- AIRC -

Associazione Italiana per la Ricerca sul Cancro

Call for Applications

International Cancer Research Fellowships

iCARE 2015

Co-funded by the European Union

Via San Vito 7 - 20123 Milan, Italy
Tel. +39-02-7797385/374
Fax +39-02-7797259
E-mail: airc.direzione-scientifica@airc.it
Technical support: tel.+39-02-7797224

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Foreword

The Italian Association for Cancer Research (AIRC) is inviting applications to the International Cancer Research Fellowships (iCARE) program, a funding scheme intended to promote the mobility of experienced researchers to and from Italy. This program is open to highly qualified post-doctoral fellows or equivalent who wish to broaden their experience in oncologic research, and consists of three different types of fellowships, each for a duration of **two years**:

Outgoing fellowships: for researchers who have worked in Italy for more than three years out of the last four years, interested in a research experience in a scientific institution located in a different country than Italy.

Incoming Fellowships: for non-Italian scientists interested in a research experience in a scientific institution located in Italy.

Reintegration Fellowships: for Italian researchers who have worked in a country outside Italy for at least two out of the last three years, and who wish to return and work in a research center in Italy.

A total of fifteen fellowships will be awarded.

This fellowship program has received funding from the European Union's Seventh Framework Program for research, technological development and demonstration under grant agreement n. 609284.

Eligibility criteria for applicants

At the time of the relevant deadline for submission and regardless of the type of fellowship, applicants MUST *either* be in possession of a doctoral degree, independently of the time taken to acquire it, *or* have at least four years of full-time equivalent research experience (including the period of research training) after the degree which formally allowed them to embark on a doctorate in the country in which the degree was obtained or in the country where the fellowship is taking place. Example: Italian applicants not holding a PhD must have at least four years of full research experience after the attainment of a *laurea magistralis* in order to be eligible. Candidates who only have a "*laurea breve/triennale*" are not eligible.

In addition, the following eligibility criteria specific for each type of mobility fellowship MUST be met:

Outgoing fellowships:
• Applicants must have legally resided and have had their main activity (work, studies, etc.) in Italy for at least three out of the last four years prior to the relevant deadline for submission.
• The Host Institution's premises must be located in a different country than Italy.
• Applicants must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organization for more than twelve months in the three years prior to the relevant deadline for submission.

Incoming fellowships:
• Applicants must be non-Italian.
• The Host Institution's premises must be located in Italy.

• Applicants must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than twelve months in the three years prior to the relevant deadline for submission.

Reintegration fellowships:
• Applicants must be Italian.
• The Host Institution's premises must be located in Italy.
• Applicants must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than twelve months in the three years prior to the relevant deadline for submission.

The Host Institution

The research activity must be carried out in 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 Host 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 Host Institution cannot enjoy a preferential access to the intellectual property of the results generated by the non-economic research activity.
Host Institutions must assure **optimal working conditions** to the fellows, both technical and contractual. More specifically, they must be committed to:

1. provide appropriate facilities, equipment and infrastructure, as well as training resources in complementary skills, e.g. seminars/workshops on Intellectual Property Rights (IPR) knowledge and skills, grantsmanship, ethical issues etc. Details on resources and trainings opportunities will have to be included in the letter of acceptance of the fellow, written and signed by the head of the hosting lab;
2. comply with national or sectoral regulations concerning health and safety in research;
3. take on fellows under a **full employment contract**, with adequate and equitable social security provisions (contribution to pension funds, health and accident insurance, parental leave, etc.) in accordance with existing national legislation and with national or sectorial collective bargaining agreements. After the awarding of a fellowship, a "**Declaration of conformity**" certifying that these conditions are met will have to be signed by the Host Institution's Legal representative and by the fellow. The Declaration of conformity is included in this Call (see Addendum A).

The research project

Research plan

Applications must include a detailed research plan, agreed with the head of the hosting lab, with a clear **focus on cancer**. The proposed research plan should be highly innovative, feasible, internationally competitive and with the potential to advance the field; in addition, it must be doable in the two-year time frame of the fellowship.

Intellectual property rights

Intellectual property and patents resulting from research carried out during an iCARE fellowship appointment will be solely owned and managed by the grantee and the Host Institution.

Ethics rules
All proposals involving research on animals and/or humans must comply with the **ethics directives** of the 7th Framework Programme, as detailed in the "Guide for proposal preparation", and clearance from the competent Ethics Committee(s) is mandatory.

Research proposals falling under any of these categories cannot be funded and applications will be automatically rejected:

a. Research activity aiming at human cloning for reproductive purpose;
b. Research activity intended to modify the genetic heritage of human beings, which could make such changes heritable (research related to cancer treatment of the gonads can be funded);
c. Research activity intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.

The review process

All applications undergo an initial administrative review by the staff of the AIRC Peer Review Office for compliance with guidelines and eligibility; those that do not conform will be triaged out. Applications that meet all eligibility requirements undergo a peer review process that ensures a fair, independent and expert evaluation of their scientific merit and competitiveness.

For the scientific evaluation of iCARE applications AIRC relies on the expertise of internationally recognized Italian scientists members of the AIRC Scientific Fellowship Committee (*Comitato Scientifico Borse*, CSB) and a panel of about 600 well-established international investigators working in institutions outside of Italy. Applications are independently evaluated by three reviewers (one from the CSB and two from the international panel) with expertise in the specific area of the research plan. Reviewer assignments are made in compliance with conflict of interest rules to ensure a review free from inappropriate influence. The AIRC policy on the Conflict of Interest is available here:
https://www.direzionescientifica.airc.it/Policies/Default.aspx

When accepting to evaluate an application, reviewers and CSB members agree that they will maintain the confidentiality of applications and associated materials they have received.

Three review criteria will be used to evaluate applications. Reviewers will assign a score to each section; for each evaluator, the global score of an application (range: 0–100; 100 for the most competitive) will be calculated as the sum of the three sub-scores. The review criteria are:

- **Quality of the Host Institution** (score range: 0-45).
  Reviewers will evaluate the quality of the Host Institution (laboratories, facilities, training potential also in complementary skills) as well as the competence of the head of the hosting laboratory (in terms of expertise in the field, track record, international standing and ability to provide mentoring).

- ***Curriculum vitae* of the applicant** (score range 0-35)
  Reviewers will evaluate the applicant's education/transcripts, track record, previous mobility (transnational and/or inter-sectorial), and consistency between the fellow's profile and research project.

- **Research proposal** (score range: 0-20)
  The research project will be judged based on its relevance to cancer, innovation, feasibility, and overall scientific/technological quality. To avoid funding applications with a non-competitive research plan, the average of the scores assigned by each of the three reviewers to this section must be at least 10.

For each application the global scores received from the three scientific reviewers will be averaged to calculate the final score. Proposals will be ranked according to the final scores.

The staff of the AIRC Peer Review Office will identify the "finalists", i.e. the top scoring applicants by going down the list of all ranked applications, until all available fellowships are allocated. The five applications ranking immediately below the finalists are kept in reserve ("reserve list") to allow for eventualities such as the withdrawal of an application or the availability of additional budget from other sources. When equally qualified, preference will be given to:
- younger candidates and/or researchers at their early post-doctoral level (taking into consideration career breaks, if present);
- applicants from less favoured countries;
- applicants that ensure a more balanced gender ratio.

All applicants will receive a communication from AIRC ("Notification of results") that will include: the indication on whether they are in the finalist list, in the reserve list, or in the not-approved list; the final score; the funding cut-off; the reviewers comments. The identity of the reviewers will not be disclosed.

Finalists and their applications will be subjected to further scrutiny: an ethical review and an interview. Applications by finalists in which the proposal involves research on animals and/or human subjects will undergo an **ethical review** by ethics experts. Ethics reviewers will not revisit the scientific evaluation, but will assess the documentation in support of research on animals and/or human subjects, in order to determine whether the applicants:

- respect the FP7 ethical standards;
- clearly indicate how the proposal meets the national legal and ethical requirements of the country where the research will be performed;
- have sought or are planning to seek the approval of relevant local/national (ethics) committees.

Particular attention will be paid to proposals involving research intervention on humans, the use of human embryonic stem cells and/or foetal tissues.
Ethics experts will prepare an Ethics Review Report which may include requests of clarifications or additional documentation. Applicants must respond and provide the requested supplementary information, which will be analyzed by the ethics experts to determine whether it adequately addresses the relevant ethical issues. Ethics reviewers will then make a final recommendation. The identity of the ethics experts will not be disclosed. Please note: **a proposal may be rejected on ethical grounds following an ethical review**.

An **interview** with the finalists will be organized, via telephone or video-conference, with the CSB member who evaluated their proposals, in order to obtain information on the commitment of the applicants, their timelines, the enthusiasm they bring to their research, and career plans. Reviewers will write a brief summary of the interview and submit it to the Peer Review Office, together with their final recommendation.

If there are no issues with the research proposal after the ethical review, and if the interview of the candidate is successful, finalists are awarded the fellowship; otherwise the first member of the

reserve list is invited for an interview and the application subjected to an ethical review, and so on, until all fellowships are assigned. Successful finalists receive an official award letter with the terms and conditions of the award, together with instructions on how to activate the fellowship.

Funding

The financial support provided comprises:

- **Living and mobility allowance**: this allowance is calculated multiplying a flat rate of € 50.000/year by the correction coefficient of the country of the Host Institution. The correction coefficients are those established for the PEOPLE Work Programme 2013, listed in the Addendum B at the end of this Call;
- **Travel allowance**: up to € 1000/year, to cover a roundtrip ticket/year from the place of origin (or the home country, whichever applies) to the country of the Host Institution;
- **Research cost contribution**: up to € 1500/year to participate to a scientific meeting.

The Living and mobility allowance will be used by the Host Institution to pay the fellow's stipend monthly, applying the local taxes in place; in addition, in conformity with the conditions set forth in the **full employment contract**, the Host Institution will also deduct the mandatory employer's contributions (e.g. pension provision): **the amount remaining from the Living and mobility allowance, after the employer's contributions have been paid and the income taxes deducted, is the fellow's net salary**. For Incoming and Reintegration fellowships: please note that the fellow cannot be taken on with a fellowship provision ("*borsa di studio*"), but must be hired under a regular work contract ("*contratto di lavoro a tempo determinato*", or "*contratto di collaborazione a progetto – co.co.pro.*", if applicable). For all types of fellowships, in case the award is granted, the Legal representative of the Host Institution and the Fellow will have to sign the "Declaration of conformity" (see Addendum A) which certifies that the fellow is hired with a full employment contract. The Living and mobility allowance will be transferred by AIRC to the Host Institution, after a specific agreement between the two parties is set up and the Declaration of conformity has been signed.
The Travel allowance and the Research cost contribution will be directly refunded by AIRC upon presentation of appropriate documentation.

A renewal request (first year progress report) must be submitted at the end of the first year of funding, and a detailed final report (scientific and administrative) must be prepared at the end of the funding period.

Deadlines

Call deadlines are strictly enforced: applications will not be accepted beyond the relevant deadlines.

Deadlines for applications
All deadlines are intended by 17:00, Central European Time, of the indicated dates.

Applications	**publication of call and release of online application forms**	**April 1, 2015**
	electronic submission deadline	**May 19, 2015**
	paper submission (postmark) deadline (*)	**May 22, 2015**
	notification of results	**September 16, 2015**
	start of fellowship	**By March 1, 2016 (#)**

(#) Fellowship awardees should start their activity as soon as possible, depending on the time required to obtain documents/permits necessary in the host country (e.g. Visa, etc.). The start date must be on the first working day of the month of choice. The earliest start date is November 2, 2015; the latest is March 1, 2016. Fellowships can start only after all administrative documents have been finalized and signed by all parties (e.g. the contract between fellow and Host Institution; the agreement between AIRC and Host Institution).

(*) For paper submissions: please print, stamp and sign in the appropriate spaces:

• the Title page
• the page indicating the type of fellowship
• the abstract (please initial this page)
• the bioethical requirements form, containing the checked boxes relative to animal and human experimentation

Please note that in the Title page two signatures are required: the Legal representative's and the fellow's. Should it be difficult to obtain both signatures in the same page (e.g. in case the fellow is not already in the Host Institution), it is possible to send separately two paper copies of this page, one with the signature of the fellow, and one with the signature of the Legal representative and the Host Institution's stamp.

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

Send these pages to:

AIRC
Direzione Scientifica
via San Vito 7
20123 Milan
Italy

Guide to proposal preparation

General information

Candidates must apply via the AIRC online portal after setting up a personal account: go to www.airc.it; click on "Area Ricercatori"; click on "Register (for applicants only)" and provide the requested information, including the Italian tax code (*codice fiscale*), if applicable. Make sure to indicate an e-mail address and phone number where you can be easily reached during all stages of the peer review process; if possible, please include a mobile phone number. The registration will be confirmed by e-mail and a username and password will be provided within two working days. Make sure to register early. You must login to access the application form.

To launch the application form for the first time, click on "Calls", go to "Fellowships" and click on "Apply" in the "iCARE – 2015" 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 "Applicant's personal data" 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;** it may be necessary to update the page of the browser to see that the information has been saved;
- 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". Please note 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.

The application must be written entirely in English. Applications that do not conform to all the requirements in these instructions will be rejected.

Applicant's personal data

Most 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 from the pop-up window.
In the "Address" field, please indicate the postal address (home or workplace) where documents related to the fellowship can be mailed to.
In the "Education (Undergraduate)" field please enter the details of the undergraduate degree obtained (i.e. of the degree that formally allows one to embark on a doctorate in the country where the degree was attained; in Italy, this would be a "*laurea magistralis*").
In the "Education (PhD)" field please indicate whether you earned a doctorate degree by checking the appropriate box at the "I obtained a PhD" question. If you do hold a PhD, please indicate: the country where you earned it; the research field; the official date it was awarded; the mark/score (write N/A if not applicable); the University.

Type of fellowship

In the upper part of the form: please enter the title of the research proposal; it must not exceed 120 characters, small cases, spaces included.
In the lower part of the form, please select the fellowship you are applying to (only one can be chosen), making sure that all eligibility requirements indicated are met. Applications from researchers who do not meet the eligibility criteria will not be sent out for review and will automatically be rejected.

Head of the hosting lab

Please fill in the requested fields with information on the head of the hosting lab (i.e. the person who will supervise and mentor the fellow) and on the Host Institution.

Legal representative

The Legal representative (*Legale rappresentante*) i.e. the authorized official of the Host Institution will be responsible, along with the head of the hosting lab, of all the legal and administrative duties of the fellowship award.
For Outgoing fellowships: please enter the requested information, then click on "Save". In the "Role" field, please indicate the position held by the Legal representative in the Host Institution (e.g. President, Dean, etc.).
For Incoming and Reintegration fellowships: the information regarding the Legal representative are provided automatically by the system based on the Host Institution selected in the "Head of the hosting lab" section. Please make sure that all data are correct and up-to-date; if they aren't, or in case the name of the Legal representative does not appear automatically in the form, please notify AIRC by e-mail (administrative.office@airc.it). You may be asked to provide an official record (e.g. copy of Appointment Decree) as supporting documentation before the request to modify existing information or to enter any new data in the form is approved and executed. To confirm the data provided by default, please click on "Save".

Head of the laboratory of origin

Please fill in the requested fields with information on the head of the laboratory of origin and the Institution of origin. Provide a letter of presentation of the applicant by the head of the lab of origin

as PDF file: click on "Select" and follow the prompt. The letter should be in letterhead paper, dated and signed, and must not exceed one page in length (approx. 500 words, font size 12). For Incoming and Outgoing fellowships, the head of the lab of origin should include a **statement that he/she is open to reintegrate the candidate** in the lab at the end of the fellowship appointment.
In case the head of the lab of origin requests the letter of recommendation not to be included in the application, please upload a statement indicating that, in order to maintain confidentiality, the letter will be sent separately to the AIRC Peer Review Office. The letter, in PDF format, should be e-mailed **by May 25th 2015** to: airc.direzione-scientifica@airc.it
The AIRC Peer Review Office will forward the letter to the reviewers assigned to the application.

Education and training of the applicant

Click on "Add new record" and list all degrees obtained (undergraduate, master's and doctoral).

Research and professional experience of the applicant

Click on "Add new record" and list all position held by the applicant after the attainment of the highest degree (e.g. PhD) indicated in the previous section; use this section to list post-doctoral trainings. **Do not leave any period unaccounted for.** For transition phases (e.g. in between positions), enter "None" in the Institution field and indicate "Unemployed" or "Transition phase" in the "Position" field. Do not include holidays. It is assumed that each entry refers to a full time position. To list part time positions, please contact AIRC: airc.direzione-scientifica@airc.it

Research interruptions and justifications

This section should be completed in case the applicant's research activity has been interrupted due to parental leave, children care, illness or other personal issues. Click on "Add new record" and fill out the requested fields.
This section allows applicants to report **prolonged periods of absence** from work that 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.

Curriculum vitae of the applicant

The *Curriculum vitae* of the applicant must not exceed the two-page length. The CV, to be uploaded as PDF file, should integrate the biographical sketch outlined in the "Education and training" and "Research and professional experience" sections, and should contain the following information:

- Name of applicant;
- Research activity: for the most relevant entries in the application forms "Education and training of the applicant" and "Research and professional experience of the applicant", please provide:
    - the exact dates in the format month-day-year. Example: "From September 1st 2011 to March 1st 2014: post-doctoral fellow at [name of the Institution, city, country]. **Do not leave any period unaccounted for**;
    - the name of the supervisor;
    - a brief description (two-three sentences) of the main focus of the research activity.
- Research interruptions, if applicable: indicate the exact dates and cause(s). Example: "From January 10th 2012 to June 1st 2012, career break for maternity leave";

- Transition phases in between positions, if applicable, specifying where they were spent. Example: "From March 2nd 2014 to April 15th 2014: transition phase (unemployed) in Milan, Italy, preparing for new position in USA and waiting for Visa". Do not include holidays;
- Technical skills, competences, clinical activity (if applicable);
- Awards, participation to international meetings and courses.

Do not list the applicant's publications in the CV, as there is a separate, specific section for this ("Publications of the applicant", below).

Certificate of graduation

Please upload a copy, in PDF format, of the degree certificate and transcripts (i.e. scores obtained in individual exams). To facilitate the work of reviewers who may not be familiar with the academic transcripts of the applicant's country, especially if in a language different than English, please include a page with a description (or translation) of the certificate provided and of the score range (e.g. for Italian applicants uploading a certificate of *laurea magistralis*, please explain that the scores of individual exams range from 18 to 30, 30 being the best score obtainable, and that the final score or *voto di laurea* can go from 80 to 110, 110 being the best score).

Publications of the applicant

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

Add PubMed publications

Within this interface the system launches a PubMed search and provides a list of PubMed-recorded publications spanning from 2010 to 2015. Enter the applicant'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 PubMed ID 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. Do not include abstracts, conference papers, letters to the editor, book chapters and papers published in journals without IF, unless they are new journals.

b. Indicate acknowledgement to AIRC
For each publication, please indicate whether it has an acknowledgement to AIRC by checking either "YES" or "NO" (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

authorship will be "not assignable"). 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® publications

From this section it is possible to enter articles that are included in Web of Science® 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®. 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® indexed journals. Mark each paper for authorship and relevance to cancer research. Please upload a PDF file with the letter of acceptance from the journal. Do not attach the entire manuscript, unless it is relevant for the proposed research (e.g. it contains important preliminary data mentioned in the proposal main body). Finally, check the certification box and click on "Save" to complete the process. The IF of papers in press will not be included in the publications table.

Add from MyPub

This interface lists all publications previously entered into the system (e.g. in case the candidate has previously submitted an application to AIRC, or has entered publications directly into the MyPub section of the Personal 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 applicant "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 publication data to generate the complete list of publications in the PDF of the application, reporting the Impact Factor (IF) of the journals where each paper (with the exception of papers in press) was published. Regardless of the publication date, the IF assigned to each paper is the latest (2013) provided by Thomson Reuters.

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 both in alphabetical order and by topic.
To enter the project keywords (at least one, maximum five) please click on the button "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".

Research project – Abstract

The Abstract must provide an immediate understanding as to why the research plan is proposed, which approach will be undertaken and the potential impact on cancer of the whole line of research. 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.
Please note: the Abstract of all iCARE fellowships funded may be made public on AIRC or European Union journals and websites.

Research project – Background

The Background must not exceed the one-page limit (approx. 500 words) and must be attached as PDF file. The list of References should not be included here as there is a separate, specific section for this ("Research project – References", see below).

Research project – Proposal main body

The Proposal main body must not exceed the four-page limit (approx. 2000 words) and must be attached as PDF file. The research project must have a clear **relevance to cancer**.

Research project – Feasibility

The Feasibility must not exceed the one-page limit (approx. 500 words) and must be attached as PDF file. This section can be used to provide: preliminary data, if not already included in the Proposal main body; statistical power calculation, if applicable; description of key facilities or resources instrumental for the success of the research plan; discussion on pitfalls and caveats; etc.

Research project – References

Please attach as PDF file a list of selected references (approx. 15) and in any case not exceeding the one-page limit. We recommend employing the **format used by the journal Cancer Research**: for any reference, give the title and list all authors. For articles with more than 6 authors, list the names

of the first 6 authors, followed by "et al.". 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).

Letter of acceptance by the Host Institution

Please upload a letter, on letterhead paper, written and signed by the head of the hosting lab (max two pages in length, approx. 1000 words), addressed to the AIRC Peer Review Office.

The letter MUST include the commitment that the Host Institution will:

- provide the "**necessary lab space and infrastructures**" (verbatim);
- take on the fellow under a **full employment contract**, agreeing to the terms and conditions set forth in the "**Declaration of conformity**" (see Addendum A). Only in case the fellowship is awarded, the fellow and the Legal representative of the Host Institution will have to sign the Declaration and send AIRC a copy of such document;
- offer **complementary skills training** (please provide specific examples, e.g. written skills for preparation of grants and papers, ethical issues and regulations in biotechnologies etc.).

The letter MUST also include:

- a clear indication on whether **health and accident insurance coverage** will be provided to the fellow;
- a description of the **resources** (e.g. research grants held by the supervisor) available to carry out the proposed research plan;
- a description of the **mentoring activities** of the head of the hosting lab, with a specific training plan for the fellow (e.g. frequency of one-on-one meetings, lab meetings, participation to seminars and international congresses) and description of mentoring experience (e.g. number of fellows trained and supervised in the past);
- the indication that the fellow will have the **freedom to publish** the results of the research carried out during the fellowship appointment.

Please note that this document is particularly important as it represents the major source of information for reviewers on the mentoring and training opportunities that the fellow will receive. As such, **it will impact the assessment of the "Quality of the Host Institution"**, one of the major review criterion (see "The review process" above).

Education and training of the head of the hosting lab

Click on "Add new record" and list degrees and post-doctoral trainings of the head of the hosting lab (only **the most relevant**).

Research and professional experience of head of the hosting lab

Click on "Add new record" and list **the most relevant positions** held by the head of the hosting lab.

Publications of the head of the hosting lab

A list of **the most important** publications of the head of the hosting lab, spanning 2010 to 2015, must be included. Click on "Add publications" and follow the prompt.

Bioethical requirements

Check boxes as applicable for human and animal experimentation.

Research on animals
Please check "Yes" if the research plan involves experimentation on live non-human vertebrates (including independently feeding larval forms and foetal forms of mammals as from the last third of their normal development) and live cephalopods.

If you check "yes", the following documents must be provided:

● **authorization from the competent animal research ethics committee** and, if applicable, the regulatory approval of the competent national authority in the country in which the research is to be carried out. For Incoming and Reintegration Fellowships, the authorization must be issued by the Italian Ministry of Health.

The authorization must be valid for the entire duration of the fellowship appointment; if it expires during the course of the research project, a new approval must be provided to AIRC. If the authorization is not in English, please provide a cover letter summarizing in English the key points of the clearance (e.g. issue and expiration dates, title of project, etc.).
If the authorization is available at the time of the application submission, check the box: "I have obtained the clearance…" and upload it as PDF file by clicking on "Select" under the "Research on animals: Clearance from Ethics Committee" header.
If the authorization is not available by the application submission deadline, **the applicant must obtain it by September 16th 2015**. Check the box: "I have not obtained the clearance…" 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". Alternatively, please send it to the AIRC Peer Review Office by e-mail (airc.direzione-scientifica@airc.it).

● **a detailed description of the compliance with EU FP7 Ethics Directives** on the protection of animals used for scientific purposes.

Supporting material to complete this section is available in the following website:
http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#fp7

The document must include a thorough description on how the **principles of the three Rs** (Replacement, Reduction, Refinement) have been implemented in the research plan, and must address the following issues:

a. details of the species (and strain if applicable) of the animals to be used, explaining why they have been chosen;
b. explanation as to 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;
c. details and justification on the number of animals proposed for the research plan;
d. description of animal care, housing and husbandry that ensure animal welfare (compliant with regulations applicable to the country where the research is carried out), and of all actions that will be taken to avoid or minimize pain and distress. Please indicate what humane endpoints, in terms of recognizable clinical signs, will be implemented. Make sure to state what will happen to the animal at the end;
e. description of the trainings to work with animals completed by the applicant, in case he/she will directly handle the animals.

To upload the document (max 10 pages, in PDF format) click on "Select" under the "Research on animals: Compliance with EU ethics rules" header and follow the prompt.

Research on humans
If the proposed research plan involves any of the following:

Adult healthy volunteers
Patients
Children
Persons not able to give consent
Human genetic material
Human biological samples
Human data collection (e.g. genetic information, health, etc.)
Human embryos/foetal tissues/embryonic stem cells

you MUST provide the following documents:

● **clearance from the competent Ethics Committee/Institutional Review Board** and, if applicable, the regulatory approval(s) of the competent national or local authority in the country in which the research is to be carried out.

The clearance must be valid for the entire duration of the fellowship appointment; if it expires during the course of the research project, a new approval must be provided to AIRC. If the authorization is not in English, please provide a cover letter summarizing in English the key points of the clearance (e.g. issue and expiration dates, title of project, etc.).
If the authorization is available at the time of the application submission, check the box: "I have obtained the clearance…" and upload it as PDF file by clicking on "Select" under the "Research on humans: Clearance from Ethics Committee" header.
If the authorization is not available by the application submission deadline, **the applicant must obtain it by September 16th 2015**. Check the box: "I have not obtained the clearance…" 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". Alternatively, please send it to the AIRC Peer Review Office by e-mail (airc.direzione-scientifica@airc.it).

● **a detailed description of the compliance with EU FP7 Ethics Directives.**
Supporting material to complete this section is available in the following website:
http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#fp7

Make sure to thoroughly address the following:

a. clear indication on where the research with human subjects will be carried out, and what authorities will approve the studies (i.e. what authority will issue the ethics clearance). In addition, please indicate which national, EU and/or international regulations will apply;
b. informed consent (mandatory). Describe the procedure for obtaining informed consent, and a comprehensive description of the information provided to the patients (e.g. statement that the participation is voluntary; description of the procedures; description of foreseeable risks; information on who is organizing and funding the research etc.). Please include a copy of the informed consent in the application (attach PDF to this section), translated in English, if necessary:

c. data protection and privacy: describe the arrangements for protecting the confidentiality of personal data of the individuals concerned. In addition, describe the measures taken to encode or anonymise banked biomaterial;
d. for research on human embryos/foetus, you must provide a comprehensive ethical justification for conducting such research; provide full details regarding the source of human stem cells/human foetal tissue; describe the procedure of how informed consent was obtained; and specify that the proposal does not include research activities which destroy embryos, including for the procurement of stem cells. The legislations, regulations and ethical rules of the country where the research will be carried out must be taken into account.

Please note that the compliance with ethics regulations will be carefully evaluated. Make sure to thoroughly address all the issues indicated above, for both research on animals and on human subjects. A proposal may be rejected on ethical grounds; any proposal that contravenes fundamental ethical principles will not be selected.

Financial support

This is a "read-only" section. The Living and mobility allowance is automatically calculated by the system based on the country where the Host Institution is located and entered in the "Head of the hosting lab" section of the application form, and is the product of the base rate of € 50.000/year multiplied by the correction coefficient of the country selected.
The Travel allowance and the Research cost contribution indicated are the maximum allowed (€ 1000 and € 1500/year, respectively).

Proposal PDF Draft

A PDF draft file of the proposal can be generated and checked at any time during the application process: 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.

Final Full Proposal Submission

Online submission

To electronically 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 a green flag before finalizing the submission. Only after having ascertained that all data are correctly reported in the PDF Draft of the proposal, please proceed to proposal submission by clicking on "Submit application".

The application submitted will be available in PDF format in the "My submissions archive" section in of the Personal Area, and a copy should be saved for future reference.

Please note: if the clearance from the Ethics Committee will be provided at a later time point, there will be a warning in the Personal Area indicating that there are actions pending. Please upload the documents by the deadlines indicated in this Guide.

Paper submission

Please note: paper documentation marked with "draft" is not valid. Please print the requested pages only after completion of the submission online.

For paper submission, please print only the following pages:
- Title page
- Page indicating type of fellowship selected
- Abstract
- Bio-Ethical requirements page

Sign in the appropriate spaces or, in the case of the Abstract, please initial this page. The signatures of the candidate and of the Legal representative are both required in the Title page. **By signing the Title page, the candidate and the Legal representative acknowledge and agree to all terms and conditions of this Call.**

Send these pages to:
AIRC
Direzione Scientifica
via San Vito 7
20123 Milan
Italy

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

Addendum A: Declaration of conformity (template)

This document must be signed ONLY in case the fellowship is awarded

DECLARATION OF CONFORMITY

OF THE AGREEMENT BETWEEN HOST INSTITUTION AND FELLOW WITH THE PROVISIONS SET FORTH FOR iCARE FELLOWS (International Cancer Research Fellowships – iCARE 2015)

The undersigned ……. (*name of Legal representative*) as Legal representative of …….. (*Host Institution*) declares, for the recruitment of the Fellow, that an agreement has been entered into force between the:

…….. (*Host Institution*)

and

…….. (*name of Fellow*)

and that the terms and conditions of the award are in conformity with the provisions set forth in:

1. the Call for Applications "International Cancer Research Fellowships – iCARE 2015";
2. the letter of award to the Fellow;
3. the Agreement between the Italian Association for Cancer Research (AIRC) and the Host Institution.

The undersigned declares that the above mentioned agreement consists of a **full employment contract** between the Host Institution and the Fellow, detailing all the following information:

a) the conditions for implementing the research project "……." (*title of application*) and the respective rights and obligations of the Fellow and the Host Institution under the project;
b) the name of the scientist supervising the research project activities (i.e. the head of the hosting lab) as well as a description (abstract) of these activities;
c) the amounts that the Fellow is entitled to receive from the Host Institution and the arrangements for payment of the amounts due to the Fellow;
d) any additional contribution paid to the Fellow by the Host Institution for the purpose of this project and the arrangements for payment of this amount;
e) any amount deducted, subject to a legal justification;
f) that the Fellow shall not be allowed to receive, for the activities carried out in the frame of the fellowship project, other incomes than those received from the Host Institution;
g) the law applicable to the agreement;
h) the social security coverage provided to the Fellow; the Host Institution must ensure that the Fellow is covered under the social security legislation, applicable according to Title II of Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004. Where the Fellow will carry out the research project activities in a non-EU Member State, each Host Institution shall ensure that the Fellow is covered under a social security scheme providing protection at least equivalent to those of local researchers holding a similar position;
i) the provisions for annual and sickness leave according to the applicable law and the internal rules of the Host Institution;
j) that the Fellow must devote him/herself full-time to his/her research project;

k) the description and the timetable for the implementation of the research project activities;
l) the total duration, the nature and the date of entry into force of the agreement, provided that the working conditions are comparable to those applied to local researchers holding a similar position. The agreement must cover the entire duration of the fellowship award (two years); it must be effective on the official start date of the fellowship; and it must be valid at least until the official termination date of the fellowship.
m) the location(s) where the research project activities will take place;
n) that the Fellow shall inform the Host Institution and AIRC as soon as possible of circumstances likely to have an effect on the research activity or the agreement, such as a pregnancy, or a sickness that may directly have an effect on the implementation of the project or the agreement;
o) the arrangements between the Host Institution and the Fellow during and after the research project activities relating to intellectual property rights;
p) that each publication, press release, patent or other documents or media communication citing results from the research carried out during the fellowship appointment must include an acknowledgment to AIRC and the European Union.

The payment arrangements referred to in paragraph c) shall be based on the principle of monthly payments in arrears unless this is contrary to the applicable law mentioned in paragraphs g) and h).

Date:

Signature of Legal representative:

Date:

Signature of Fellow:

Addendum B: correction coefficients

Incoming or Reintegration Fellowships

Italy	1,066

Outgoing fellowships

Albania	0,631	Croatia	0,830	Hungary	0,792	Marocco	0,780	South Korea	1,062
Algeria	0,774	Cuba	0,825	Iceland	0,950	Mozambique	0,703	Spain	0,977
Angola	1,191	Cyprus	0,837	India	0,691	Namibia	0,862	Sri Lanka	0,814
Argentina	0,685	Czech Republic	0,842	Indonesia	0,853	Nepal	0,833	Sudan	0,883
Armenia	0,831	Dem. Rep. Congo	1,476	Ireland	1,091	Netherlands	1,041	Suriname	0,630
Australia	1,082	Denmark	1,341	Israel	1,098	New Caledonia	1,135	Swaziland	0,718
Austria	1,062	Djibouti	1,097	Jamaica	1,070	New Zealand	1,003	Sweden	1,186
Azerbaijan	1,110	Dominican Rep.	0,707	Japan	1,501	Nicaragua	0,633	Switzerland	1,196
Bangladesh	0,587	Ecuador	0,806	Jordan	0,982	Niger	0,881	Syria	0,903
Barbados	1,215	Egypt	0,594	Kazakhistan	0,963	Nigeria	0,990	Taiwan	0,898
Belarus	0,701	El Salvador	0,799	Kenya	0,833	Norway	1,406	Tajikistan	0,702
Belgium	1,000	Eritrea	0,952	Kosovo	0,609	Pakistan	0,521	Tanzania	0,766
Belize	0,753	Estonia	0,756	Kyrgyzstan	0,791	Panama	0,675	Thailand	0,820
Benin	0,930	Ethiopia	0,909	Laos	0,850	Papua New Guinea	1,034	The Faroes	1,341
Bolivia	0,661	Fiji	0,646	Latvia	0,743	Paraguay	0,666	Timor Leste	0,994
Bosnia Erzegovina	0,744	Finland	1,194	Lebanon	0,877	Peru	0,917	Togo	0,860
Botswana	0,632	France	1,161	Lesotho	0,687	Philippines	0,785	Trinidad e Tobago	0,915
Brazil	1,120	FYROM	0,605	Liberia	1,083	Poland	0,771	Tunisia	0,720
Bulgaria	0,627	Gabon	1,044	Libya	0,624	Portugal	0,850	Turkey	0,984
Burkina Faso	0,967	Gambia	0,856	Liechtenstein	1,099	Romania	0,695	Uganda	0,703
Cambodia	0,855	Gaza Strip	1,157	Lithuania	0,725	Russia	1,075	Ukraine	0,782
Cameroon	0,933	Georgia	0,731	Luxembourg	1,000	Rwanda	0,974	United Kingdom	1,344
Canada	0,942	Germany	0,948	Madagascar	0,815	Samoa	0,921	US	1,010
Capo Verde	0,742	Ghana	0,730	Malawi	0,898	Saudi Arabia	0,807	Uruguay	0,942
Cent. African Rep.	1,013	Greece	0,948	Malaysia	0,803	Senegal	0,903	Uzbekistan	0,564
Chad	1,118	Guatemala	0,796	Mali	1,002	Serbia	0,679	Vanuatu	1,200
Chile	0,693	Guinea	0,676	Malta	0,822	Sierra Leone	1,090	Venezuela	0,811
China	1,002	Guinea-Bissau	0,952	Mauritania	0,673	Singapore	1,208	Vietnam	0,577
Colombia	0,948	Guyana	0,691	Mauritius	0,801	Slovak Republic	0,800	West Bank	1,157
Congo	1,167	Haiti	1,082	Mexico	0,780	Slovenia	0,896	Yemen	0,726
Costa Rica	0,933	Honduras	0,827	Moldova	0,643	Solomon Islands	1,111	Zambia	0,797
Côte d'Ivoire	0,968	Hong Kong	1,090	Montenegro	0,650	South Africa	0,678		

Adapted from: http://ec.europa.eu/research/mariecurieactions/documents/about-mca/actions/cofund/marie-curie-actions-fellowships-people-wp-201301_en.pdf (pages 66 and 67)

To calculate the Living and mobility allowance, the base rate of € 50.000,00/year will be multiplied by the correction coefficient of the country where the host institution is located.
Belgium and Louxembourg are the basis of the correction coefficient which is therefore always static at 1,000
For Countries where the correction coefficient is not available, the European Commission will decide on a case-by-case basis.

KEYWORDS IN ALPHABETICAL ORDER

Adenovirus
Adhesion dynamics
Adjuvant therapy
Aging
AIDS/HIV/Kaposi
ALL
AML
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
Beta-catenin/Wnt pathway
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 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
Chemokines
Chemotherapy and/or chemotherapic drugs
Chromatin remodeling
Circulating tumor cells
Clinical practice guidelines
Clinical trials
CLL
CML
Colorectal and/or Intestinal ca.
Combination therapy
Comparative genomics hybridization (CGH)
Computational biology
Computer Tomography (CT Scan)
Costimulatory molecules
COX2
Crosstalk
Crystallography
CTL
Cyclic AMP
Cyclins and/or inhibitors
Cytogenetics and/or chromosome alterations
Cytokines/Interleukins
Cytokinesis
Cytoskeleton
Dendritic cells
Diagnosis
Diet
DNA damage
DNA double strand break repair (DSBR)
DNA methylation

KEYWORDS IN ALPHABETICAL ORDER

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 microvescicles
Extracellular Matrix (ECM)/Stroma
Fas and/or FasL
FGF and/or receptor
Flow cytometry
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
GVDH and/or Graft versus Tumor
Gynecological tumors
Head and neck ca.
Heat shock proteins (HSP)
Hedgehog pathway
Hematologic malignancies
Hematopoiesis
Hematopoietic stem cells
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-inducibile 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

KEYWORDS IN ALPHABETICAL ORDER

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
Liver development and/or regeneration
Loss of heterozygosity (LOH)
Lung ca.
Lymphatics and/or lymphangiogenesis
Lymphocyte differentation
Lymphomas
Macrophages and/or monocytes
Magnetic resonance imaging (MRI)
MAP Kinases
Mass spectrometry
Mathematical modeling
Matrix metalloproteases (MMP) and/or inhibitors
MDM2
Medulloblastoma
Melanoma
Membrane biology
Mesothelioma
MET/HGF
Metabolism/Metabolomics
Metallo-drugs
Metastasis
Microarrays
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-kB 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
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.
PDGF and/or receptors
Pediatric tumors
Peptides as drugs
PET and/or PET-CT
Phage display
Phagocytes and/or phagocytosis
Pharmacogenetics/Pharmacogenomics
Pharmacokinetics

KEYWORDS IN ALPHABETICAL ORDER

Pharmacology
Phosphatases
Phospholipids
Phosphorylation
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
Retinoic acid and/or receptors
Retrospective studies
Rho GTPases family
Risk factors
RNA binding proteins
RNA splicing
Sarcoma
Screening
Senescence
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 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

KEYWORDS IN ALPHABETICAL ORDER

Von Hippel-Lindau (VHL)
Wilms' Tumor Gene (WT1)
Xenopus
Yeast
Zebrafish

KEYWORDS BY TOPIC

Adhesion and stroma

Adhesion dynamics

Cadherins

Caveolin

Cell adhesion and/or cell adhesion molecules

Cell migration, motility and/or invasion

Cell polarity

Cytoskeleton

Extracellular Matrix (ECM)/Stroma

Focal Adhesion/FAK

Integrins and/or Integrin-linked kinase (ILK)

Matrix metalloproteases (MMP) and/or inhibitors

Microenvironment

Osteopontin

Tumor-stroma interaction

Urokinase-Plasminogen System (uPA, uPAR, PAI)

Angiogenesis

Angiogenesis and/or vasculogenesis

Endothelial cells

Hypoxia/Hypoxia-inducibile Factors (HIF-1)

Lymphatics and/or lymphangiogenesis

VEGF and/or receptor

Von Hippel-Lindau (VHL)

KEYWORDS BY TOPIC

Cell death and apoptosis

Apoptosis

Autophagy

bcl2 family

Caspases

Fas and/or FasL

Inhibitor of apoptosis proteins (IAPs)

Mitochondria

Non apoptotic cell death

p53, p63, p73

Senescence

TRAIL

Clinical topics

Cachexia

Computer Tomography (CT Scan)

Diagnosis

Drug toxicity

Endocrinology

GVHD and/or Graft versus Tumor

Magnetic resonance imaging (MRI)

Metastasis

Minimal Residual Disease (MRD)

Nuclear medicine

Palliative care

PET and/or PET-CT

Prognosis

Retrospective studies

SPECT

Staging

Survival analysis

Ultrasound

Transplantation

KEYWORDS BY TOPIC

Genes, proteins and miscellanea

ATM pathway
ATR pathway
BCR-Abl/Abl
Bone morphogenetic protein (BMP)
BRAF/RAF kinases
BRCA
Embryonic development
Endocytosis
Endoplasmic reticulum (ER)
Epigenetics
Epithelial mesenchyme transition (EMT)
Exosomes and/or endogenous microvescicles
FGF and/or receptor
Glucocorticoids and/or receptors
Glucose metabolism and/or Warburg effect
Glycoproteins and/or glycosylation
Golgi
Heat shock proteins (HSP)
High Mobility Group Proteins (HMG)
Ion channels
Lipid metabolism
Liver development and/or regeneration
MDM2
Membrane biology
Myc
Netrin receptors
Nitric oxide
Oncogenes
p21 - activated kinases (PAK)
Phosphatases
Phospholipids
Poly-ADP-ribose polymerase (PARP)
Proteasome
RNA binding proteins
Stress response
SUMO and/or sumoylation
Telomere and/or telomerase
Topoisomerase
Ubiquitin and/or ubiquitination
Wilms' Tumor Gene (WT1)

KEYWORDS BY TOPIC

Genetics

Aneuploidy
Centrosome
Chromatin remodeling
Cytogenetics and/or chromosome alterations
DNA damage
DNA double strand break repair (DSBR)
DNA methylation
DNA recombination
DNA repair
DNA replication
DNA single strand break repair (SSBR)
Functional genomics
Fusion genes
Gene alteration/gain or loss
Gene expression and/or profile
Gene regulation
Genetics
Genome wide screening/GWAS
Genomic imprinting
Genomic/Genetic instability
Genomics
Hereditary DNA repair disorders
Histone modifications
Homologous recombination
Loss of heterozygosity (LOH)
microRNA
Mitosis
mRNA processing
mRNA translation
Mutation (somatic and/or germline)
Nuclear structures
Pharmacogenetics/Pharmacogenomics
Polymorphisms/SNPs
Post-translational modification
RNA splicing
siRNA and/or non coding RNA
Synthetic lethality
Transcription
Transcription factors
Transformation assays
Translesion synthesis
Translocation
Tumor suppressor genes

KEYWORDS BY TOPIC

Immunology

Autoimmunity/Autoantibodies
B cells
Chemokines
Costimulatory molecules
COX2
CTL
Cytokines/Interleukins
Dendritic cells
Granulocytes
Hematopoiesis
HLA/Major Histocompatibility Complex (MHC)
Immune escape
Immunization
Immuno-editing
Immunosuppression and/or suppressor cells
Immunotherapy
Infection
Inflammation and/or inflammatory cytokines
Innate immunity
Interferons
Lymphocyte differentation
Macrophages and/or monocytes
Monoclonal antibodies (mAbs) and/or immunoconjugates
NF-kB family
NK and/or NKT cells
Phagocytes and/or phagocytosis
Prostaglandins
T cells/TCR
T helpers
TNF and/or receptors
Tolerance
Toll-like receptors (TLR)
Treg cells
Tumor antigen
Tumor dormancy
Vaccine

KEYWORDS BY TOPIC

Methods

Animal models
Biochemistry
Bioinformatics
Biomolecular modelling
Biophysics
C.elegans
Chemistry
Comparative genomics hybridization (CGH)
Computational biology
Crystallography
Docking
Drosophila
Epidemiology
Flow cytometry
Fluorescence in situ hybridization (FISH)
Fluorescence resonance energy transfer (FRET)
Functional validation of target genes
Immunohistochemistry
In vitro imaging and/or live cell imaging
In vivo imaging
Mass spectrometry
Mathematical modeling
Microarrays
Microscopy
Mouse models
Nanotechnology/Nanoparticles
Next generation sequencing
NMR spectroscopy
Phage display
Protein microarrays
Proteomics
Spheroids/3D cultures
Statistics
Systems biology
Tissue microarrays (TMA)
Transgenic mice
Xenopus
Yeast
Zebrafish

Risk factors

Aging
Biomarkers
Body mass index (BMI) and/or obesity
Carcinogenesis
Diet
Genotoxicity
Metabolism/Metabolomics
Organic compounds
Oxidative stress and/or Reactive Oxygen Species (ROS)
Precancerous lesions
Prevention and/or chemoprevention
Risk factors
Screening
Smoking

KEYWORDS BY TOPIC

Signaling and cell cycle

Androgen and/or receptors
Beta-catenin/Wnt pathway
Cell cycle
Cell cycle checkpoint G1/S
Cell cycle checkpoint G2/M
Cell differentiation and/or differentiation therapy
Cell signaling
Crosstalk
Cyclic AMP
Cyclins and/or inhibitors
Cytokinesis
EGF and/or receptors
Estrogens and/or receptors
Folate and/or receptor
G-proteins and/or GPCR
Growth factors and/or receptors
Growth induction and/or growth arrest
Hedgehog pathway
HER1-2-3-4
Hippo pathway
Hormones
Insulin
Insulin-like growth factor (IGF) and/or receptors
Jak/Stat pathway
Kinase/Kinome
MAP Kinases
MET/HGF
Notch pathway
Nuclear receptor
PDGF and/or receptors
Phosphorylation
PI3K/Akt/PTEN/mTOR pathway
RAS/RAS inhibitors
Rb/Rb family
RET
Retinoic acid and/or receptors
Rho GTPases family
Src family
TGF and/or receptors
Thyroid hormone
Tyrosine kinase receptors (TKR) and/or inhibitors

Stem cells

Cancer stem cells
CD133/Stem cell markers
Circulating tumor cells
Hematopoietic stem cells
Normal stem cells

KEYWORDS BY TOPIC

Types of tumors

ALL
AML
Bladder tumor
Bone disease
Brain and/or nervous system tumors
Breast ca.
Burkitt lymphoma
Cervix or endometrial ca.
CLL
CML
Colorectal and/or Intestinal ca.
Gastric ca.
Glioma and/or glioblastoma
Gynecological tumors
Head and neck ca.
Hematologic malignancies
Hepatocellular carcinoma (HCC)
Hereditary tumors
Hodgkin's lymphoma
Kidney ca.
Leukaemia
Lung ca.
Lymphomas
Medulloblastoma
Melanoma
Mesothelioma
Myeloma
Neuroblastoma
Neuroendocrine tumors
Non melanoma skin tumors
Osteosarcoma
Ovarian ca.
Pancreas ca.
Pediatric tumors
Prostate ca.
Sarcoma
Soft tissue tumors
Solid tumors
Testis ca.
Thymoma
Thyroid ca.
Triple negative breast ca.

Therapies

Adjuvant therapy
Anti-angiogenic therapy
Antibody/mAb therapy
Aromatase and/or inhibitors
Chemotherapy and/or chemotherapic drugs
Clinical practice guidelines
Clinical trials
Combination therapy
Drug delivery
Drug discovery and/or development
Drug response and/or resistance
Drug screening
Gene therapy
Metallo-drugs
Multidrug resistance (MDR)
Peptides as drugs
Pharmacokinetics
Pharmacology
Preclinical studies
Radionuclide therapy
Radiosensitivity and/or resistance
Radiotherapy
Radiotoxicity
Response and/or resistance to therapy
Signal transduction inhibitors
Small molecule inhibitors
Surgery
Target therapy

KEYWORDS BY TOPIC

Viruses

Adenovirus

AIDS/HIV/Kaposi

Epstein-Barr Virus (EBV)

Hepatitis B virus (HBV)

Hepatitis C virus (HCV)

Herpes virus

Human Papilloma Virus (HPV)

Lentivirus

Oncogenic virus/Viral oncology

Virology