both required in the Title page, the Budget form, the Declaration on affiliation and the AIRC Policy on research integrity: **by signing the Title page, the PI and the Legal Representative acknowledge and agree to all terms and conditions of this Call and certify that all information present in the application is correct.** In addition, **the Legal Representative declares that, should the application be funded, the PI will be affiliated with the Hosting Institution for the entire duration of the grant and will be allowed to carry out the research project in the Hosting Institution.** The applicant’s signature is required in the Bio-Ethical requirements page as well. Paper documentation marked with “draft” is not valid. Please print the requested pages only after completion of the submission online.

Please send all paper documentation required to the following address:
<b>AIRC, Direzione Scientifica</b> <b>Via San Vito 7, 20123 Milano</b>
If these documents are not sent by the indicated deadline, or if AIRC does not receive them, applications will not be sent out for review.

## List of Keywords

Acute Lymphoblastic Leukemia (ALL)  
 Acute Myeloid Leukemia (AML)  
 Adenovirus  
 Adjuvant therapy  
 Aging and cancer  
 AIDS/HIV/Kaposi  
 Androgen and/or receptors  
 Aneuploidy  
 Angiogenesis and/or vasculogenesis  
 Animal models  
 Anti-angiogenic therapy  
 Antibody/mAb therapy  
 Apoptosis  
 Aromatase and/or inhibitors  
 ATM pathway  
 ATR pathway  
 Autoimmunity/Autoantibodies  
 Autophagy  
 B cells  
 bcl2 family  
 BCR-Abl/Abl  
 Biochemistry  
 Bioinformatics  
 Biomarkers  
 Biomolecular modelling  
 Biophysics  
 Bladder tumor  
 Body mass index (BMI) and/or obesity  
 Bone disease  
 Bone morphogenetic protein (BMP)  
 BRAF/RAF kinases  
 Brain and/or nervous system tumors  
 BRCA  
 Breast ca.  
 Burkitt lymphoma  
 C.elegans  
 Cachexia  
 Cadherins  
 Cancer evolution  
 Cancer stem cells  
 Carcinogenesis  
 Caspases  
 Caveolin  
 CD133/Stem cell markers  
 Cell adhesion and/or cell adhesion molecules  
 Cell cycle  
 Cell cycle checkpoint G1/S  
 Cell cycle checkpoint G2/M  
 Cell differentiation and/or differentiation therapy  
 Cell migration, motility and/or invasion  
 Cell polarity  
 Cell signaling  
 Centrosome  
 Cervix or endometrial ca.  
 Chemistry  
 Chemoimmunotherapy  
 Chemokines  
 Chemotherapy and/or chemotherapeutic drugs  
 Chromatin remodeling  
 Chronic Lymphocytic Leukemia (CLL)  
 Chronic Myeloid Leukemia (CML)  
 Circulating tumor cells  
 Clinical practice guidelines  
 Clinical trials  
 Colorectal and/or Intestinal ca.  
 Combination therapy  
 Comparative genomics hybridization (CGH)  
 Computational biology  
 Computer Tomography (CT Scan)  
 Costimulatory molecules  
 COX2  
 CRISPR/Cas9  
 Crosstalk  
 Crystallography  
 Cyclic AMP  
 Cyclins and/or inhibitors  
 Cytogenetics and/or chromosome alterations  
 Cytokines/Interleukins  
 Cytokinesis  
 Cytoskeleton  
 Cytotoxic T Lymphocytes (CTL)  
 Dendritic cells  
 Diagnosis  
 Diet  
 DNA damage  
 DNA double strand break repair (DSBR)  
 DNA methylation  
 DNA recombination  
 DNA repair  
 DNA replication  
 DNA single strand break repair (SSBR)  
 Docking  
 Drosophila  
 Drug delivery  
 Drug discovery and/or development  
 Drug response and/or resistance  
 Drug screening  
 Drug toxicity  
 EGF and/or receptors  
 Embryonic development  
 Endocrinology  
 Endocytosis  
 Endoplasmic reticulum (ER)  
 Endothelial cells  
 Epidemiology  
 Epigenetics  
 Epithelial mesenchyme transition (EMT)  
 Epstein-Barr Virus (EBV)  
 Estrogens and/or receptors  
 Exosomes and/or endogenous microvesicles  
 Extracellular Matrix (ECM)/Stroma  
 Fas and/or FasL  
 Fatty acids  
 FGF and/or receptor  
 Flow cytometry  
 Fluorescence imaging system  
 Fluorescence in situ hybridization (FISH)  
 Fluorescence resonance energy transfer (FRET)  
 Focal Adhesion/FAK  
 Folate and/or receptor  
 Functional genomics  
 Functional validation of target genes  
 Fusion genes  
 Gastric ca.  
 Gene alteration/gain or loss  
 Gene expression and/or profile  
 Gene regulation  
 Gene therapy  
 Genetics  
 Genome wide screening/GWAS  
 Genomic imprinting  
 Genomic/Genetic instability

Genomics  
 Genotoxicity  
 Glioma and/or glioblastoma  
 Glucocorticoids and/or receptors  
 Glucose metabolism and/or Warburg effect  
 Glycoproteins and/or glycosylation  
 Golgi  
 G-proteins and/or GPCR  
 Granulocytes  
 Growth factors and/or receptors  
 Growth induction and/or growth arrest  
 GVHD and/or Graft versus Tumor  
 Gynecological tumors  
 Head and neck ca.  
 Heat shock proteins (HSP)  
 Hedgehog pathway  
 Hematologic malignancies  
 Hematopoiesis  
 Hematopoietic stem cells  
 Hemostasis and thrombosis  
 Hepatitis B virus (HBV)  
 Hepatitis C virus (HCV)  
 Hepatocellular carcinoma (HCC)  
 HER1-2-3-4  
 Hereditary DNA repair disorders  
 Hereditary tumors  
 Herpes virus  
 High Mobility Group Proteins (HMG)  
 Hippo pathway  
 Histone modifications  
 HLA/Major Histocompatibility Complex (MHC)  
 Hodgkin's lymphoma  
 Homologous recombination  
 Hormones  
 Human Papilloma Virus (HPV)  
 Hypoxia/Hypoxia-inducible Factors (HIF-1)  
 Immune escape  
 Immunization  
 Immuno-editing  
 Immunohistochemistry  
 Immunosuppression and/or suppressor cells  
 Immunotherapy  
 In vitro imaging and/or live cell imaging  
 In vivo imaging  
 Infection  
 Inflammation and/or inflammatory cytokines  
 Inhibitor of apoptosis proteins (IAPs)  
 Innate immunity  
 Insulin  
 Insulin-like growth factor (IGF) and/or receptors  
 Integrins and/or Integrin-linked kinase (ILK)  
 Interferons  
 Ion channels  
 Jak/Stat pathway  
 Kidney ca.  
 Kinase/Kinome  
 Lentivirus  
 Leukaemia  
 Lipid metabolism  
 Lipidic mediators  
 Lipoxygenases  
 Liquid biopsy  
 Liver development and/or regeneration  
 Loss of heterozygosity (LOH)  
 Lung ca.  
 Lymphatics and/or lymphangiogenesis  
 Lymphocyte differentiation  
 Lymphomas  
 Macrophages and/or monocytes  
 Magnetic resonance imaging (MRI)  
 MAP Kinases  
 Mass spectrometry  
 Mathematical modeling  
 Mathematical oncology  
 Matrix metalloproteases (MMP) and/or inhibitors  
 MDM2  
 Medulloblastoma  
 Melanoma  
 Membrane biology  
 Mesothelioma  
 MET/HGF  
 Metabolism/Metabolomics  
 Metallo-drugs  
 Metastasis  
 Microarrays  
 Microbiome  
 Microenvironment  
 microRNA  
 Microscopy  
 Minimal Residual Disease (MRD)  
 Mitochondria  
 Mitosis  
 Monoclonal antibodies (mAbs) and/or immunoconjugates  
 Mouse models  
 mRNA processing  
 mRNA translation  
 Multidrug resistance (MDR)  
 Mutation (somatic and/or germline)  
 Myc  
 Myeloma  
 Nanotechnology/Nanoparticles  
 Netrin receptors  
 Neuroblastoma  
 Neuroendocrine tumors  
 Next generation sequencing  
 NF- $\kappa$ B family  
 Nitric oxide  
 NK and/or NKT cells  
 NMR spectroscopy  
 Non apoptotic cell death  
 Non melanoma skin tumors  
 Normal stem cells  
 Notch pathway  
 Nuclear medicine  
 Nuclear receptor  
 Nuclear structures  
 Nucleophosmin (NPM)  
 Oncogenes  
 Oncogenic virus/Viral oncology  
 Organic compounds  
 Osteopontin  
 Osteosarcoma  
 Ovarian ca.  
 Oxidative stress and/or Reactive Oxygen Species (ROS)  
 p21 - activated kinases (PAK)  
 p53, p63, p73  
 Palliative care  
 Pancreas ca.  
 Pathology  
 Patient-derived xenografts (PDX)  
 Patient risk stratification  
 PDGF and/or receptors  
 Pediatric tumors  
 Peptides as drugs  
 Peroxisome proliferator-activated receptor (PPAR)  
 PET and/or PET-CT

Phage display  
Phagocytes and/or phagocytosis  
Pharmacogenetics/Pharmacogenomics  
Pharmacokinetics  
Pharmacology  
Phosphatases  
Phospholipids  
Phosphorylation  
Photodynamic therapy and photodetection  
Photonics  
PI3K/Akt/PTEN/mTOR pathway  
Poly-ADP-ribose polymerase (PARP)  
Polymorphisms/SNPs  
Post-translational modification  
Precancerous lesions  
Preclinical studies  
Prevention and/or chemoprevention  
Prognosis  
Prostaglandins  
Prostate ca.  
Proteasome  
Protein microarrays  
Proteomics  
Radionuclide therapy  
Radiosensitivity and/or resistance  
Radiotherapy  
Radiotoxicity  
RAS/RAS inhibitors  
Rb/Rb family  
Response and/or resistance to therapy  
RET  
Retinoblastoma  
Retinoic acid and/or receptors  
Retrospective studies  
Rho GTPases family  
Risk factors  
RNA binding proteins  
RNA splicing  
Sarcoma  
Screening  
Senescence  
Side effects  
Signal transduction inhibitors  
siRNA and/or non coding RNA  
Small molecule inhibitors  
Smoking  
Soft tissue tumors  
Solid tumors  
SPECT  
Spheroids/3D cultures  
Src family  
Staging  
Statistics  
Stress response  
SUMO and/or sumoylation  
Surgery  
Survival analysis  
Synthetic lethality  
Systems biology  
T cells/TCR  
T helpers  
Target therapy  
Telomere and/or telomerase  
Testis ca.  
TGF and/or receptors  
Thymoma  
Thyroid ca.  
Thyroid hormone  
Tissue microarrays (TMA)  
TNF and/or receptors  
Tolerance  
Toll-like receptors (TLR)  
Topoisomerase  
TRAIL  
Transcription  
Transcription factors  
Transformation assays  
Transgenic mice  
Translesion synthesis  
Translocation  
Transplantation  
Treg cells  
Triple negative breast ca.  
Tumor antigen  
Tumor dormancy  
Tumor-infiltrating Lymphocytes (TIL)  
Tumor suppressor genes  
Tumor-stroma interaction  
Tyrosine kinase receptors (TKR) and/or inhibitors  
Ubiquitin and/or ubiquitination  
Ultrasound  
Urokinase-Plasminogen System (uPA, uPAR, PAI)  
Vaccine  
VEGF and/or receptor  
Virology  
Von Hippel-Lindau (VHL)  
Wilms' Tumor Gene (WT1)  
Wnt/beta-catenin pathway  
Xenopus  
Yeast  
Zebrafish