

DIET, NUTRITION, BODY COMPOSITION, PHYSICAL ACTIVITY AND **CANCER**

REGULAR GRANT PROGRAMME 2018/2019

Guidelines for research grant applications and award recipients



Our vision

We want to live in a world where no one develops a preventable cancer.

Our mission

We champion the latest and most authoritative scientific research from around the world on cancer prevention and survival through diet, weight and physical activity, so that we can help people make informed lifestyle choices to reduce their cancer risk.

As a network, we influence policy at the highest level and are trusted advisors to governments and to other official bodies from around the world.



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1. Chair's Introduction



Professor Christine Williams

Professor of Human Nutrition
University of Reading, UK

As the new Chair of the World Cancer Research Fund International Grant Panel, I am delighted to introduce this Grant Application Guidelines Package.

The World Cancer Research Fund International Regular Grant Programme funds research on the effects of diet, nutrition (including body composition) and physical activity on cancer. The definition of 'cancer' includes the whole cancer process, both before and after diagnosis, from incidence to survivorship, local progression, distant metastasis and cancer mortality.

This document – Guidelines for Applicants and Award Recipients – outlines the Regular Grant Programme's Research Principles, Areas and Themes, clarifies the eligibility criteria, provides applicants with details of the submission and review process, and documents the terms and conditions for award recipients. Information is also available at wcrf.org/apply. World Cancer Research Fund International is unique in its mission to eradicate preventable cancers attributable to diet, nutrition (including body composition) and physical activity. This research grant programme is an important element of how World Cancer Research Fund fulfils that mission.

This is a particularly important year for World Cancer Research Fund, particularly with the publication of its landmark WCRF/AICR Third Expert Report, *Diet, Nutrition, Physical Activity and Cancer: a Global Perspective*.

The report has highlighted many examples of strong evidence that is judged to be sufficient to support cancer prevention recommendations. It has also highlighted the many factors for which the evidence is judged to be too limited in amount, quality or consistency to draw firm conclusions, especially for cancer survivors.

The report has identified six critical areas of research for the whole scientific community. Four of these research areas are of particular relevance for the WCRF International Grant Programme:

- **Biological mechanisms by which diet, body composition and physical activity affect cancer processes.**
- **The impact of diet, nutrition and physical activity throughout the life course on cancer risk.**
- **Stronger evidence for the impact of diet, nutrition and physical activity on outcomes in cancer survivors.**
- **Globally representative research on relevant exposures and cancer.**

For this grant call there are no major changes from last year. However, we have included more flexibility to our eligibility for projects proposing work using cell lines or animal models (see page 11) and to the eligibility of the study design (page 12). For more information on the Research, Areas and Themes, please refer to section 4.3.

Our former Pilot Grants have been redefined, becoming now Seed

Grants (for more information refer to section 5.2).

The budget for proposals is currently £350,000 for Investigator Initiated Grants for up to four years and £60,000 for Seed Grants over two years.

Applications must adhere to all the Research Principles of the Regular Grant Programme and I would like to remind applicants that the grant programme is limited to funding research on the role of diet, nutrition (including body composition) and physical activity on cancer: proposals that do not focus on these areas will not be accepted.

We continue to encourage international collaborations and research from low- and middle-income countries, with the aim of strengthening capacity from under-represented regions and for developing more collaborative research.

The Regular Grant Programme is part of a wider portfolio of scientific and policy activities undertaken by World Cancer Research Fund International. For more information about our Science and Policy work see pages 47–50 of this document.

Thank you for your interest.
We look forward to receiving your application.



2. World Cancer Research Fund International Grant Panel

PANEL CHAIR

Prof Christine Williams

Professor of Human Nutrition
University of Reading, UK



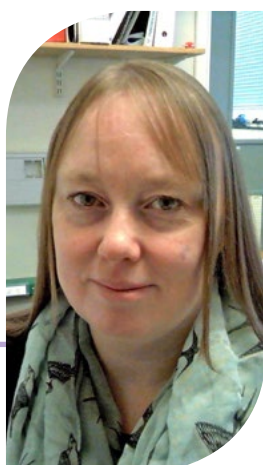
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3. Background and context

The burden of cancer is predicted to rise significantly in the coming years, while cancer mortality is predicted to be the most frequent cause of death. Having a healthy diet, being physically active and maintaining a healthy weight are integral to the prevention of cancer: World Cancer Research Fund (WCRF) Network is unique in its mission to eradicate preventable cancers attributable to diet, nutrition (including body composition) and physical activity. This research grant programme is an important element in how we fulfil that mission.



Analysing research on cancer prevention and survival

Since its inception in 2007, our Continuous Update Project (CUP), in reviewing the most current evidence, has helped identify knowledge gaps that could be addressed within the grant programme. Equally, new data generated from studies funded through the grant programme contribute to the data reviewed by the CUP. Thus, the WCRF Network research grant programs and the CUP act synergistically to strengthen the evidence on the effects of diet, nutrition (including body composition) and physical activity on cancer.

The CUP has identified numerous knowledge gaps in the mechanisms that explain the role of diet, nutrition

(including body composition) and physical activity in cancer development. Understanding these mechanisms would help us create a better picture of cancer risk and how cancer could be prevented. Also, only limited evidence is available into the genetic, epigenetic or other differences among individuals that may explain the variability in their response to nutritional exposures and physical activity in relation to cancer risk.

While cancer incidence is increasing, survival rates have significantly improved. However, the CUP has identified a relative lack of good quality evidence in the area of cancer survivors. There are knowledge gaps in the mechanisms underpinning the role of diet, nutrition (including body composition) and physical activity in both cancer progression and survival. Only limited evidence has been identified to explain the variability in cancer progression and survival between individuals, especially regarding the effect of diet, nutrition (including body composition) and physical activity and/or their interplay with genetic, epigenetic and hormonal factors on cancer survivor related outcomes, including prognosis and quality of life during and after treatment.

Visit our website for more information
on the Continuous Update Project
reports and the Third Expert Report
dietandcancerreport.org



4. World Cancer Research Fund Network Research Grant Programmes

The World Cancer Research Fund Network operates two research grant programmes that provide similar funding opportunities in different regions of the world:

- **World Cancer Research Fund International Research Grant Programme, based in London, UK**
- **American Institute for Cancer Research (AICR) Research Grant Programme, based in Washington DC, USA**

The World Cancer Research Fund International Research Grant Programme accepts applications from anywhere in the world except the Americas (North America, Central America including the Caribbean, and South America).

The American Institute for Cancer Research (AICR) manages and funds a separate Research Grant Programme, accepting applications from the Americas only (North America, Central America including the Caribbean, and South America). The details of this programme can be found online at aicr.org or by email at research@aicr.org

4.1 World Cancer Research Fund International Research Grant Programme

World Cancer Research Fund International manages and administers the Regular Research Grant Programme on behalf of the following WCRF Network charities:

- **World Cancer Research Fund (WCRF UK), United Kingdom**
- **Wereld Kanker Onderzoek Fonds (WKOF), the Netherlands**
- **World Cancer Research Fund Hong Kong (WCRF HK), Hong Kong**

The WCRF UK and WKOF charities fund the approved grants.

This document focuses on the WCRF International Regular Grant Programme.



4.2 The Regular Grant Programme

Changes to the Regular Grant Programme

The CUP has identified knowledge gaps in the biological and mechanistic evidence underpinning the influence of diet, nutrition (including body composition) and physical activity on cancer risk and cancer survival. In addition, only limited evidence has been identified to explain the variability in cancer risk, cancer progression and survival between individuals. There is also a relative lack of available data for cancer survivors, especially regarding the effect of diet, nutritional status and physical activity on outcome, including prognosis and quality of life during and after treatment.

Our Regular Grant Programme classifies research into two Research Areas: Cancer Prevention and Cancer Survivors. Each of these two Research Areas may be addressed either from the perspective of identifying the mechanisms that underpin the effects of diet, nutrition and physical activity on cancer, or by addressing the host factors that influence individual susceptibility to cancer development or progression, and so contribute to explaining variability between people in outcomes.

For the Research Area of Cancer Survivors, we also encourage broader research into the identification of likely causal links between diet, nutrition (including body composition), physical activity and outcomes after cancer diagnosis, as robust evidence on these links is still lacking.

Details of our Research Areas and Themes, the remit of the pilot grants and the Principles that define eligibility, are detailed on page 10.

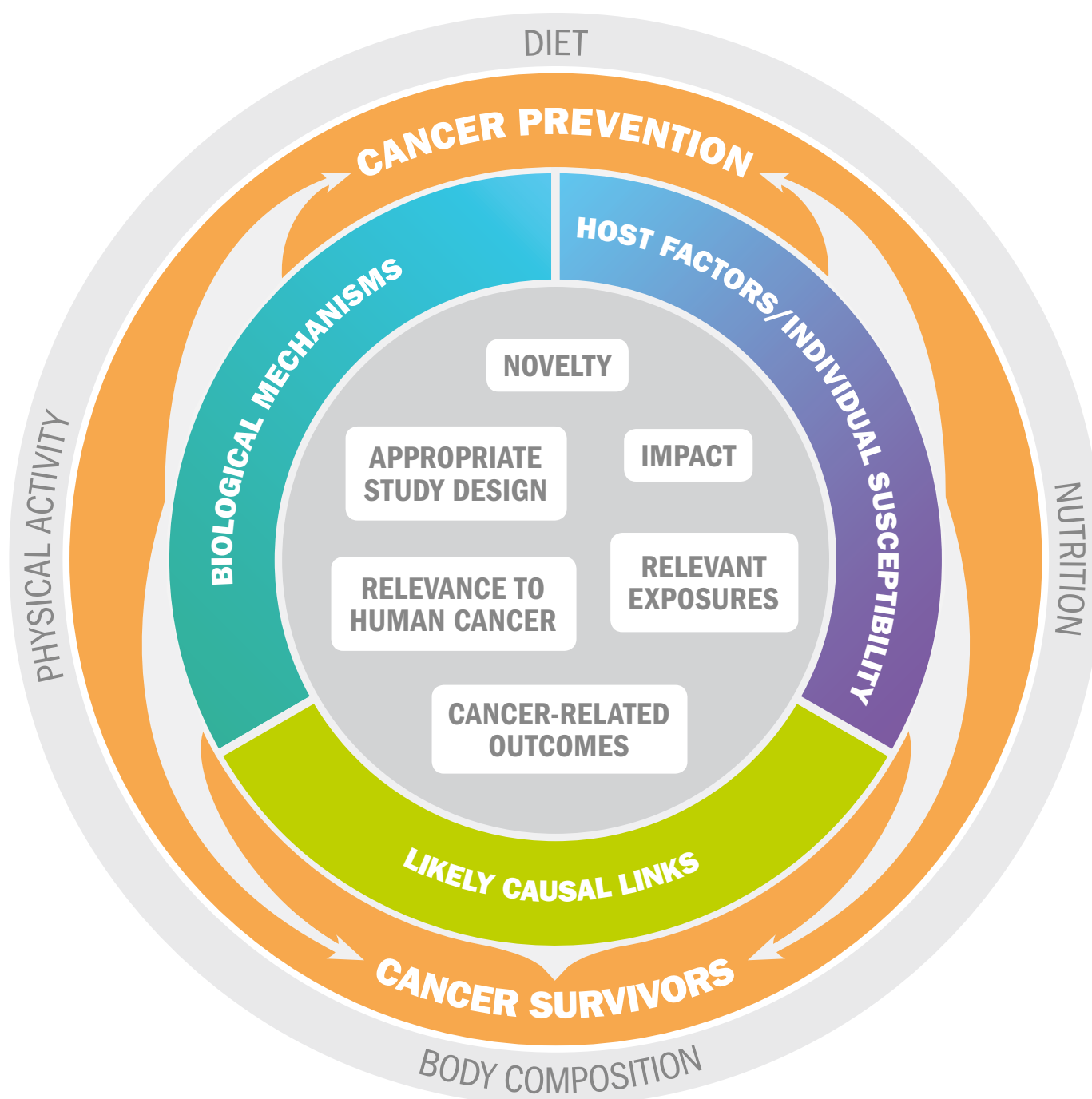
Details of these new Research Areas and Themes, the remit of the grants and the Principles that define eligibility, are detailed below.

Research Principles, Areas and Themes

The Research Principles, Areas and Themes define the scientific scope of the World Cancer Research Fund International Regular Grant Programme.

Applications must address the role of diet, nutrition and physical activity in either Cancer Prevention or Cancer Survivors. Applications should fall into either of the two Research Themes of Biological Mechanisms or Host Factors, or an additional third Theme for studying likely causal links in cancer survivors (see Figure 1 below).

FIGURE 1: Research Principles, Areas and Themes



Regular Grant Programme Research Principles

Applications must adhere to all Research Principles (listed below) to be considered for review. Applications that do not align with these Research Principles will not be accepted (see section 5.6 Review process).

Relevant exposures

The aim of the grant programme is to fund research that helps elucidate the role of diet, nutrition (including body composition) and physical activity on cancer.

Relevant exposures encompass both confirmed and possible cancer risk factors related to diet, nutrition (including body composition) and physical activity. The rationale for the chosen exposure needs to be sufficiently justified in the application.

Exposures must be well defined and could include:

- Diet, dietary patterns, other diet related behaviours and – provided that they are part of the usual diet – foods, food components and dietary supplements.
Please note that proposals focusing on the role of isolated food or herb extracts that are not part of the usual diet will not be accepted.
- Markers of nutritional status, including physiological or metabolic markers; body composition, and measures of growth, development and maturation.
- Physical activity, physical fitness, time spent being sedentary, metabolic or other markers related to physical activity and physical activity related behaviours.

Exposures must be relevant to usual human exposures. For mechanistic research, exposures should be in a form that would normally be encountered in vivo and at a level that is relevant to usual human experience. Exposures in animal research need to be justified in terms of their relevance to exposure in humans and as to why a human research model is not used. **Extreme or unusual exposures, in dose or method of administration, will not be considered.**

Cancer-related outcomes

Outcomes should be specific and well defined. Relevant outcomes include cancer endpoints as well as recognised surrogate markers of cancer (these do not include risk factors such as obesity, oxidative stress, hormone levels, behavioural change but factors that reflect the cancer process eg mammographic density, colorectal adenomas, leukoplakia, Barrett's oesophagus) or cancer outcome (eg pathological complete response to therapy), but applications must justify the use of a particular surrogate marker.

Please note that for the Cancer Prevention Research Area, body composition (eg adiposity) and behavioural change will not be considered appropriate outcomes, but they could be appropriate exposures (see above). However, for the Cancer Survivors Research Area, a wider range of outcomes is allowed. These are: overall survival, local cancer recurrence, distant metastasis, quality of life during treatment, quality of life after treatment, development of second primary cancers, and effectiveness of treatment (including tolerability, toxicity, comorbidities), as well as body composition. Behavioural change will also be accepted as an outcome for IIGs only in the Cancer Survivors Research Area and for Seed Grants for both Cancer prevention and survivors.

Please note that in this document the definition of 'cancer' includes the whole cancer process, both before and after diagnosis, from incidence to survivorship, local progression, distant metastasis and cancer mortality.

Relevance to human cancer

Studies must be justified in terms of their direct relevance to human cancer. Experimental designs outside in vivo human settings, such as animal models, will only be considered for relevant studies that examine mechanistic pathways of the cancer process. Applications that propose solely cell line studies will not be accepted.

The relevance to humans and to human cancer of the proposed animal model will need to be clearly explained.

The experimental model needs to be clearly described, including the species and any genetic modification of an animal model. **Please note that studies outside mammalian systems will not be accepted.**

Applications proposing the use of animals must provide a strong and clear justification for the work, including an explanation of why the research aims could not be met using an alternative study model. If a xenograft or induced-tumour model are proposed, direct relevance to human cancer needs to be well justified. To help our peer reviewers and Panel of experts assess these applications we ask for detailed information on the proposed research. The questions we ask are based on the advice of the National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs). The NC3Rs is a UK-based scientific organisation dedicated to the 3Rs. These questions allow applicants to demonstrate how they have considered the 3Rs in their research. For more information visit nc3rs.org.uk

Studies involving humans or animals will need the

appropriate ethical approval and the relevant licences and/or certification. WCRF International adheres to the guidelines from the Association of Medical Research Charities (AMRC) and subscribes to the AMRC policy on the use of animals in research. For more information, visit amrc.org.uk/our-work/animal-research

Appropriate study design

The study design must be appropriate and able to answer the research question. Sufficient information on the proposed study design must be provided. The research question(s) should be formulated as a clear and specific hypothesis, and be explicitly justified.

Please note that applications proposing a case-control study design not nested in a cohort study, or a crosssectional study design, will not be considered unless it is well justified.

Applicants need to provide data to support the hypothesis that will be tested and to demonstrate the feasibility of the study. When the data needs to be obtained, applicants are encouraged to apply for a Seed Grant to obtain such data first, before applying for an Investigator Initiated Grant (see section 5.2).

Detailed power calculations for a specific outcome and a clear justification of the proposed sample size must be provided. **Please note that applications without sufficient information on the proposed statistical methods, including power calculations, will not be accepted.** We strongly recommend that statistical input is obtained before submitting an application; this applies to all studies whether on animals or humans.

Epidemiological and other study designs need to take into account evidence from basic science, and experimental models, investigating the biological processes for specific exposure outcome links, need to take into account epidemiological, clinical and other data. An interdisciplinary approach to the research is encouraged, but applicants must demonstrate they have secured the appropriate expertise across all relevant disciplines in their research team (eg through consulting, collaborating and/or staffing provision).

When feasible, applicants should optimise resources through appropriate collaborations, for example the addition of a nutrition or physical activity component to an existing or planned study. When multiple studies are proposed from a single study population, a case-cohort design is generally preferred to a nested case-control.

Additionally, relevant systematic reviews including meta-analyses will also be accepted.

Applications that solely propose the development of new methodologies, or the validation of food frequency questionnaires and other research tools including new statistical models, will only be accepted for Seed Grants (see Figure 2 on page 15).

Novelty

Applicants need to demonstrate that the proposed research is novel and original. Applications should propose a novel research question from careful interpretation of existing data, and/or propose an innovative approach to an existing research question: the aim is to test new or innovative ideas, but please note that applicants must still demonstrate the feasibility of their proposed study.

It must be clear from the application that the researchers have carried out a careful assessment of the existing body of knowledge, including the findings from the Continuous Update Project, to demonstrate the novelty and validity of the proposed research question.

Impact

To have impact, funded research must contribute to a better understanding of the role of diet, nutrition (including body composition) and physical activity in cancer. Ultimately, it should make a difference to people's lives. The outcome of the research must, in some way, contribute towards helping reduce people's risk of developing cancer, or improve outcomes in cancer survivors.

Applicants need to demonstrate they have considered the potential impact of their research in relation to all or some of the following areas, as appropriate:

- **Potential for translation into clinical practice**
- **Usefulness to other researchers in the field**
- **Outreach to the general public or patients**
- **Influence on public health, including, when relevant, in policy settings**

Please refer to sections 5.4, 7.4 and 7.5 for more information on impact.

Applications must adhere to all the Research Principles described in section 4.2, as well as applying to one of the Research Areas and Research Themes.

4.3 Regular Grant Programme Research Areas and Themes

Applications to the Regular Grant Programme must adhere to either the Cancer Prevention or the Cancer Survivors Research Area. Each of these two Research Areas may be addressed under two Research Themes, either from the perspective of identifying the **mechanisms** that underpin the effects of diet, nutrition (including body composition) and physical activity on cancer, or by addressing the **host factors that influence individual susceptibility** to cancer development or progression and survival, and so contribute to explaining variability between people in outcomes. A third theme addressing the **identification of likely causal links** between diet, nutrition (including body composition) and physical activity after cancer diagnosis also applies for the Cancer Survivors Research Area.

Regular Grant Programme Research Areas

Cancer Prevention Research Area



We encourage research into the mechanisms that can more robustly explain the exposure-outcomes links relating diet, nutrition (including body composition) and physical activity to cancer. Additionally, we encourage research into the genetic, epigenetic or other host factors in relation to the impact of diet, nutrition (including body composition) and physical activity on cancer risk, and those that identify which individuals are more or less likely to respond to interventions based on those exposures are also welcome.

The exposure must be related to diet, nutrition (including body composition) and physical activity, as described in section 4.2.

Cancer Survivors Research Area



This Research Area focuses on individuals who have received a cancer diagnosis.

We encourage research into the mechanisms that can more robustly explain the links relating diet, nutrition (including body composition) and physical activity to outcomes after cancer diagnosis. Furthermore, we encourage research into genetic, epigenetic or other factors that might influence the impact of diet, nutrition (including body composition) and physical activity on cancer outcomes, as well as those factors that predict response to interventions in relation to these exposures.

We also encourage broader research into the identification of likely causal links between diet, nutrition (including body composition), physical activity and outcomes after cancer diagnosis, as robust evidence on these links is still lacking.

Both intervention and observational studies are acceptable, but exposures, outcomes and possible confounders, when appropriate, need to be well characterised. Applications including a study component that aims to characterise the biological mechanisms that might explain an effect in cancer survivors are welcome. For example, evidence from small and short-term trials suggests that proposed biological mediators are favourably affected by weight loss or activity interventions but longer-term studies in cancer patients are needed to understand mechanisms and justify recommendations for cancer patients.

The feasibility of proposed interventions is particularly relevant in cancer survivors research, and must be clearly justified in the application. Applications submitted without sufficient detail on the feasibility, acceptability, compliance, clinical relevance, statistical power or expertise in the research team, will not be accepted. Consider applying for a Seed Grant if preliminary data are needed, or study parameters need to be defined (see section 5.2).

Additionally, relevant systematic reviews, including meta-analyses, in cancer survivors will be considered.

Regular Grant Programme research themes

Within the **Mechanisms Research Theme**, we encourage research that explores the molecular, cellular and physiological **mechanisms that help explain the biological connection between relevant exposures and cancer development or progression**, and so help the inference of causality. This type of research must be relevant to the epidemiological and clinical body of knowledge. For example, some links identified in the Continuous Update Project reports might merit more investigation. Please refer to the individual reports on our website at wcrf.org/cupreports

Research in this Theme is especially likely to benefit from interdisciplinary work and the use of new technologies, such as genomics, epigenomics and metabolomics, but such studies should be hypothesis driven and based on preliminary data. For this Theme, we welcome both laboratory studies and epidemiological studies that explore the mechanisms underpinning links between diet, nutrition (including body composition) and physical activity, and cancer-related outcomes.

Within the **Host Factors Research Theme**, we encourage research into the factors that might explain the variability between people in their **susceptibility** to cancer or the biological abnormalities predisposing to it. We also welcome research into the variability in response to treatment.



Variation in susceptibility to cancer or in its progression is likely to be influenced by host factors. These might be fixed, such as age, gender, ethnicity and genetic variation, or potentially modifiable, such as hormonal, immunological, metabolic and epigenetic influences. **We are interested in how diet, nutrition (including body composition) and physical activity exposures throughout the lifecourse might interact with or operate through these host factors to modulate individual susceptibility and response to therapy.** In addition, factors related to nutritional status or physical activity might modify an individual's response to other exposures. Better characterisation of the dietary, nutritional or physical activity determinants of variability in an individual's personal susceptibility to cancer and response to treatment, as well as a better understanding of what underpins that variability, would permit a more stratified approach to preventive or management strategies.

Within the **Likely Causal Links Theme** in the area of cancer survivors, we especially encourage research into the role that diet, nutrition (including body composition) and physical activity can play in assisting cancer patients overcome the side-effects of treatment, to improve their quality of life during and after the completion of treatment, to reduce the risk of distant metastasis, second primaries and local cancer recurrence and ultimately to prolong survival. Under this theme, we encourage robust attempts at causal analysis when assessing exposure-outcome associations, for example, using instrumental variables analysis.

For cancer survivors, relevant outcomes may include:

- Overall and cancer specific survival
- Local cancer recurrence
- Distant metastasis
- Quality of life during treatment
- Quality of life after treatment
- Development of second primary cancers
- Effectiveness of treatment (tolerability, toxicity, comorbidities)
- Body composition
- Behavioural change

The exposure must be related to diet, nutrition (including body composition) and physical activity, as described in section 4.2.

Examples of research topics that might be addressed under these Themes in either Research Area are in the Appendix (page 52).

FIGURE 2: Grant call 2018/2019: schematic diagram presenting the two main Research Areas, the Themes within each Area and the remit of the Seed Grants





5. How to apply

Please note that we request that both applicants and relevant representatives from their institutions review them carefully before considering applying for a grant.

Also, please note that applications must adhere to all the Research Principles (see section 4.2) and fall under one or more of the Research Areas and Research Themes (see section 4.3).

5.1 Eligibility

Grant applications are open to a Principal Investigator based at a research institution from any country outside the Americas (North America, Central America including the Caribbean, and South America).

The AICR Research Grant Programme (aicr.org) accepts applications from the Americas (see section 4).

World Cancer Research Fund International encourages international collaborations. Please note that although the Principal Investigator of an application cannot be from an institution based in the Americas, co-applicants and collaborators can be based in those countries, and a portion of the research work can be carried out at their institutions.

Applications from low- and middle-income countries are also encouraged, such as for high quality studies that explore relevant exposure-outcome links in under-researched regions or populations, but applicants should ensure the relevant expertise has been secured, for example through appropriate international collaborations.

Institutions

The Regular Grant Programme accepts applications from universities, medical schools, hospitals, research institutes and other academic centres. Research for commercial organisations is not eligible.

A maximum of five applications will be accepted from one institution in any one grant cycle; it is the responsibility of the Principal Investigators and

the host institution to coordinate the number of applications submitted. Institutions are encouraged to contact us to discuss the prioritisation of their applications, if needed.

Please note that prior to starting a grant, the Principal Investigator and the institution will need to accept the terms and conditions as covered in section 7. It is the responsibility of the applicant to make sure all appropriate departments are aware of the terms and conditions before an application is submitted. Any queries regarding the terms and conditions of a grant should be raised before submitting an application.

Personnel

Principal Investigator (PI)

- The Principal Investigator must hold a senior established research position (not a PhD student) at the host institution.
- Only one application per Principal Investigator per grant cycle is permitted.
- Only one person can act as the Principal Investigator, though an applicant can be a Principal Investigator for one application and a co-applicant in one or more other applications (up to a maximum of four).
- If a Principal Investigator moves institution or the application changes Principal Investigator during the review process, the applicant must alert us before the change takes place, as per the procedure detailed in section 7.2.
- The Principal Investigator's salary cannot be covered by the grant, wholly or partly.

PhD Students

If a PhD student is to be included in a research grant project, the following criteria must be met:

- The host institution must be responsible for the progress and training of the PhD student and must ensure adequate supervision and assessment of the student's progress and the research training provided.
- The PhD student should be a full-time student, spending 100 per cent of their time on the project.

Refer to section 5.5 Grant budgets for suggested PhD stipends and allowed fees.

Maternity and long-term sick leave arrangements

Personnel employed on a grant are employees of the institution awarded the grant. Therefore, all employee benefits, including those pertaining to maternity and sick leave, will be the responsibility of the institution awarded the grant. If personnel essential to the project become unable to work due to maternity leave or long-term sickness, a replacement must be sought. For more information see section 7.2.

5.2 Types of grants

The Regular Grant Programme comprises two main grant types:

Investigator Initiated Grants

Investigator Initiated Grants (IIGs) are awarded to Principal Investigators for a maximum of £350,000 for up to four years, with a limit of £100,000 for any one year.

Seed Grants

Seed Grants (SGs) are intended as start-up funds for preliminary research to allow the development of innovative ideas, new methodologies and new research tools relevant to our Research Themes. This will allow researchers to collect preliminary data or test study parameters to take them to a stage where an application for an IIG would be appropriate. Please note that there is a one stage only application (outline stage) for Seed Grants (see section 6).

Within the Seed Grants, applicants will need to choose if they are applying for a Feasibility study or Pilot study (see below the description for each based on NIHR criteria: [nihr.ac.uk/funding-and-support/documents/funding-for-research-studies/research-programmes/PGfAR/CCF-PGfAR-Feasibility-and-Pilot-studies.pdf](https://www.nihr.ac.uk/funding-and-support/documents/funding-for-research-studies/research-programmes/PGfAR/CCF-PGfAR-Feasibility-and-Pilot-studies.pdf)).

Feasibility study

Feasibility Studies are pieces of research done before a main study in order to answer the question “Can this study be done?”. They are used to estimate important parameters that are needed to design the main study.

The design of a feasibility study generally involves listing those parameters which are uncertain and describing the methods for improving their precision so that the main study will have a better chance of success. Examples of such parameters include:

- standard deviation of the outcome measure, which is needed in some cases to estimate sample size
- willingness of participants to be randomised
- willingness of clinicians to recruit participants
- number of eligible patients; carers or other appropriate participants
- characteristics of the proposed outcome measure and in some cases feasibility studies might involve designing a suitable outcome measure
- follow-up rates, response rates to questionnaires, adherence/compliance rates, ICCs in cluster trials, etc.
- availability of data needed or the usefulness and limitations of a particular database
- time needed to collect and analyse data
- recruitment and retention rates
- measures of acceptability in a novel intervention.

Feasibility studies do not evaluate the outcome of interest; that is left to the main study. Feasibility studies for randomised controlled trials may not themselves be randomised. If a feasibility study is a small randomised controlled trial, it does not necessarily need to have a primary outcome or power calculations. Instead, the sample size is often used to estimate the critical parameters (eg recruitment rate) to the necessary degree of precision.

Crucially, feasibility studies do not evaluate the outcome of interest; that is left to the main study.

Pilot study

Pilot studies are a version of the main study that is run in miniature to test whether the components of the main study can all work together. It is focused on the processes of the main study, for example to ensure recruitment, randomisation, treatment, and follow-up assessments all run smoothly. It will therefore resemble the main study in many respects, including an assessment of the primary outcome. In some cases, this will be the first phase of the substantive study and data from the pilot phase may contribute to the final analysis; this can be referred to as an internal pilot. Or at the end of the pilot study the data may be analysed and set aside, a so-called external pilot.

Applicants need to be clear which Seed grant type they are applying for and why; and be explicit regarding the purpose of the study, in particular what specific aspects are being tested or piloted, as well as the next expected research steps.

Unlike IIGs on the area of cancer prevention, Seed Grants can have as an outcome measures of

behavioural change, for both cancer prevention and cancer survivors.

These grants are for a maximum of £60,000 in total for up to two years.

5.3 Types of applications

This section contains information relating to the possible types of applications to the Regular Grant Programme. See section 5.6 for more information on the application and review stages.

New application

Most grant applications are for new projects. Researchers can only submit one application per grant cycle as the Principal Investigator.

Revised application

Applications rejected at the outline application stage will only be accepted in subsequent years if they have been substantially improved and/or aligned with the Research Principles, Areas and Themes of the grant programme, as appropriate.

Applications that have been rejected twice at the outline application stage cannot be resubmitted to the grant programme.

Applications rejected at the full application stage must be resubmitted at the outline application stage in the next grant cycle. These revised applications should address all issues raised by the Grant Panel and peer reviewers as provided in the feedback to the applicant in the previous cycle.

Revised applications compete equally with all applications at the outline application stage.

Grant renewal application

At the discretion of WCRF International, IIG Grants may be renewed once, provided the research builds on the previous grant. Renewal proposals will follow the same process that new applications and compete equally with all applications in that cycle.

Please note that applications examining a completely different research question to that in the original grant will not be considered for renewal.

Applicants will need to submit an up-to-date progress report alongside their proposal, as well as any published papers, manuscripts and conference abstracts.

Applications previously unsuccessful at board meeting stage

Applications are ranked according to scores awarded by the Grant Panel, and grants are awarded according to their ranking, the priorities of the World Cancer Research Fund Network, and the funds available at the end of each fiscal year (September). Some applications judged to be of sufficient scientific merit for funding by the Grant Panel, and presented to the Board of Trustees to consider for award, might not be funded due to limited funds (see section 5.6).

At the discretion of WCRF International, if applicants would like to reapply in the next cycle they can submit directly at the full application stage. Applicants must inform WCRF International that they hope to resubmit their application before the outline application stage deadline. Please note that a Principal Investigator can either resubmit an application previously unsuccessful at the Board meeting OR submit a new application at the outline application stage, but not both.

Applications previously unsuccessful at Board meeting compete equally with all applications at the full application stage. Seed grant applicants unsuccessful at the Board meeting stage may reapply in the next cycle at the outline stage and compete with all other Seed Grants.

5.4 Research impact

The Regular Grant Programme aims to fund research that has demonstrable impact, to help us achieve our mission. Grant applications will be assessed on how clearly they convey the potential impact of the proposed research. We understand that the impact of the research can be hard to envisage before the completion of the study, but applicants are asked to consider the potential and realistic impact of their research and to document this in the form of **specific impact objectives** in their grant applications.

As part of these impact objectives, applicants also need to include a clear and appropriate dissemination plan for their research and its findings, including maximising opportunities to engage with other researchers, clinicians, policy makers and/or the general public, as appropriate.

Once the grant has started, Principal Investigators will be asked to track progress on their grant monitoring against the stated impact objectives, as well as against any new impact objectives that may emerge during the course of the research. This helps us to ascertain and document the impact of our research programme.

Please refer to the Research Principles in section 4.2, as well as sections 7.4 and 7.5 of the terms and conditions for more information on impact and how to monitor it.

Examples of areas where the impact of research could be shown are listed below:

- **Citations of published papers, especially in high impact journals**
- **Presentations of findings at conferences**
- **Collaborations derived from the study**
- **Further funding leveraged or new funding opportunities** (government matched funding, follow up grant, etc)
- **Public engagement activities** (public talks or presentations, newsletter articles, blog posts, etc)
- **Professional development of the members of the research team** (PhD thesis achieved through the funded study, Post-Doctoral Fellow able to apply for new grant as a Principal Investigator, etc)
- **Awards and recognitions to the Principal Investigator and the research team**
- **Research materials** (development of a new model or process to improve the NC3Rs, etc)
- **Development of products or interventions** (diagnostic tests, interventions and/or clinical trials originated from the original grant study, etc); **intellectual property** (patents or copyrights)
- **Influence on public health and, when relevant, on policy** (input into national or international guidelines, participation in policy committee, etc)

Demonstrable impact in low- and middle-income countries is particularly valuable.

Public involvement

WCRF International encourages the Institution and the Principal Investigator to, where possible, incorporate Public Involvement (PI) into their projects, including members of the public (including patients) in research projects. For more information, see [invo.org.uk](https://www.invo.org.uk)

5.5 Grant budgets

IIGs are awarded for a maximum of £350,000 for up to four years, with a limit of £100,000 for any one year. SGs are awarded for a maximum of £60,000 for up to two years. Budgets must be realistic estimates of the funds required for the proposed research.

Budgets should cover the costs of such items as salaries for personnel (excluding the Principal

Investigator), research equipment, Open Access publication fees, supplies and travel to conferences/meetings. **Budgets must be submitted in pounds sterling (GBP) only.**

At the outline application stage, a brief description of each budget section will be sufficient. Full application budgets must contain a detailed breakdown of each item per year and a detailed justification of all elements of the budget. For more information on adding the budget to the application form see section 6.

Accurate financial tracking and management of the grant is the responsibility of the Principal Investigator together with the institution's finance department. For more information on the terms and conditions see section 7.

Personnel

Principal Investigator

The salary of the Principal Investigator cannot be included in the grant budget, wholly or partly. The grant may cover the salary or stipend of personnel (other than the Principal Investigator) involved in the project, including the stipend or salary of PhD students.

If necessary, calculate and include the percentage of any time claimed by any co-applicants and collaborators, if their respective institutions do not cover that time.

Please note that those compensated in whole or in part with funds from a grant shall not be considered as employees of the World Cancer Research Fund Network charities. For more information on the terms and conditions see section 7.

PhD student stipend

We appreciate that PhD studentships, or the remuneration paid to PhD students, varies between countries. In order to recruit high quality students, we recommend that the stipend award be at the top end of the scale for PhD studentships.

Additionally, up to £2,000 per year charged by the host institution towards PhD fees can be added to the budget.

Equipment

Please note that only equipment essential for the study will be considered. Items costing more than £700 must be itemised.

Travel to conferences

WCRF International encourages Principal Investigators and other grant personnel to attend conferences and relevant scientific forums to present the grant's outputs, and will provide funds towards the cost of travel, registration and accommodation. These funds must only be used to allow the attendees to present work funded by the grant, in the form of a poster or oral presentation.

The maximum allowance for travel is £3,000 for IIGs and £1,500 for SGs over the duration of the grant period.

Other pertinent travel costs not related to conferences should be included under the miscellaneous section of the budget.

Open access publication

WCRF International encourages the Open Access publication of research. The maximum allowance for Open Access publication is £6,000 for IIGs and £3,000 for SGs. Funds to cover the cost of publishing under open access can be included in this budget section (see section 7.5.4 Publication under Open Access).

Miscellaneous

Other relevant and justifiable additional costs pertaining to the study, such as the travel expenses of study participants, travel to any meetings that might be required to co-ordinate multicentre studies, maintenance contracts or the cost of obtaining certification or licenses to carry out research involving humans or animals, can be added under the miscellaneous section.

Please note that all costs added to this budget section will need to be itemised and clearly justified in the application.

Institutional overheads

Budgets should not contain overheads or any institutional expenditure; only the direct cost of research should be included.

5.6 Review process

We operate a two-stage process for reviewing IIG Grant applications and a one-stage process for reviewing SG applications. Applications that are not clearly relevant to the goals of the Regular Grant Programme, as outlined in this document, will not be sent for review.

Patients and public will be involved at different stages of the review process.

The timeline for the current grant cycle can be found in section 5.7 of this document.

Stage 1: Outline applications

Outline applications for both **IIGs** and **SGs** are accepted between mid July and early October each year.

The deadline for submission of outline applications for the 2018/2019 cycle is 4 October 2018, 5pm UK time (GMT).

With the support of our Panel Chair we triage all the outline applications and those applications that do not adhere to the Research Areas, Themes and Principles, as well as those from Principal Investigators who are not eligible to apply, will be rejected at this stage and not be sent for review to the Panel. Applications with missing information, forms or attachments may also be rejected at triage.

The Grant Panel reviews the outline applications that are in scope after the triage review. During the first Grant Panel meeting in November the Panel evaluates the scientific merit of the applications, their feasibility and their particular relevance to the Research Principles, Areas and Themes. They then advise on which SGs applications should be sent out for external peer review and which IIG applications should be invited to submit a full application. Principal Investigators are notified of the outcome of their application in December and are provided with any feedback from the Panel.

SGs review process

Since there is only a one stage application process for Seed Grants, successful applications at the outline stage will be sent for external peer review and DO NOT need to submit a full application. The comments from the external peer reviewers will be discussed by the Panel at the second Panel meeting and at that stage the Panel will score the SGs (separately from the IIGs) on their scientific merit (Panel members give each application a numerical score between one and five). The scores are averaged and the applications ranked by score, to prioritise them as a basis for funding decisions. Further information or clarification may be requested from the applicant before and/or after the second Panel meeting before a final decision is made. **Please note that this is not an indication that the application will be put forward for funding.**

Rejection indicates insufficient merit to warrant funding. The written peer reviews and a summary of the Panel discussion are provided in unattributed form to the applicants at the end of the process.

STAGE 2: Full applications (IIGs only)

The Principal Investigator for each recommended IIG outline application is invited to submit a full application. The deadline for submission of invited full applications for the 2018/2019 cycle is 14 February 2019, 5pm UK time (GMT).

Each full application is assigned two or more external peer reviewers, who provide a written review. Suggested peer reviewers for each application are obtained from the Grant Panel, from the applicants and from suggested peer reviewers who are unable to review the application themselves.

The Grant Panel members review the IIG full applications prior to the second Panel meeting, using the external peer reviews to assist them in judging the scientific merit of the proposals. Full applications are then discussed at the second Grant Panel meeting in June 2019.

At the meeting, after discussion, Panel members give each application a numerical score between 1 and 5 according to scientific merit. The scores are averaged and the applications ranked by score, to prioritise them as a basis for funding decisions. Further information or clarification may be requested from the applicant after the second Panel meeting before a final decision is made. **Please note that this is not an indication that the application will be put forward for funding.**

Rejection indicates insufficient merit to warrant funding. The written peer reviews and a summary of the Panel discussion are provided in unattributed form to the applicants at the end of the process.

Final approval of funding for IIG and SG grants

Final approval for funding of IIG and SG grants is decided by the relevant WCRF Network charity Board of Trustees at the end of September 2019. Please note that although approval by the Grant Panel indicates that the application is of sufficient scientific merit to be considered for funding, it is not a guarantee, as this depends on available funds and final Board approval.

Principal Investigators of applications awarded a grant will be notified by early October 2019. Notification of awards will include details of the grant amount and the WCRF Network charity that is funding the grant. Funding must begin between 1 November 2019 and 1 April 2020 (see section 7.1).

Conflicts of interest

Grant Panel members and external peer reviewers do not review an application that has been submitted by themselves (as Principal Investigator or co-applicant), by a member of their institution, or by an applicant with whom they have had any involvement in the project, or with whom they might have a possible conflict of interest.

If a Grant Panel member has a conflict of interest for a particular application, the other Grant Panel members review it and the conflicted Panel member is excluded from discussion on the proposed project.



The Regular Grant Programme has been audited by the Association of Medical Research Charities (AMRC) and has been awarded a certificate to show that it follows best practice when peer reviewing grant applications.

Contract terms and conditions

The World Cancer Research Fund International terms and conditions (as described in section 7) will need to be accepted by the Principal Investigator of the approved grants, as well as by relevant representatives of the host institution, including Finance, Human Resources and Public Relations/Communications departments. Grant applicants are asked to alert their legal department to the grant's terms and conditions before submitting an application.

Collaboration with other funding bodies

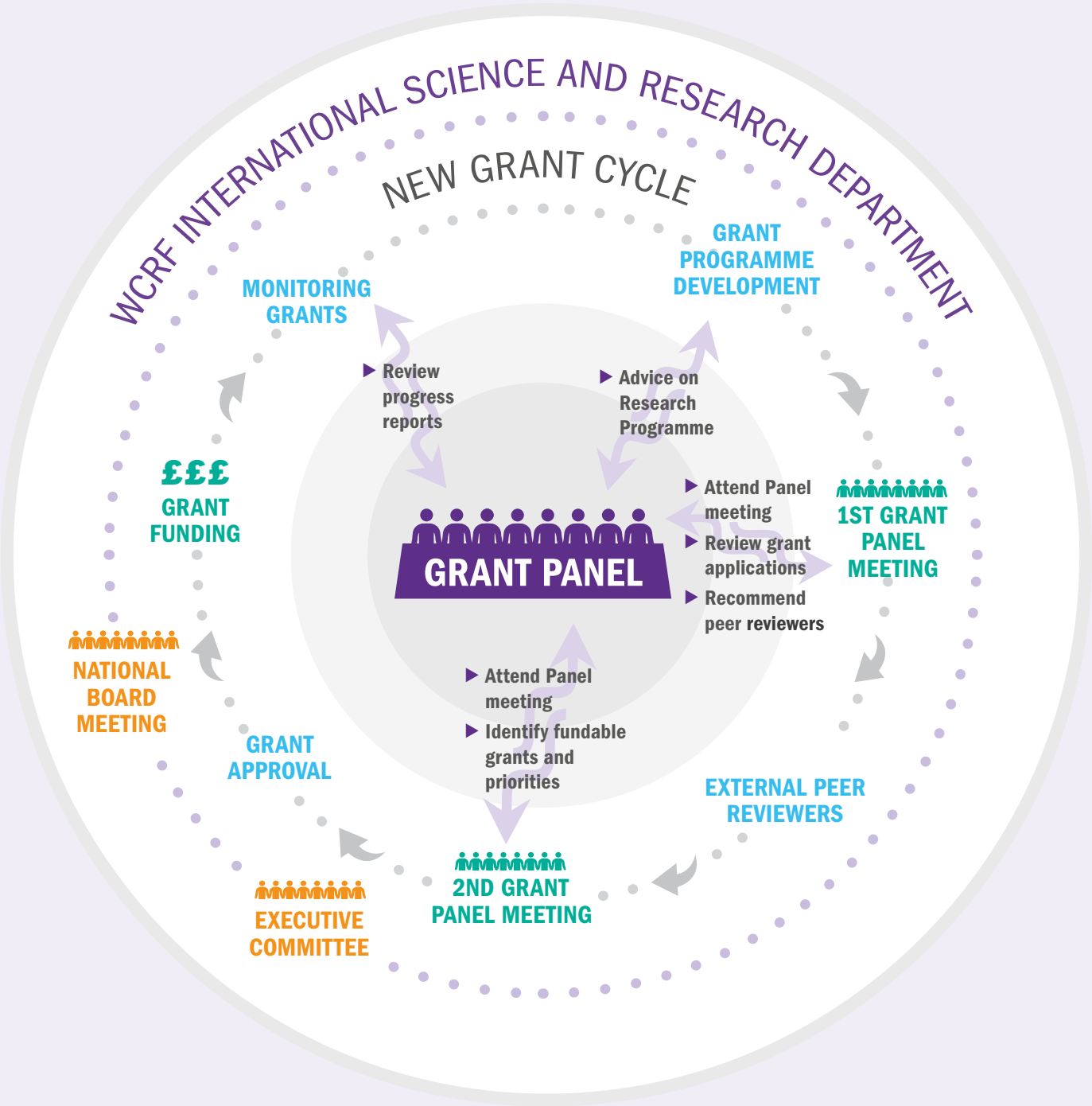
With the consent of the applicant, World Cancer Research Fund International may occasionally enter into collaboration with other organisations to jointly fund an application for high-quality research that meets the objectives of both organisations.

All applications considered for collaborative funding will be reviewed using the standard World Cancer Research Fund International grant application process (detailed in this document), which includes both Grant Panel review and external peer review. In addition, it is expected that the collaborating organisation may also review the application using their internal application review process. Rejection by the collaborating organisation will not affect eligibility for funding by the World Cancer Research Fund International Regular Grant Programme. Applicants will be informed as soon as possible if their application is deemed potentially eligible for a collaborative grant.

5.7 Grant application timeline and deadlines 2018/2019

9 July 2018	▶ Call for IIG and SG outline applications (one stage process for SGs).
4 October 2018	▶ Deadline for IIG and SG outline applications submission (online).
November 2018	▶ Grant Panel Meeting 1 <ul style="list-style-type: none"> ■ Review IIG outline applications and select for full applications. ■ Review SG applications and select applications for external peer review.
December 2018	▶ Call for IIG full applications. Notify SG applicants for external peer review stage.
14 February 2019	▶ Deadline for IIG full applications submission (online).
March/April 2019	▶ Peer review process of IIG and SG applications.
May 2019	▶ IIG full applications and peer reviews are sent to the Grant Panel for review. External peer reviews of SG applications are sent to the Grant Panel for review.
June/July 2019	▶ Grant Panel Meeting 2 <ul style="list-style-type: none"> ■ Review IIG and SG applications (including responses to Panel and reviewers' comments) and prioritise grants on scientific merit.
Late September 2019	▶ Approval of grants for funding by the appropriate Board of Trustees.
1 November 2019 – 1 April 2020	▶ New grants begin.

FIGURE 3: Regular Grant Programme overview: schematic diagram of the grant cycle





6. Instructions for completing the application forms

All applicants must apply online, using the online application forms.

The link to the online forms, as well as the template attachments, will be made available online at wcrf.org/apply for the outline application stage, and via email for the full application stage (IIGs only).

Applicants will need to register first and then can leave and re-enter the online form at any point. Applicants need to fill in the online form, upload the completed attachments provided and submit the application. Applicants will receive an automated email to acknowledge the submission. Please ensure you have received this confirmation email (check your spam folder if needed).

6.1 Outline application online form: STAGE 1

The outline application online form has four sections and applies for **both the IIG and SG applicants**. Since there is only one stage application process for Seed Grants, successful applications at the outline stage will be sent for external peer review and SG applicants do not need to submit a full application.

1 Main project details

Principal Investigator details: include full name, institution, full address, email, telephone (including country and area code) and main scientific discipline for the Principal Investigator. Please note that the email address will be used for all communication, including acknowledgement of receipt of the application.

Project details: include the grant type (see section 5.2), research purpose for the Seed studies only, type of application (see section 5.3), project title, total funds required, length of study (in months), a single main WCRF International Research Area covered by the proposed study (see section 4.3), main WCRF International Research Theme/s (covered by the proposed study see section 4.3), cancer type/outcome, and whether the application proposes to use animals. The total funds required must be given in pounds sterling. Do not enter any punctuation marks or currency

symbols in the field, only numbers. Please ensure the amount entered in this field matches the budget provided in attachment 1.

Where did you see our grant programme advertised? Please give specific details of how you know about the grant programme.

2 Contact details for co-applicants, consultants and for collaborators

Co-applicant(s) details: Enter the name and contact details for up to six co-applicants. The application must include at least one co-applicant. Additional professional details of the Principal Investigator and the co-applicants can be added to the main grant proposal (attachment 1).

If relevant, applicants should supply the names, contact details and main scientific disciplines for up to two consultant/ collaborators (people engaged on the project from within or outside the applicant's institution who are not deemed to be co-applicants).

3 Scientific abstract, plain language summary and keywords

Scientific abstract: (max. 500 words) the scientific abstract needs to be included in the main grant proposal (attachment 1), see section 4 below and also copied to this section of the online form. Distribute the information into the sections '**Background**', '**Hypothesis and Objectives**', '**Setting and Methods**', and '**Impact**'.

Plain language summary: (max. 500 words) the plain language summary should be written at the level of newspaper and magazine articles, so it can be easily understood by the general public. Avoid complex scientific terms. The plain language summary should clearly state the need for the study, its main aims, any unique elements of the work and should concisely state the importance of the study. Distribute the information into the sections '**Background**', '**Aims and Objectives**', '**How It Will Be Done**', and '**Potential Impact**'.

Keywords: please give up to 10 keywords that describe the project.



4 Attachments

Two attachments need to be uploaded at the **SG and IIG outline application stage**.

Attachment 1. Main grant proposal

Present your main grant proposal clearly and logically, to help the review process. Please note that revised applications (see section 5.3) from a previous cycle need to highlight clearly any changes to the resubmitted application. These applications need to address all issues raised by the peer reviewers and/or the Grant Panel as provided in the previous application's feedback.

1a) Scientific abstract: (max. 500 words in total) the scientific abstract needs to provide sufficient detail to convey clearly the rationale, main aims, research approach and potential impact of the study. Please note the scientific abstract is an essential document in the review process: it will be assessed by the Grant Panel and therefore needs to contain all important information. Structure the abstract under the headings 'Background', 'Hypothesis and Objectives', 'Setting and Methods', and 'Impact'.

1b) Plain language summary: (max. 500 words for all sections) the plain language summary should be written at the level of newspaper and magazine articles, so it can be easily understood by the general public. Avoid complex scientific terms. The plain language summary should clearly state the need for the study, its main aims, any unique elements of the work and should concisely state the importance of the study. Distribute the information into the sections 'Background', 'Aims and Objectives', 'How It Will Be Done', and 'Potential Impact'.

1c) Hypothesis, objectives and milestones: (max. 200 words) state the hypothesis, expand on the objectives and specify the milestones of the proposed research, in the sequence in which they are to be studied, including all primary and any secondary outcomes.

1d) Study design: (max. 500 words) the study design needs to be described in sufficient detail for the

reviewers to understand precisely what is proposed. Use a table and/or a schematic representation if this helps (these are not included in the word count). The study design must adhere to the Research Principles (section 4.2).

The experimental model and/or the study population must be sufficiently described and justified. When relevant, applications must include detailed and explicit power calculations for a specific outcome and a clear justification of the proposed sample size. Please note that sufficient statistical power is a condition for progressing the application to the next stage of review.

1e) Impact and future directions: (max 200 words) please, describe the expected outcomes and future steps for this project.

1f) Budget details: provide an overall amount divided into components including personnel, equipment, supplies, travel to conferences, Open Access publication and miscellaneous. Add a brief description of each component. See section 5.5 for more information on the budget specifications. Ensure that you abide by the restrictions (ie maximum total budget, maximum amount to travel to conferences allowed, permitted salaries, PhD stipend and fees, maximum amount for Open Access publications allowed, etc). The budget must be added in pounds sterling.

1g) Other funding: indicate any current funding support (pending and approved) that is relevant to the proposed study.

1h) Principal Investigator: biographical information: provide a CV, including current position, and list five recent relevant publications for the Principal Investigator.

1i) Co-applicant(s) biographical information: provide a CV, including current position, and list five recent relevant publications for the co-applicant(s).

1j) References: a selected list of relevant references should be listed using either the Harvard or Vancouver style.

Attachment 2. Administrative forms and signatures

All sections in this attachment must be completed and signed. If the Principal Investigator is temporarily unable to secure a signature prior to submitting the application, he or she must inform WCRF International as soon as possible before the submission deadline. Please note that applicants who submit a blank or incomplete administrative form without having previously informed WCRF International might have their applications rejected straightaway.

2a) Declaration: the Head of Department (or an authorised organisational officer, ie a person with authority to sign documents on behalf of the head of department), the Finance Officer and the Principal Investigator need to sign a declaration stating that the information contained in the grant application is correct, and that they will comply with the WCRF International's guidelines and the Terms and Conditions if a grant is awarded as a result of this application.

2b) Terms and conditions: the Principal Investigator needs to sign this section to indicate that s/he has read the terms and conditions (section 7) and has distributed them to relevant colleagues. Please note that, if a grant is awarded, several representatives of the host institution will need to agree to these terms and conditions prior to the start of a grant.

6.2 Full application form: STAGE 2

The full application online form has two sections and applies **only for IIG applicants**.

After the first Grant Panel meeting, the Principal Investigators of all IIG outline applications recommended for further consideration will be invited to submit a full application. On notification of progression to the full application stage, applicants will be emailed instructions on how to submit their full application, as well as the relevant attachment templates and the link to the full application online form.

All information entered on the Stage 1 Outline form will be saved and not requested to be submitted again at the full application stage. Applicants will be able to view the completed outline application form and proceed to the next stage. They will be requested to provide the contact details for potential peer reviewers and to submit additional attachments (see below).

Any changes in the outline application form should be uploaded as an additional attachment (attachment 7 – PDF file or Word document).

The following information will be needed:

1 Contact details for potential peer reviewers

Peer reviewers: Applicants must provide at least 2, and preferably 3, potential peer reviewers for their application. These peer reviewers must not in any way be connected with your study or institution. Please note it is essential these peer reviewers are able to provide an informed and impartial review of the application. Applicants may also identify individuals whom they would prefer WCRF International does not approach to peer review the application.

2 Attachments

Templates for attachments 1 to 4 will be supplied. Attachment 5, and when relevant, attachments 6 and 7, can be uploaded as a Word or PDF file.

Attachment 1. Main Grant Proposal

Please note that any resubmitted applications from the previous cycle (see section 5.3) need to address all issues raised by the Grant Panel and/or peer reviewers, as provided in the previous application's feedback. All changes need to be acknowledged and highlighted in the application. Renewal applications (see section 5.3) need to indicate clearly how the renewal proposal builds on the original grant.

1a) Background and significance: (max. 1,000 words) this section should review the background literature and existing knowledge that has led to the hypothesis to be investigated. State the relevance of the proposed research to the understanding of the impact of diet, nutrition, (including body composition) and physical activity on cancer. References should be listed in Section 1i. References, tables and figures are not included in the total word count.

1b) Hypothesis and objectives: (max. 500 words) describe the hypothesis, or hypotheses, to be tested. Ensure the hypothesis is clear, specific, explicit and focused. List the objectives and link them to the hypothesis.

1c) Objectives and milestones: (max. 1,000 words) expand on the study objectives, including all primary and any secondary outcomes, and link them to the milestones of the proposed research, in chronological sequence. Use a table and/or schematic representation if this helps (these are not included in the word count).

1d) Study design: (max. 2,000 words) the study design needs to be discussed in sufficient detail for the reviewers to understand precisely what is proposed. Use a table and/or a schematic representation if this helps (these are not included in the word count). The study design must adhere to the Research Principles (section 4.2).

Make sure that any animal or other experimental model and/or the study population are sufficiently described and justified. Applications involving animals need to demonstrate that the study follows an ethical framework for conducting research using animals humanely, such as the principles proposed by the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs, see [nc3rs.org.uk](https://www.nc3rs.org.uk)). These applications will need to address additional questions

on how the 3Rs principles, or the principles of a similar framework, have been implemented. A separate form will be provided for those applications (see below part 4c.)

Applications must include detailed and clear description of the planned statistical analyses, including power calculations for a specific outcome, and a clear justification of the proposed sample size. Applications exploring interactions need to ensure the sample size provides sufficient power to study interactive effects.

1e) Impact objectives: list and briefly describe any specific impact objectives from the research study and its findings. Include a dissemination plan and, if appropriate, any examples of Public Involvement in the planning, conduct or dissemination of the study. See sections 4.2, 5.4, 7.4 and 7.5 for more information.

1f) Questions/feedback from the outline application stage: use this section to address all concerns or queries from the Grant Panel included in the feedback from the outline application and/or highlight here how you have addressed them throughout this full application. These questions or requests would have been sent to you with the full application invitation. Take into consideration how any changes might affect the application, including the budget or personnel needs.

1g) Facilities: (max. 500 words) briefly describe availability of relevant laboratory space, major equipment and other facilities.

1h) PhD studentships: confirm that the Principal Investigator's institute has the necessary training and procedures for supervision and assessment of PhD students.

1i) References: relevant references should be listed here using either the Harvard or Vancouver style.

Attachment 2. Budget proposal

Please read section 5.5 and 7.4 of the guidelines carefully when planning the budget, and ensure that you abide by the restrictions. The budget must be added in pounds sterling.

The budget should be presented under the following main headings: personnel, PhD student tuition fees, equipment, supplies, travel to conferences, Open Access publication, miscellaneous. All budget components, including miscellaneous, need to be justified and other funding and research support available to the project should be noted.

2a) Budget sheet: add the budget within the Excel spreadsheet saved in the table. Make sure you check

the budget carefully before submitting it. Do not save this attachment as a PDF file.

Personnel: when possible, personnel should be named with their title, otherwise indicate 'to be named'. For each person to be supported by the research grant (including PhD students stipends), show grade, percentage time to be spent on the project, salary and the employer's combined contribution to Superannuation and National Insurance (where applicable). Annual salary increments (including cost of living increases) or other equivalent annual increases should be included in future years but not any other anticipated pay increases.

PhD student fees: up to £2,000 in any one year can be added towards PhD fees.

Equipment: equipment costing more than £700 must be itemised and fully justified.

Supplies: itemised expendables, assays, reagents, questionnaires, glassware, etc.

Travel for conferences: the maximum allowance for travel is £3,000 for IIGs, over the duration of the grant period, for the purpose of attending conferences where findings relating to the grant project are being disseminated.

Open Access publication: The maximum allowance to cover the cost of publication under Open Access is £6,000 for IIGs and £3,000 for SGs. Please refer to section 7.5.4 ('Publication under Open Access') for more details.

Miscellaneous: this section should list relevant and justifiable additional costs pertaining to the study design, such as, for example, the expenses/travel of study, participants, attendance to meetings, maintenance contracts, or the cost of obtaining certification or licences to carry out research involving human beings or animals.

Please note that budgets should not include fees for training courses, overhead costs or any institutional expenditure. See section 5.5 for more information.

2b) Justification of cost: use this section to make your justification of the costs. All budget items should be fully justified, including an explanation of the role of the individuals budgeted for the project. Structure your response using the main headings in the budget sheet (eg personnel, PhD student fees, equipment, supplies, travel to conferences, Open Access publication, miscellaneous). This section is important: please ensure you provide sufficient detail and evidence when appropriate.

2c) Other funding and research support: select the options for research support that apply to your proposed study. Indicate all funding support (pending and approved) relevant to this project.

This funding could be directly or indirectly relevant to the proposed project. Indicate any overlap between this WCRF International application and other pending or approved projects.

In addition to current funding, if your study is a continuation study (eg cohort study) previous sources of funding of the study from the past five years, together with 'core' funding must be listed here.

Attachment 3. Biographical information

Details of the relevant research interests and CVs for the Principal Investigator, all co-applicants and any consultants/collaborators should be provided. Copy and paste the subheadings for the appropriate number of co-applicants and consultants/ collaborators in the application. Please ensure you provide information for all listed consultants/ collaborators involved in the project.

Specific research interests relevant to the application: (max. 200 words) briefly summarise the specific research interests relating to the application for the Principal Investigator and all co-applicants and consultants/ collaborators involved in the proposed study.

Curriculum Vitae (CV): include a clearly formatted current CV for the Principal Investigator and all the co-applicants and consultants/collaborators. Ensure that it includes full name, current position, relevant education, relevant employment and professional experience, and a list of up to 10 recent publications that are relevant to the research proposal.

Please note you will need to provide letters of support/ collaboration from all co-applicants and consultants/ collaborators, as part of attachment 5.

Attachment 4. Supporting Documents 1: Administrative forms and signatures

All sections in this attachment must be completed and signed. An institutional stamp is also required. If the Principal Investigator is temporarily unable to secure a signature prior to submitting the application, he or she must inform WCRF International as soon as possible before the submission deadline. Please note that applicants who submit a blank or incomplete administrative form without having previously informed WCRF International might have their applications rejected straightaway.

4a) Declaration: the Head of Department, the Finance Officer and the Principal Investigator need to sign a declaration stating that the information contained in the grant application is correct, and that they will comply with the WCRF International's guidelines and the Terms and Conditions if a grant is awarded as a result of this application.

Please note that, if a grant is awarded, several representatives of the host institution will need to agree to the terms and conditions that are included in these Guidelines for Applicants and Award Recipients prior to the start of a grant. It is the responsibility of the Principal Investigator to ensure that all relevant colleagues have received a copy of the guidelines.

4b) Certification for use of human participants: certification for protection of human participants must be completed for all applications. Certification status can fall under one of three categories: approved, pending or not applicable. Appropriate ethical committee approval is required for research that involves human subjects, and appropriate evidence of actual or pending approval must be forwarded with the application. Evidence of ethical committee approval must be provided for each collaborating centre that may be involved in the research proposal (or approval from a multi-centre research ethics committee). Ethical committee approval must be supplied before the release of funds. If approval is not obtained, funds will be withheld. Please consider any potential costs associated with gaining certification and include these in your budget.

Where research involves human participants, their organs, tissue or data, the basic principles of research governance including ethics, science, information, health and safety must be implemented to a high standard. Where the institution does not have a policy on Research Governance, projects must conform to the UK Department of Health Research Governance framework, or a national equivalent.

The Principal Investigator will need to provide a sample copy of the relevant certificate/s, as part of attachment 5 (Supporting Documents 2: Letters of Support and Collaboration).

4c) Research involving animals: studies involving animals will need the relevant approval and licences and/or certification. The proper care and humane treatment of laboratory animals involved in activities supported by grants from the WCRF Network is the responsibility of the institution that receives the funds awarded. No grant for an activity involving laboratory animals will be made unless the application for such

support has been reviewed and approved by an appropriate institutional committee in accordance with current policy for the relevant country.

The Principal Investigator will need to provide a sample copy of the relevant certificate/s as part of attachment 5 (Supporting Documents 2: Letters of Support and Collaboration) and an additional form: 'Applications proposing research on animals – Assessing the 3Rs' that will be emailed to you with the rest of the attachment templates.

Please note that applications involving animals need to demonstrate that the study follows an ethical framework for conducting research using animals humanely, such as the principles proposed by the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), see nc3rs.org.uk

WCRF International adheres to the guidelines from the Association of Medical Research Charities (AMRC) and subscribes to the AMRC policy on the use of animals in research. For more information visit: amrc.org.uk/our-work/animal-research

4d) Standard release form: the standard release form should be completed in its entirety. This form allows the WCRF Network to describe the project and identify the organisation and investigators in health information and publicity materials. Applications without a completed standard release form will not be reviewed. For further information, please refer to section 7.5 'Dissemination'.



Attachment 5. Supporting Documents 2: Letters of support and collaboration

Letters from all co-applicants and consultants/ collaborators confirming their willingness to collaborate should be included in this attachment, as well as relevant certificates and, for applications involving animals, information on how the NC3Rs framework has been addressed. All documents should be uploaded as one combined PDF file or Word document. **No template is provided for this attachment.**

Attachment 6. Renewal applications only

Renewal applicants need to supply a copy of their original grant application, a copy of the final report and copies of all publications from the original project. All documents should be uploaded as one combined PDF file or Word document. **No template is provided for this attachment.**

Attachment 7. Changes in the outline application form only

Any changes in the outline application form should be uploaded as a PDF file or a Word document. **No template is provided for this attachment.**

If you have any queries about these guidelines, please contact WCRF International Science and Research Department by emailing research@wcrf.org





7. Procedures for funded grants: Terms and Conditions

7.1 Getting started definitions

In these terms and conditions, the following words and phrases have the following meanings (unless the context otherwise requires):

“Acceptance Form” means the acceptance of terms and conditions form, which must be signed by the Institution and the Principal Investigator to accept the Grant;

“Arising Intellectual Property” means any Intellectual Property Rights created or developed in the course of the Project or otherwise with the use of the Grant;

“Award Letter” means the letter from World Cancer Research Fund International (WCRF International) and the Grantor Charity, notifying the Principal Investigator of the award of the Grant in accordance with section 7.1.1;

“Grant” means the grant awarded to the Institution by the Grantor Charity, in the amount specified in the Award Letter;

“Grant Period” means the period for which the Grant is awarded, as specified in the Award Letter;

“Grantor Charity” means the WCRF Network charity which is funding the grant, being World Cancer Research Fund (WCRF UK), Wereld Kanker Onderzoek Fonds (WKOF), or a combination of these charities, as identified in the Award Letter;

“Intellectual Property Rights” means all patents, rights to inventions, utility models, copyright and related rights, trade marks, service marks, trade, business and domain names, rights in trade dress or get-up, rights in goodwill or to sue for passing off, unfair competition rights, rights in designs, rights in computer software, database rights, topography rights, rights in confidential information (including know-how and trade secrets) and any other intellectual property rights, in each case whether registered or unregistered and including all applications for, and renewals or extensions of, such rights, and all similar or equivalent rights or forms of protection in any part of the world;

“Institution” means the university, medical school, hospital, research institute or other academic centre at which the Project will be carried out and which employs

or retains the Principal Investigator and to which the Grant will be paid, as specified in the Award Letter;

“Open Access” means making publications freely available online so that they can be viewed by members of the public, and not just academics or those with access via libraries;

“Principal Investigator” means the individual who holds a senior established research position at the Institution and is performing or supervising the Project, as named in the Award Letter;

“Project” means the research project for which the Grant is awarded, as set out in the application form;

“Terms and Conditions” means these terms and conditions of grant, which govern the Grant from the Grantor Charity to the Institution;

“WCRF International” means World Cancer Research Fund International, a not-for-profit association established in Belgium, which manages and administers the Grant. World Cancer Research Fund International is funded by the WCRF Network of charities. The charities in the Network are: World Cancer Research Fund (WCRF UK), Wereld Kanker Onderzoek Fonds (WKOF), World Cancer Research Fund Hong Kong (WCRF HK), and American Institute for Cancer Research (AICR).

Notice

7.1.1

Successful applicants are notified in writing by WCRF International's Science and Research Department by early October 2019 after grants are approved for funding at the end of September 2019. The Award Letter includes the dates of the Grant Period, the amount of funds authorised during the period indicated and the Grantor Charity that is funding the Grant.



World Cancer Research Fund International and the grantor charity

7.1.2

WCRF International manages and administers the Regular Grant Programme on behalf of the WCRF Network charities in the UK, the Netherlands, and Hong Kong. The WCRF UK and WKOF Network charities fund the approved grants.

The relevant WCRF Network charities are:

- **World Cancer Research Fund (WCRF UK)**
- **Wereld Kanker Onderzoek Fonds (WKOF)**
- **World Cancer Research Fund Hong Kong (WCRF HK)**

The Award Letter will specify which of the WCRF Network charities is the Grantor Charity – please contact WCRF International if in any doubt.

In managing and administering the Grant and exercising its rights under these Terms and Conditions, WCRF International will, where it is appropriate to do so, act in consultation with the Grantor Charity.

Grant agreement

7.1.3

The Grant is awarded to the Institution, on the basis that the Principal Investigator will be carrying out or supervising the Project. On notification of the award of the Grant, WCRF International will send the Institution a Payment Details form and an Acceptance of Terms and Conditions form. These forms must be completed and signed by authorised staff at the Institution (constituting the relevant Head of Department or other person authorised to accept the Grant on behalf of the Institution, the Finance Officer, and representatives from the Press Department and Human Resources or individuals holding equivalent positions) and the Principal Investigator, and returned to WCRF International at least one month before the Grant's proposed start date.

By completing and signing the Acceptance of Terms and Conditions form, the Institution and the Principal Investigator agree to accept the Grant and comply with these Terms and Conditions, and the Institution agrees to take such steps as are necessary to ensure the compliance of the Principal Investigator and all parties and individuals working on the Project with these Terms and Conditions. In order to avoid delays please make sure that the Principal Investigator and the Institution's representatives are made aware of these Terms and Conditions as soon as possible and before the application is submitted.

These Terms and Conditions shall continue to apply for so long as any of them remain unperformed.

Grant start date

7.1.4

The Project must start between 1 November 2019 and 1 April 2020. In exceptional circumstances, the Institution may contact WCRF International in writing requesting a delayed start date.

WCRF International will notify the Institution of its decision in writing. The Grant will be awarded for the period specified in the Award Letter.

Payments

7.1.5

The Award Letter will notify the Institution of the identity of the Grantor Charity. All payments of the Grant will be made by the Grantor Charity solely to the Institution, and WCRF International is not responsible for ensuring payment of the Grant by the Grantor Charity. Payments will be made in arrears on a monthly basis by electronic transfer to the Institution's bank account. All grant application budgets are approved in pounds sterling (£), but the Grant is awarded in the currency of the Grantor Charity. The amount to be paid under the Grant shall be determined by the Board of the Grantor Charity at its sole discretion.

Grants awarded by WCRF UK will be paid in pounds sterling (£). Please note: if the Institution uses a currency other than pounds sterling (£), then the monthly payment will be subject to any fluctuations in the exchange rate when the payment is converted to that currency. These fluctuations will be at the Institution's expense or gain.

Grants awarded by WKOF will be paid in euros (€). Please note: if the Institution uses a currency other than euros (€), then the monthly payment will be subject to any fluctuations in the exchange rate when the payment is converted to that currency. These fluctuations will be at the Institution's expense or gain.

Any queries regarding payments can be sent to finance@wcrf.org, copying research@wcrf.org

Photograph

7.1.6

A high-resolution (print quality) digital photograph of the Principal Investigator, and optionally one of all members of the research group, must be submitted by 1 November 2019.

7.2 Changes to the grant

Changes to the grant budget

7.2.1

The Grant must be spent exclusively in support of the Project and within the Grant Period, and no funds received from the Grantor Charity under the Grant may be transferred to other research projects or used for any other purposes without the prior written consent of WCRF International. The Grant is based on the budget submitted with the application and will be in the amount specified in the Award Letter. The Grant will not be increased to reflect any increase in costs, and any such increase is the responsibility of the Institution.

7.2.3

The Grant must be spent in accordance with the original budget that was submitted with the application for the Grant. To allow the Institution to meet the agreed objectives of the grant, funds may be transferred within and between budget categories (Personnel, PhD students, Equipment, Supplies, Travel for conferences/meetings, Open Access publication and Miscellaneous) without WCRF International's prior approval provided the amount transferred is no more than 10 per cent of the budget for the Project that year and is intended to achieve the original objectives for the Project.

WCRF International must be notified of any such transfers in the next annual progress report and financial report which are submitted in accordance with section 7.4. All transfers must be within the approved budget amounts. For budget transfers greater than 10 per cent of the yearly budget or intended to achieve different objectives from those originally agreed, the Principal Investigator must contact WCRF International in advance to seek approval for the proposed change to the budget and, when relevant, to the objectives. Requests for budget transfers should be emailed to WCRF International in the form of an attachment letter explaining, in sufficient detail, the need for the budget transfer and a breakdown of the proposed changes. Please note that items or services not permitted in the original grant application budget (for example the Principal Investigator's salary) cannot be included or considered for any budget transfer.

7.2.4

Funds included in the budget to cover publication under Open Access are an exception to the provisions of clause 7.2.3: such funds must be used for their originally intended use in accordance with section 7.5.4

and cannot be transferred to another budget category, and must be refunded to the Grantor Charity via WCRF International if they are not spent.

Changes of institution

7.2.5

If the Principal Investigator leaves their position at the Institution and joins another institution, the Grant may be transferred to the new institution for completion of the Project at the new institution with prior written approval from WCRF International. In order for such a transfer to take place, the Principal Investigator must submit, with sufficient notice, a letter to WCRF International requesting the transfer of the Grant to the new institution. The letter must include the following information:

- a) **A statement guaranteeing that the new institution has the necessary technical and personnel resources to continue with the Project;**
- b) **A statement guaranteeing the new institution officially accepts the WCRF International grant, and that relevant representatives have agreed to these Terms and Conditions;**
- c) **The Principal Investigator's full address and contact details (including new job title if changed) at the new institution;**
- d) **The new institution's bank details, for the grant payments; and**
- e) **Contact details of the head of department/section and a senior financial representative at the new institution.**

In addition, WCRF International must also receive a final financial accounting report of all expenditure from the original institution, and any unexpended funds must be returned to the Grantor Charity via WCRF International. Payments will only be initiated to the new institution upon receipt of final financial accounting of all expenditure from the original institution.

WCRF International will notify the Principal Investigator in writing of whether the grant transfer has been approved, and send the new institution and the Principal Investigator a new Acceptance of Terms and Conditions form which must be signed and returned to WCRF International in accordance with section 7.1.3 above in order for the transfer to take effect.

The above requirements also apply to grants that are transferred before the start date of the Grant. Any changes to the institution named in a grant application must also be notified to WCRF International in advance.

Employment and personnel changes

7.2.6

Personnel employed on the Project are employees of (or otherwise retained or contracted by) the Institution, and not WCRF International or the Grantor Charity. Therefore, all costs, taxes and expenses (including those pertaining to maternity and sick leave) incurred by or in respect of all employees, staff, contractors, students or others engaged in carrying out the Project are the sole responsibility of the Institution.

7.2.7

The Institution and the Principal Investigator are responsible for ensuring that the Project is carried out. If personnel essential to continuing the Project leave (or go on maternity leave or long-term sickness leave), the Institution and the Principal Investigator are responsible for the recruitment of a replacement to conclude the Project. The Institution and Principal Investigator must inform WCRF International in writing of any personnel changes.

If the personnel change is likely to delay the Project substantially, WCRF International reserves the right to suspend payments of the Grant until such time as appropriate replacement personnel are found.

WCRF International will then notify the Institution and the Principal Investigator that the Grant will be extended and will resume using the remaining funds from the Grant.

7.2.8

WCRF International requires the Institution to identify any risks that could affect the health of a new and expectant mother or a person with a disability, and to take the necessary action as a result of the risk assessment.

Changes to Principal Investigator

7.2.9

The Institution must ensure that the Principal Investigator carries out or supervises the Project, in accordance with the Terms and Conditions. The Principal Investigator may only be replaced with another individual with prior written approval from WCRF International. When replacement of the Principal Investigator is required, the original Principal Investigator must submit a letter including the following information:

- a) The reason for the requested change;
- b) Evidence that the proposed new Principal Investigator is eligible and qualified to undertake the project;
- c) Support for the new Principal Investigator from the Institution;
- d) A statement guaranteeing the new Principal Investigator accepts the Grant, and that he or she has agreed to these Terms and Conditions; and
- e) Biographical information for the proposed new Principal Investigator, including CV information (as an attachment to the letter – refer to 'Attachment 3. Biographical information' of the online application form).

If applicable, any co-applicants of the original Principal Investigator must also write to WCRF International, stating their support for the new Principal Investigator.

WCRF International will notify the Principal Investigator and the Institution in writing of whether the transfer has been approved, and send the new Principal Investigator and the Institution a new Acceptance of Terms and Conditions form which must be signed and returned to WCRF International in accordance with section 7.1.3 above in order for the replacement to take effect.

The above requirements also apply to replacements of the Principal Investigator before the start date of the Grant, including any changes to the Principal Investigator named in a grant application.

Unfunded extension

7.2.10

The Grant Period may be extended for up to one year beyond the date specified in the Award letter with prior written approval from WCRF International.

No additional funds will be provided. Requests for extensions should be submitted no less than three months prior to the expiration of the Grant Period. The request should be emailed to WCRF International in the form of an attachment letter explaining, in sufficient detail, the reason for the delay, the need for an extension, and a breakdown of the work that will be carried out during the extension. Any Grant budget underspend also needs to be documented in the letter.

WCRF International will notify the Principal Investigator and the Institution in writing of its decision whether or not to allow the extension. Depending on the length of the extension, an interim progress report and an interim financial statement may be requested from the Principal Investigator, detailing the work carried out up to the extension date.

7.3 Conduct of the project

7.3.1

The Institution and the Principal Investigator must ensure that all the necessary legal and regulatory requirements relating to the Project and the facilities used for the Project are met at all times, and all of the necessary licences and approvals have been obtained. No Grant to support any Project involving research on humans or animals will be awarded unless evidence of relevant ethical committee approval and/or certification/licences is provided with the application, and such approval and certification/licence must be maintained for the duration of the Project.

7.3.2

The Institution and Principal Investigator shall ensure that the Project is carried out according to good practice amongst the research community and avoid any actual or perceived conflict of interest. The Institution must have in place adequate formal written procedures for the handling of allegations of misconduct and fraud, and shall provide copies of such procedures to WCRF International on request and amend or revise them to take account of any reasonable requirements of WCRF International.

In the event of any allegations of misconduct or fraud (whether scientific, financial or otherwise) occurring it is the responsibility of the Institution to investigate this fully. If a case of misconduct or fraud is suspected during the course of research, then WCRF International should be notified and kept informed of any developments. WCRF International reserves the right to terminate the Grant and require a return or all or part of the Grant in cases of misconduct or fraud, in accordance with section 7.8.

7.3.3

The Institution and the Principal Investigator warrant that they have all the necessary resources and expertise to carry out the Project, and will ensure that sufficient resources are dedicated to support the Project. The Institution and the Principal Investigator must notify WCRF International of any significant alteration to or divergence from the original aims and directions of the Project.

7.3.4

The Institution and the Principal Investigator must notify WCRF International promptly of any event in connection with the Project that may cause adverse publicity to WCRF International or the Grantor Charity.

7.3.5

The Institution and the Principal Investigator will maintain any information they receive about WCRF International or the Grantor Charity in strictest confidence and will not use, publish, or sell such information.

7.3.6

The Institution and the Principal Investigator are responsible for ensuring full compliancy with the General Data Protection Regulation (and any subsequent legislation and guidance) for the collection and storage of any personal data necessary for the grant.

7.4 Monitoring of the Grant

Budget and management

7.4.1

The Institution and the Principal Investigator are responsible for ensuring accurate financial tracking and management of the Grant. In addition to the reporting requirements set out in this section 7.4, the Institution agrees, upon reasonable notice and at reasonable times, to make all books and records relating to the Project and/or the Grant available for inspection, copy and audit by WCRF International or its agents, for the purposes of WCRF International verifying compliance with these Terms and Conditions. The Institution shall permit any person authorised by WCRF International for such purposes to have all reasonable access to its employees, agents, premises, facilities and records for the purpose of discussing, monitoring and evaluating the Institution's fulfilment of these Terms and Conditions, and shall if so required provide appropriate oral and written explanations to WCRF International.



Annual progress reports

7.4.2

At the end of each year during the Grant Period (on the anniversary of the Grant's start date), the Principal Investigator must submit a progress report to WCRF International by email. WCRF International will send the Principal Investigator a progress report form beforehand to complete and return. The completed form should summarise any progress made on the scientific objectives and milestones as outlined in the grant application, as well as a summary of the Project's key scientific findings so far.

Other relevant information, such as publications, manuscripts in preparation, conference abstracts, publicity, progress on the impact objectives, examples of Public Involvement in the research etc, also needs to be documented in the annual progress report. If WKOF or WCRF HK is the Grantor Charity, the Principal Investigator must report outputs and impact through the annual progress reports.



Financial report

7.4.3

In addition to the annual progress report, an annual financial report is also required. The financial report must be signed by the Principal Investigator and countersigned by a representative from the finance department of the Institution. It should include details in at least the following categories: Personnel, PhD students, Equipment, Supplies, Travel to conferences/meetings, Open Access publication and Miscellaneous. All budget transfers made under section 7.2.3 should also be reported in the annual financial report. Any queries regarding financial reports can be sent to finance@wcrf.org, copying research@wcrf.org

7.4.4

The progress and financial reports will be reviewed by WCRF International and may be sent to WCRF International Grant Panel members for review. At the discretion of WCRF International, funds for the second, third or fourth years of the Grant may be withheld based on any issues highlighted in the progress or financial reports or if progress or financial reports are not submitted.

Liaison visits

7.4.5

In the second, third or fourth year of the Grant Period, WCRF International may arrange with the Principal Investigator a liaison visit to the Institution, to discuss the progress of the Project in more detail. The Principal Investigator will be asked to give a presentation on the progress of the Project, followed by a more detailed evaluation of any issues that the Principal Investigator or WCRF International Science and Research Department would like to raise as part of the monitoring of the Grant.

WCRF International science staff may be accompanied on the liaison visits by staff from other departments within the WCRF Network, such as colleagues from the Fundraising, Health Information or Communication departments. On occasions, journalists and/or potential fundraising donors may be invited to be part of the meeting. This is an excellent opportunity for WCRF Network non-science staff and for donors to learn more about the work funded by the WCRF Network, so the cooperation of the Principal Investigator in organising the meeting is appreciated.

The Principal Investigator and the Institution agree that WCRF International staff may take photographs or video footage to document the liaison visit, as well as carry out interviews with the Principal Investigator and other relevant research staff members, and that any photos, video footage and interview copy or quotes collected during a liaison visit may be used in all WCRF Network external materials.

Final report

7.4.6

Within three months of the completion of the Grant Period, WCRF International requires a final comprehensive report to show the Project's accomplishments. WCRF International will send the Principal Investigator the relevant forms to complete. The final report must include:

- a) **A final year progress report form – including a scientific summary, a plain language summary and a grant report. The scientific report can be up to 3,000 words (plus a reference section) including how the outcomes and achievements relate to the initial proposal and a list of publications, invited talks and any publicity resulting from the Project;**
- b) **A final financial statement – signed by the Principal Investigator and a representative from the finance department of the Institution;**
- c) **Electronic copies of all publications, manuscripts in review and accepted conference abstracts, posters and oral presentations.**

Failure to submit a final report may result in automatic disqualification from submitting a grant application to WCRF International for three years, or action being taken by WCRF International under section 7.8. Occasionally, the Principal Investigator may be asked to present the Project's findings to the Grantor Charity's local offices at the end of the Grant Period.

Unexpended funds

7.4.7

All unexpended funds from the Grant must be returned to WCRF International within three months of completion of the Grant, along with the final financial report. WCRF International is not responsible for over expenditure on the Project, for commitments against a Grant not paid within 60 days after termination, or for expenditure incurred before the starting date of a Grant.

Unexpended funds from the Grant may only be carried forward to any extended Grant Period with prior permission of WCRF International in accordance with section 7.2.10.

7.5 Dissemination

Acknowledgments

7.5.1

The Principal Investigator and the Institution must acknowledge the Grantor Charity in all outputs relating to the Grant and the Project, as well as all PR (public relations) and communications activities relating to the Grant and the Project. Acknowledgement of research supported (wholly or in part) by the WCRF Network is essential to allow the WCRF Network charities to fundraise, publicise their work and show the scope of the research funded. All Public Relations (PR) and Communications activities must be conducted in

liaison with the Grantor Charity Communications team, which must be informed at least four weeks prior to implementation.

The Principal Investigator and the Institution must use the wording below when acknowledging a grant from the WCRF Network. When appropriate, such as on scientific journal articles, also include the grant number:

'Funding [for grant number] was obtained from World Cancer Research Fund (WCRF UK), as part of the World Cancer Research Fund International grant programme.'

'Funding [for grant number] was obtained from Wereld Kanker Onderzoek Fonds (WKOF), as part of the World Cancer Research Fund International grant programme.'

If a grant was co-funded by more than one of the WCRF Network charities, both charities must be acknowledged using the following wording, amended to refer to the relevant WCRF Network charities 'Funding for grant [number] was obtained from World Cancer Research Fund (WCRF UK) and Wereld Kanker Onderzoek Fonds (WKOF), as part of the World Cancer Research Fund International grant programme.'

Use of WCRF logos

Principal Investigators must use the WCRF International and appropriate Grantor Charity's logo in any materials regarding work that has been funded by the WCRF Network. All new Principal Investigators will be sent electronic copies of the WCRF International and appropriate Grantor Charity's logo for use. If logos are updated, Principal Investigators will be sent new versions, which must be used. All such WCRF Network logos will remain the property of WCRF International or the appropriate Grantor Charity as the case may be.

7.5.2

The Principal Investigator and the Institution must acknowledge their grant from the Grantor Charity in any publications, materials, or talks regarding the Project, including but not limited to the following places:

- a) **Publications resulting from research supported wholly or in part by the World Cancer Research Fund Network;**
- b) **Posters and/or presentations at conferences resulting from research supported wholly or in part by the World Cancer Research Fund network;**
- c) **Publicity materials, including press releases or advertisements for jobs related to the Project or the Grant;**
- d) **Online promotional activity, including the World Cancer Research Fund websites, blogs, newsletters and social media**

- e) The Institution and/or the Principal Investigator's research group website(s);
- f) Invited talks to research institutions, hospitals or public lectures;
- g) The Institution's institutional annual report and accounts; and
- h) Other relevant output related to the research supported wholly or in part by the WCRF Network.

When required, please use the relevant logos for the WCRF Network members and WCRF International. Electronic copies of all relevant above materials must be sent to WCRF International prior to publication, to allow WCRF International to check and approve the correct grant acknowledgement and use of the logos.



Publication

7.5.3

The Principal Investigator should send copies of all published papers, submitted manuscripts and conference abstracts regarding the Project to WCRF International, throughout the Grant Period and for five years after the Grant has ended. **The Principal Investigator must notify WCRF International as soon as a submitted manuscript under review is accepted for publication by a journal.** This will enable the appropriate WCRF Network Communications team and the WCRF International Science and Research Department, in consultation with the lead author,

to design appropriate plans for media and communications work prior to publication.

The Principal Investigator must inform WCRF International of the proposed publication date as soon as it is known, and must send WCRF International a copy of the final print version PDF file of the grant paper once the journal has made it available to them.

Publications resulting from research supported wholly or in part by the WCRF Network must contain an acknowledgement of the Grantor Charity as well as of WCRF International, in accordance with the Acknowledgements section above.

Please note: WCRF International strongly encourages the Institution and the Principal Investigator to follow the ARRIVE (Animal Research: Reporting In Vivo Experiments) guidelines by the National Centre for the Replacement, Refinement and Reduction of Animals in Research (see NC3Rs at [nc3rs.org.uk](https://www.nc3rs.org.uk)) if publishing findings from grants involving animal research.

Publication under Open Access

7.5.4

WCRF International encourages the Institution and the Principal Investigator to, wherever possible, make publications arising from the Project available under Open Access.

To accommodate the cost of Open Access publication for grant papers published while the Grant is active, WCRF International allows up to a maximum of £6,000 for IIGs and £3,000 for SGs to be included in the grant budget to cover the cost of publishing under Open Access. Such funds must be explicitly documented in the budget under the Open Access category, must be used solely towards paying for publication under Open Access of papers derived from the Project, and must be repaid to the Grantor Charity via WCRF International if not used for that purpose. These Open Access funds cannot be used to pay for other publication charges, such as page or colour charges.

WCRF International encourages the Institution and the Principal Investigator to use these funds towards paying for author processing charges at Open Access journals, rather than to pay Open Access fees at hybrid journals, but defers the decision of where to publish to the Institution and the Principal Investigator.

If the Grant has been completed and papers have been accepted for publication after the Grant's end date, the Principal Investigator is encouraged to contact WCRF International to discuss the options available for Open Access dissemination of those papers.

Conferences/scientific meetings

7.5.5

Principal Investigators and their collaborators are strongly encouraged to present the results of the Project at appropriate conferences and relevant scientific meetings. Costs for such activities should be included as part of the budget available for travel and conferences, up to a maximum of £3,000 for Investigator Initiated Grants and £1,500 for Seed Grants (as specified in the grant application) over the duration of the Grant Period. These funds are specifically to cover the expense of travelling to conferences and invited talks where findings relating to the Grant will be presented in the form of a poster or oral presentation. Funds cannot be used for travel to other conferences.

The Principal Investigator is required to give WCRF International advance notice of their attendance, or the attendance of any individuals working on the Project, at such a conference (two months if possible) and to acknowledge the Grantor Charity as well as WCRF International as part of the poster/oral presentation (see Acknowledgements section above). The support of the Grantor Charity and WCRF International must be acknowledged in any conference poster or oral presentation resulting from research supported wholly or in part by the WCRF Network, in accordance with sections 7.5.1 and 7.5.2 above. **The Principal Investigator must send WCRF International copies of accepted conference abstracts and posters.** Please use the relevant WCRF Network logos in any conference poster or oral presentation resulting from research supported wholly or in part by the WCRF Network.

Publicity and communications

7.5.6

Publicity is vital to charities to help in raising funds and communicating our messages. The Institution and the Principal Investigator are therefore required to work with WCRF International and the Grantor Charity to coordinate and maximise publicity and communication opportunities arising from the Grant. We request that the Institution and the Principal Investigator support us in this vital part of our work.

Announcing the grant

7.5.7

A standard release form is included in the full application form, and it is required that the Principal Investigator sign and submit it as part of the full application. This form allows WCRF International and the Grantor Charity to describe the Project and identify

the Institution, the Principal Investigator and other investigators in health information, fundraising and publicity materials.

WCRF International must be informed before any announcement is made in relation to the newly awarded Grant through any external communication channel (eg Institution newsletter, press release, social media).

Grant awards are announced on our websites and via social media after grants have been approved. In addition, if appropriate, press releases will be written by the WCRF Network and cleared through the Principal Investigator and/or the Institution's press office for general distribution. The Principal Investigator will need to be available for any interviews by the media.

A link to the WCRF International website should be added to relevant department or project pages of the Institution and/or the Principal Investigator's website. Please inform WCRF International as soon as the link has been added. WCRF International URL:

www.wcrf.org

Publicising the grant progress and its findings

7.5.8

During the Grant Period, the Institution, the Principal Investigator, publications and other activities relating to the Project, such as a liaison visit, may be publicised by WCRF International. It is likely that from time to time, the Institution and/or the Principal Investigator will be called upon to help with press calls or act as a spokesperson regarding the topic of their Grant. Although this is not expected to be an onerous or time-consuming task, it is a condition of the Grant that the Institution and the Principal Investigator will assist with this wherever reasonably possible. Any press calls directed to the Institution or the Principal Investigator will have been screened through the appropriate WCRF Network Communications team and discussed beforehand with the Institution or the Principal Investigator.

It is also important that we explain the findings of our grants. Copies of papers due for publication in relation to the Project must be forwarded to the Science and Research Department at WCRF International when publication is confirmed.

The appropriate WCRF Network Communications team will liaise with the Principal Investigator and the journal about the suitability of this work for a press release, embargoed until publication date. The press release will be written by the WCRF Network Communications team in conjunction with the Science and Research Department, and cleared through the

Principal Investigator and the Institution's press office as appropriate. Where the content of a press release cannot be agreed, neither the Principal Investigator, the Institution nor the WCRF Network should issue a press release.

The Institution and the Principal Investigator may also be interviewed for an article to be featured in one of our WCRF Network charities' newsletters, websites or blogs, asked to contribute to blogs and/or social media activities, or on occasion asked to input into other WCRF Network activities relevant to their research work. They are also encouraged to be active on their own social media networks, in conjunction with the WCRF Communications team, to assist the team in promoting their work.

In addition, the Institution and the Principal Investigator might be asked to give a presentation on the Project for events organised by WCRF International or other WCRF Network offices.



7.6 Intellectual property

WCRF International and the Grantor Charity recognise that intellectual property, including patentable inventions, may be developed in the course of the Project. As organisations operating for the public benefit, WCRF International and the Grantor Charity are obliged to ensure that the useful results of the research that they wholly or partly fund are applied for the public good. In some circumstances, this obligation is best achieved through the protection of intellectual property, including by filing a patent application, and commercial

exploitation of such intellectual property. The following conditions seek to ensure that this obligation is met:

7.6.1

To the extent that it does not already have such strategies and procedures in place, the Institution shall develop and implement strategies and procedures for the identification, protection, management and exploitation of any Arising Intellectual Property.

7.6.2

The Institution shall ensure that all persons in receipt of the Grant or working on the Project (including the Principal Investigator, other investigators, researchers, employees, students, visiting fellows and subcontractors) are employed or retained by the Institution on terms that vest in the Institution all Arising Intellectual Property. The Institution shall not transfer ownership of any Arising Intellectual Property to any third party without the prior written consent of WCRF International, and then only on terms which provide WCRF International with no less extensive rights than under section 7.6.3.

7.6.3

The Institution hereby grants WCRF International an irrevocable, perpetual, non-exclusive, sub-licensable, royalty free licence to use all the Arising Intellectual Property in all territories in all media in existence now or in the future. For the avoidance of doubt, this licence will remain in effect as long as the Arising Intellectual Property remains in existence, notwithstanding the expiry or earlier termination of the Grant.

7.6.4

The Institution shall promptly notify WCRF International in writing when any Arising Intellectual Property comes into existence (which shall in any event be no later than one month after the Institution or the Principal Investigator becomes aware of the Arising Intellectual Property), and shall consult with WCRF International to discuss whether the protection, management and exploitation of such Arising Intellectual Property is an appropriate means of achieving the public benefit, and if WCRF International reasonably believes it is then WCRF International shall establish (and the Institution and the Principal Investigator shall adhere to) such strategy as it reasonably requires for such protection, management and exploitation. The Institution shall take all reasonable steps to ensure that such Arising Intellectual Property is protected and is not published or otherwise disclosed publicly prior to consultation with WCRF International.

7.6.5

The Institution must obtain the prior written consent of WCRF International before using, or authorising the use of, the Arising Intellectual Property for any commercial purpose (which for the avoidance of doubt shall include any circumstances when payment is made for use of the Arising Intellectual Property). WCRF International is not obliged to grant consent, however this will not be unreasonably withheld provided that the proposed use does not run counter to WCRF International's interests and objectives.

Any consent given by WCRF International will be conditional upon the Institution, as a minimum:

- a) **Undertaking to adhere to a reasonable commercial strategy, approved by WCRF International, for the protection, management and exploitation of the relevant Arising Intellectual Property;**
- b) **Paying WCRF International and/or the Grantor Charity (as determined by WCRF International) a reasonable proportion of any revenue realised from any such commercial use; and**
- c) **Accepting any revenue and equity-sharing terms which WCRF International notifies to the Institution.**

7.6.6

If the Institution does not wish to protect, manage or exploit any Arising Intellectual Property or if the Institution fails to comply with the conditions in this section 7.6 or any agreed strategy for the protection, management or exploitation of the Arising Intellectual Property, WCRF International may direct the Institution to:

- a) **Take immediate steps to protect the Arising Intellectual Property as required in any strategy, at WCRF International's expense; and/or**
- b) **Immediately transfer the Arising Intellectual Property to WCRF International.**

Without prejudice to the generality of the foregoing, if the Institution does not intend to file a patent application or any other application for registration

in connection with any Arising Intellectual Property which is capable of protection through a patent or other registration, it shall notify WCRF International promptly and in any event at least six months prior to any deadline for filing the application or within two years of the Arising Intellectual Property coming into existence, whichever is the earlier. The Institution shall take such steps as WCRF International directs to transfer ownership of such Arising Intellectual Property to WCRF International so that WCRF International can register such Arising Intellectual Property.

7.6.7

The Institution agrees to do, and will ensure that the Principal Investigator and its employees, students and any third party acting on its behalf do, all acts reasonably required by WCRF International to assist it in the protection and exploitation of the Arising Intellectual Property.

7.6.8

If the Institution wishes to use any third party to carry out its obligations with respect to this section 7.6, then it must provide details of the proposed third party to WCRF International and obtain WCRF International's prior written approval, such approval not to be unreasonably withheld or delayed.

7.6.9

The Institution shall use all reasonable endeavours to ensure that it is not subject to any consultancies, third party restrictions or other arrangements which might impact upon the Arising Intellectual Property, and in particular the ownership of or rights to use the Arising Intellectual Property. The Institution shall not enter into any such arrangements after the date of the Award Letter without the prior written consent of WCRF International, and shall notify WCRF International of any existing arrangements in the application for the Grant, or immediately on receipt of the Award Letter if the arrangements were entered into after submission of the application. WCRF International reserves the right to withdraw the offer of the Grant or amend these Terms and Conditions on being notified that such an arrangement has been entered into.

7.6.10

Where the Institution has agreed with WCRF International that a patent application should be filed, or any other steps should be taken to register any Arising Intellectual Property, the Institution shall keep WCRF International informed of the progress of such applications or registrations and shall agree in advance with WCRF International the name(s) under which the applications or registrations shall be filed. No patent application or other application for registration shall be abandoned by the Institution without first notifying WCRF International in writing and without providing WCRF International with the opportunity and all reasonable assistance necessary to continue the application at WCRF International's expense.

7.6.11

The Institution agrees that if it or its licensee has not taken reasonable steps within three years (or any reasonable length of time under the circumstances) after a patent or other registration has been issued on any Arising Intellectual Property to bring that Arising Intellectual Property to the point of practical application, and cannot show any valid reason for this, it shall take such steps as WCRF International directs to transfer that patent or registration to WCRF International, to cancel any outstanding exclusive licences under the patent, and/or to grant licences under the patent to parties designated by WCRF International on whatever terms are reasonable under the circumstances.

7.6.12

The Principal Investigator and the Institution shall provide regular reports, on at least a yearly basis, updating WCRF International on any publication, sale or public use of any Arising Intellectual Property.

7.7 Data protection

WCRF International may contact Principal Investigators, any co-applicants and their Institutions by post, telephone or e-mail about their grants and the other research activities of the Grantor charity.

All information supplied by the Principal Investigator will be used for processing the application, audit, review, evaluation and publicity as per section 7.5. The information provided will not be shared with any third party except for these purposes. All personal information will be stored and processed in accordance with the the General Data Protection Regulation (and any subsequent legislation and guidance).

7.8 Termination

7.8.1

WCRF International or the Institution may terminate the Grant by giving at least three months' notice in writing. If the Grant is terminated under this section 7.8.1, the Institution shall retain any portion of the Grant already committed, and shall return to the Grantor Charity, via WCRF International, any unexpended and uncommitted portion of the Grant. If the Grant is terminated by WCRF International under this section 7.8.1, the Institution shall be entitled to be reimbursed by the Grantor Charity for any reasonable costs incurred in carrying out the Project up until the expiry of the notice which were in accordance with the budget submitted with the application and which are not covered by any portion of the Grant already paid to the Institution.

7.8.2

WCRF International may, at its sole discretion, require the return of some or all of the Grant and/or terminate the Grant immediately if:

- a) **The Grant, or any part of it, is used for any purposes other than the Project without the prior written agreement of WCRF International;**
- b) **The Institution or the Principal Investigator fails to comply with any of these Terms and Conditions and fails to rectify any such failure within 30 days of receiving written notice from WCRF International detailing the failure;**
- c) **The Principal Investigator ceases to carry out or supervise the Project without any replacement being agreed by WCRF International;**
- d) **The Institution or the Principal Investigator act in a way which, in the reasonable opinion of WCRF International, brings or is likely to bring the name or reputation of WCRF International or the Grantor Charity into disrepute or damage their names or reputations in any way (including, but not limited to, if any fraud is committed in relation to the Grant or the Project);**
- e) **The Institution or the Principal Investigator obtain duplicate funding from a third party for the Project or the same aspects of the Project as the Grant is intended to cover;**
- f) **The Institution or the Principal Investigator provide WCRF International with any materially misleading or inaccurate information, whether in the grant application form or otherwise; or**
- g) **The Institution ceases to operate, passes a resolution (or any court of competent jurisdiction makes an order) that it be wound up or dissolved other than for the purpose of a bona fide and solvent reconstruction or amalgamation, becomes insolvent or is placed into receivership, administration or liquidation, has a petition presented for its winding up, enters into any arrangement or composition for the benefit of its creditors, or is unable to pay its debts as they fall due.**

7.9 Limitation of liability

7.9.1

Neither WCRF International nor the Grantor Charity accept any responsibility or liability for any expenditure or liabilities arising out of the Grant, the Project or these Terms and Conditions.

7.9.2

The Institution shall be fully responsible and liable (and neither WCRF International nor the Grantor

Charity shall be liable), financially and otherwise, for all liabilities, expenditure, claims, demands, actions, costs, expenses, losses and damages arising out of or in relation to:

- a) any non-payment of the Grant on any due date; and
- b) any use of the Grant or conduct of the Project.

7.9.3

Neither WCRF International nor the Grantor Charity shall indemnify the Institution against any claim for compensation or against any other claims for which the Institution may be liable.

7.9.4

Nothing in these Terms and Conditions shall limit or exclude any party's liability for death or personal injury caused by that party's negligence, or fraud or fraudulent representation.

7.10 Entire agreement, assignment, conflict and non-waiver

7.10.1

These Terms and Conditions, together with the Award Letter, constitute the entire agreement between the parties with respect to the Grant and shall have effect to the exclusion of any other representation, agreement or understanding or any kind between the parties preceding the date of the Award Letter and relating to the Grant.

7.10.2

WCRF International may amend these Terms and Conditions and the Award Letter at any time, and shall give notice in writing to the Institution and the Principal Investigator of any such amendment.

7.10.3

Neither the Institution nor the Principal Investigator shall assign or sub-contract any of their rights or obligations under these Terms and Conditions without WCRF International's prior consent.

7.10.4

In the event of any conflict between the provisions of these Terms and Conditions and the Award Letter, the provisions of the Award Letter shall take precedence over the provisions of these Terms and Conditions.

7.10.5

No failure or delay by a party to exercise any right or remedy provided under this Agreement or by law shall

constitute a waiver of that or any other right or remedy, nor shall it prevent or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall prevent or restrict the further exercise of that or any other right or remedy.

7.11 Notices

Any notice or other document given under this Agreement shall be in writing and shall be deemed to have been duly given if left or sent by hand or by registered post or by email to a party. Any notice or other document shall be deemed to have been received by the addressee following receipt of dispatch if the notice or other document is sent by registered post or simultaneously where the delivery or transmission is sent by hand or given by email. Notice shall not have been properly given by email if the sender of an email receives notification that the email has not been delivered.

7.12 Governing law and jurisdiction

These Terms and Conditions and the Award Letter shall be governed by English law and the parties irrevocably submit to the jurisdiction of the English courts in any legal proceedings regarding any claim or matter relating to these Terms and Conditions, the Award Letter, or the Grant.





8. World Cancer Research Fund International activities

WCRF International Continuous Update Project (CUP)

The WCRF International Continuous Update Project (CUP) is led and managed by WCRF International in partnership with the American Institute for Cancer Research, on behalf of World Cancer Research Fund UK, Wereld Kanker Onderzoek Fonds and World Cancer Research Fund HK.

Scientific research from around the world is collated and added to a database of epidemiological studies on an ongoing basis and systematically reviewed by a team at Imperial College London.

An independent panel of leading scientists evaluates and interprets the evidence to draw conclusions based on the body of scientific evidence. Their conclusions form the basis for our Cancer Prevention Recommendations published in the 2018 Third Expert Report, for reviewing and, where necessary, revising them.



Up to July 2018, reports have been published on the updated evidence for mouth, pharynx and larynx, lung, breast, colorectal, pancreatic, endometrial, ovarian, prostate, liver, gallbladder, kidney, bladder, stomach, cervical, skin, nasopharyngeal and oesophageal cancer, and breast cancer survivors.

A new framework has been developed for systematically reviewing mechanistic studies in relation to diet, nutrition (including body composition) physical activity, and the development and progression of different

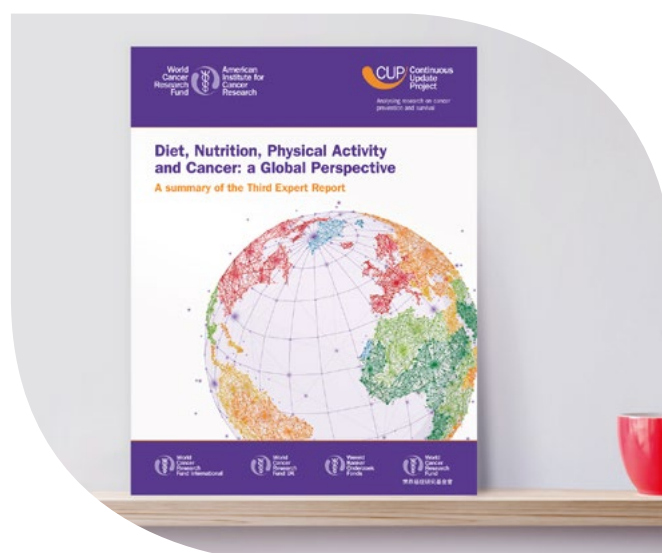
cancers along with the design of a web-based tool for mechanism prioritization (TeMMPo-Text Mining for Mechanisms Prioritisation).

To find out more about the CUP mechanisms work please visit: wcrf.org/int/continuous-update-project/about-cup/mechanisms-research

The Third Expert Report was launched in May 2018. The new report is a synthesis of the current evidence and the updated Cancer Prevention Recommendations. The Recommendations are based on our CUP Panel's major review of the accumulated evidence on cancer from the last ten years.

As part of the Continuous Update Project (CUP) process, the Panel has discussed the implications of recent findings that emphasise the importance of adopting a more holistic focus, by considering how different patterns of diet and physical activity combine to create a metabolic state that is more, or less, conducive to the development and progression of cancer (rather than focusing on the singular effects of specific dietary factors such as individual foods). These discussions have led the Panel to identify six areas where research is needed. More detailed information on all six areas can be found in the full Future research directions part of the Third Expert Report available online.

Please visit dietandcancerreport.org for further details on the Third Expert report or try our interactive risk matrix to discover how diet, nutrition and physical activity affect cancer risk: wcrf.org/interactivematrix



SUMMARY OF STRONG EVIDENCE ON DIET, NUTRITION, PHYSICAL ACTIVITY AND THE PREVENTION OF CANCER

To reference this matrix please use the following citation:

World Cancer Research Fund/American Institute for Cancer Research. Continuous Update Project: Diet, Nutrition, Physical Activity and the Prevention of Cancer. Summary of Strong Evidence. Available at: wcrf.org/cupmatrix accessed on DD-MM-YYYY

Abbreviation: SLR, systematic literature review.

	Wholegrains	Foods containing dietary fibre	Aflatoxins	Foods containing beta-carotene	Non-starchy vegetables or fruit (aggregated) ²	Red meat	Processed meat	Cantonese-style salted fish	Dairy products	Foods preserved by salting	Arsenic in drinking water	Mate	Coffee	Sugar sweetened drinks	Alcoholic drinks	'Mediterranean type' dietary pattern	'Western type' diet	'Fast foods'	Glycaemic load	High-dose beta-carotene supplements	Beta-carotene	Calcium supplements	Physical activity (moderate and vigorous)	Vigorous physical activity	Walking	Screen time (children) ¹⁵	Screen time (adults) ¹⁵	Adult body fatness ¹⁶	Body fatness in young adulthood ¹⁶	Adult weight gain	Adult attained height ²¹	Greater birthweight	Lactation ²²	Having been breastfed
MOUTH, PHARYNX, LARYNX 2018																																		
NASOPHARYNX 2017 (SLR)																																		
OESOPHAGUS (ADENOCARCINOMA) 2016																																		
OESOPHAGUS (SQUAMOUS CELL CARCINOMA) 2016																																		
LUNG 2017																																		
STOMACH 2016																																		
PANCREAS 2012																																		
GALLBLADDER 2015																																		
LIVER 2015																																		
COLORECTUM 2017																																		
BREAST PREMENOPAUSE 2017																																		
BREAST POSTMENOPAUSE 2017																																		
OVARY 2014																																		
ENDOMETRIUM 2013																																		
PROSTATE 2014																																		
KIDNEY 2015																																		
BLADDER 2015																																		
SKIN 2017 (SLR)																																		
AERODIGESTIVE CANCERS (AGGREGATED) 2016-2018¹																																		
RISK OF WEIGHT GAIN, OVERWEIGHT OR OBESITY 2018^{23,24}																																		
<div> <div></div> Convincing decreases risk <div></div> Probable decreases risk <div></div> Probable increases risk <div></div> Convincing increases risk <div></div> Substantial effect on risk unlikely </div>																																		

- Includes mouth, pharynx and larynx, nasopharynx, oesophagus (squamous cell carcinoma and adenocarcinoma), lung, stomach and colorectal cancers.
- Aggregated exposure which contains evidence for non-starchy vegetables, fruit and citrus fruit.
- The Panel notes that while the evidence for links between individual cancers and non-starchy vegetables or fruits is limited, the pattern of association is consistent and in the same direction, and overall the evidence is more persuasive of a protective effect.
- Includes evidence on total dairy, milk, cheese and dietary calcium intakes.
- Stomach and liver: Based on intakes above approximately 45 grams of ethanol per day (about 3 drinks).
- Based on intakes above approximately 30 grams of ethanol per day (about 2 drinks per day).
- No threshold level of intake was identified.
- Based on intakes up to 30 grams of ethanol per day (about 2 drinks per day). There is insufficient evidence for intake greater than 30 grams per day.
- Such diets are characterised by high intakes of free sugars, meat and dietary fat; the overall conclusion includes all these factors.
- Evidence is from studies of high-dose supplements in smokers.
- Includes both foods naturally containing the constituent and foods which have the constituent added and includes studies using supplements.
- Evidence derived from studies of supplements at dose >200 milligrams per day.

- Colon cancer only.
- Aerobic physical activity only.
- Screen time is a marker of sedentary behaviour.
- Body fatness is marked by body mass index (BMI) and where possible waist circumference and waist-hip ratio.
- Stomach cardia cancer only.
- Advanced prostate cancer only.
- Young women aged about 18 to 30 years; body fatness is marked by BMI.
- Malignant melanoma only.
- Adult attained height is unlikely to directly influence the risk of cancer. It is a marker for genetic, environmental, hormonal and nutritional factors affecting growth during the period from pre-conception to completion of growth in length.
- Evidence relates to effects on the mother who is breastfeeding and not to effects on the child who is being breastfed. Relates to overall breast cancer (unspecified).
- The factors identified as increasing or decreasing risk of weight gain, overweight or obesity do so by promoting positive energy balance (increased risk) or appropriate energy balance (decreased risk), through a complex interplay of physiological, psychological and social influences.
- Evidence comes mostly from studies of adults but, unless there is evidence to the contrary, also apply to children (aged 5 years and over).

Our policy and public affairs work

We believe that governments worldwide should develop, implement and evaluate evidence-informed policies to enable people to make informed lifestyle choices that will reduce their risk of cancer and other noncommunicable diseases (NCDs). We focus on providing evidence-based policy advice and independent policy analysis, to encourage policymakers to take comprehensive action to encourage healthy diets and reduce overweight and obesity, promote physical activity and breastfeeding and reduce the consumption of alcohol.

Our Policy and Public Affairs work has an overarching goal:

The wider implementation of more effective policies to create environments for people and communities that are conducive for people to follow our Cancer Prevention Recommendations.

To achieve this goal, our Policy and Public Affairs Department works to support, advice and hold accountable policymakers to take action. We have four priorities:

Advancing the evidence for policy

Our NOURISHING framework and policy database is a unique tool and trusted information resource for policymakers, researchers and civil society organisations. It outlines a comprehensive approach for governments to take action to promote healthy diets and reduce overweight and obesity. Further, as part of our commitment to updating, interpreting and communicating the evidence for policy our Policy Advisory Group helps us to effectively meet the evidence needs of the policymaking community.

More information: wcrf.org/NOURISHING

N O U R I S H I N G		
FOOD ENVIRONMENT		FOOD SYSTEM
POLICY AREA		
N	Nutrition label standards and regulations on the use of claims and implied claims on food	
O	Offer healthy food and set standards in public institutions and other specific settings	
U	Use economic tools to address food affordability and purchase incentives	
R	Restrict food advertising and other forms of commercial promotion	
I	Improve nutritional quality of the whole food supply	
S	Set incentives and rules to create a healthy retail and food service environment	
H	Harness food supply chain and actions across sectors to ensure coherence with health	
I	Inform people about food and nutrition through public awareness	
N	Nutrition advice and counselling in health care settings	
G	Give nutrition education and skills	

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Influencing our target audiences

We are in Official Relations with the World Health Organization and are trusted advisors at the highest policy level. We work closely with international and inter-governmental agencies, as well as national governments to encourage the implementation of effective policies to prevent cancer and other NCDs.

Collaborating with civil society organisations

We work in partnership with a variety of organisations, including those active in NCD prevention, consumer rights and international development to ensure NCD prevention and control are seen as a top priority by policymakers worldwide.

Communicating our work globally

We produce policy documents and briefings on topics related to diet, weight and physical activity in the prevention of cancer and other NCDs, present at international conferences and events, and participate in working groups and advisory boards.



WCRF International Academy

The WCRF International Academy provides educational materials and activities, mainly for scientific and policy audiences, about the importance and impact of diet, nutrition (including body composition) and physical activity on cancer. WCRF International Academy activities may vary from workshops on particular areas of diet, nutrition (including body composition) and physical activity on cancer through to more in-depth courses and conferences. As part of the Academy activities, Wageningen University will be holding a Masterclass on Nutrition and Cancer, 4-6 February 2018, in collaboration with WCRF International and WKOF.

For more information about the WCRF International Academy and the upcoming Masterclass, please visit: wcrf.org/academy

WCRF International conferences programme

WCRF International holds and participates in national and international conferences to promote our science and policy work.

Our next big presence will be at **World Cancer Congress 2018 in Kuala Lumpur, 1–4 October 2018**

To find out more, please visit: wcrf.org/conferences

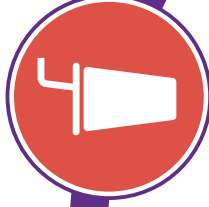


For more information on WCRF International activities, please visit wcrf.org

**LIMIT CONSUMPTION
OF RED AND
PROCESSED MEAT**



**LIMIT CONSUMPTION
OF SUGAR
SWEETENED DRINKS**



**LIMIT CONSUMPTION
OF 'FAST FOODS' AND
OTHER PROCESSED
FOODS HIGH IN FAT,
STARCHES OR SUGARS**



**LIMIT ALCOHOL
CONSUMPTION**



**EAT A DIET RICH
IN WHOLEGRAINS,
VEGETABLES,
FRUIT AND BEANS**



**BE PHYSICALLY
ACTIVE**



**BE A
HEALTHY WEIGHT**



Not smoking and avoiding other exposure to tobacco and excess sun are also important in reducing cancer risk. Following these Recommendations is likely to reduce intakes of salt, saturated and trans fats, which together will help prevent other non-communicable diseases.



OUR CANCER PREVENTION RECOMMENDATIONS

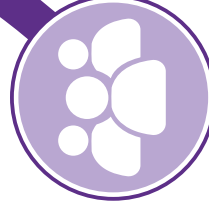
**DO NOT USE
SUPPLEMENTS
FOR CANCER
PREVENTION**



**FOR MOTHERS:
BREASTFEED YOUR
BABY, IF YOU CAN**



**AFTER A CANCER
DIAGNOSIS: FOLLOW OUR
RECOMMENDATIONS,
IF YOU CAN**



wcrf.org

9. Appendix

Examples of appropriate research topics under specific Research Areas and Themes

Cancer Prevention Research Area

Indicative examples within the scope of the **Cancer Prevention Research Area** under the **Mechanisms Theme** include:

- Studies exploring the biological mechanisms that might explain observed associations.
- Studies that aim to explain the variability between people in cancer risk in relation to diet, nutrition (including body composition) and physical activity.
- Studies that explore the role of nutrition, including body composition and physical activity, on immune function and/or inflammation in relation to cancer risk.
- Studies that aim to translate relevant laboratory findings to a human setting.
- Studies that explore the mechanisms underpinning established diet, nutrition (including body composition) or physical activity related links between cancer and other chronic diseases and conditions, such as diabetes.
- Studies that integrate clinical and epidemiological research with advances in molecular genotyping and phenotyping.
- Studies that aim to identify and characterise biological mechanisms behind genetic and/or epigenetic profiles that influence the relation between diet, nutrition (including body composition) and physical activity, and cancer.
- Studies exploring mechanisms behind the interaction of the microbiome with diet and with the host in relation to cancer outcomes.
- Studies that explore the mechanisms linked to specific “Hallmarks of cancer”; please note these types of application must be relevant to diet, nutrition (including body composition) or physical activity, as described in section 4.2.

- Studies exploring disordered regulation of metabolism at the whole body, tissue or cellular level including cellular energetics and its control.
- Studies that help understand the impact of relevant exposures on the immune and endocrine systems in the context of cancer; for example, studies exploring the impact of relevant exposures on inflammation or on persistence of viral infection within the context of cancer are of interest.

Indicative examples within the scope of this Area under the **Host Factors/Individual Susceptibility Theme** include:

- Studies that address how relevant exposures at critical periods during the lifecourse affect susceptibility to cancer.
- Studies that explore how diet, nutrition (including body composition) and physical activity interact with the human microbiome, and how this in turn might relate to cancer. Also, studies exploring how the microbiome response to diet or dietary change varies between people, in relation to cancer.
- Studies that investigate specific exposures that impact on growth, development and maturation (eg adrenarche, menarche), and that identify epigenetic or other biomarkers that predict or impact on later disease susceptibility.
- Studies that aim to characterise optimal growth trajectories that take account both of cardiometabolic and cancer risk.
- Studies that help identify genetic and epigenetic variations that modify susceptibility to cancer.

Cancer Survivors Research Area

Indicative examples within the scope of the **Cancer Survivors Research Area** under the **Mechanisms Theme** include:

- Studies that integrate clinical and epidemiological research with advances in molecular genotyping and phenotyping.

- Studies in cancer survivors that explore the mechanisms underpinning established nutrition or physical activity related links between cancer and other chronic diseases and conditions, such as diabetes.
- Studies that aim to identify and characterise biological mechanisms behind genetic and/or epigenetic profiles associated with diet, nutrition (including body composition), physical activity and cancer progression.
- Studies exploring mechanisms behind the interaction of the microbiome with diet and with the host in relation to cancer outcomes.
- Studies that help understand the role of relevant exposures and related pathways in recurrence and distant cancer metastasis.
- Studies that aim to translate relevant laboratory findings to a human setting.
- Studies that explore mechanisms linked to specific “Hallmarks of cancer”; please note applications must be relevant to diet, nutrition (including body composition) or physical activity, as described in section 4.2.
- Studies exploring disordered regulation of metabolism at the whole body, tissue or cellular level including cellular energetics and its control.
- Studies that explore the (mechanistic) interaction between diet, nutrition (including body composition), physical activity and treatment regimes in relation to cancer outcomes.
- Studies that explore the role of nutrition, including body composition and physical activity, on the interactions between tumour cells, the tumour environment and the host.

Indicative examples within the scope of this Area under the **Host Factors/Individual Susceptibility Theme** include:

- Studies that aim to explain the variability in response to cancer treatment in relation to diet, nutrition (including body composition) and physical activity.
- Studies that address how relevant exposures at critical periods during the life course affect susceptibility to cancer.
- Studies exploring how the microbiome response to diet, nutrition (including body composition) or

physical activity change varies between people, in relation to cancer outcomes.

- Studies that explore the genetic and epigenetic differences between cancer survivors (or their tumors) in relation to the impact of diet, nutrition (including body composition) and physical activity on outcomes, as well as studies that identify which cancer survivors are more or less likely to respond to interventions based on these exposures
- Studies in cancer survivors that characterise the dose response (including possible threshold or plateau effects) in relation to body composition, energy intake, expenditure and balance, sedentary habits and related exposures over the life course, and their interactions and related mechanisms.
- Studies that help identify genetic or epigenetic variations that modify the clinical course of cancer in relation to diet, nutrition (including body composition) and physical activity.

Indicative examples within the scope of this Area under the **Likely Causal links** include:

- Studies exploring the impact on cancer-related outcomes of interventions aimed at changing diet, nutritional status or physical activity in cancer survivors.
- Studies that aid to a better understanding of the nutritional, physical activity and anthropometric trajectories of cancer survivors from before diagnosis to after treatment in relation to cancer outcomes; studies should characterise the timing of events in relation to diagnosis, treatment and progression.
- Studies that explore how changes in exposures, such as changes in body composition, dietary modifications or physical activity, relate to cancer survivors or to recognised surrogate markers of cancer.
- Studies exploring the possible links between diet, nutrition (including body composition) and physical activity and the tumour microenvironment and metastatic process.
- Studies exploring the links between overall dietary patterns and cancer progression and survival.
- Studies that characterise interactions among foods and nutrients, and physical activity, in relation to cancer progression and survival.

[illegible]



World Cancer Research Fund Network

World Cancer Research Fund International is a not-for-profit organisation that leads and unifies a network of cancer charities with a global reach, dedicated to the prevention of cancer through diet, weight and physical activity. The World Cancer Research Fund Network of charities is based in Europe, the Americas and Asia, giving us a global voice to inform people about cancer prevention.



**American
Institute for
Cancer
Research**



**World
Cancer
Research
Fund UK**



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