

# INSPIRE Research Challenge



## INSPIRE Research Challenge: Background and rationale

Over the past four decades, the WCRF/AICR Network has built a reputation as the global authority on diet, nutrition, physical activity and cancer. The Network, led by World Cancer Research Fund International (WCRF International) comprises of World Cancer Research Fund (WCRF) in the UK, Wereld Kanker Onderzoek Fonds (WKOF) in the Netherlands, and American Institute for Cancer Research (AICR) in the USA.

The WCRF/AICR Network was among the first to recognise and support research on how lifestyle factors could reduce cancer risk and improve survivorship. Three Expert Reports, four decades of funding research projects, annual conferences highlighting the latest research and the Global Cancer Update Programme (formerly Continuous Update Programme), have all cemented the WCRF/AICR Network as the most trusted source of the latest evidence.

The concepts pioneered by the WCRF/AICR Cancer Prevention Recommendations are now the mainstay of public health cancer (and other non-communicable diseases) prevention initiatives and clinical practice. Despite this huge success, cancer incidence rates and the burden of disease remain unacceptably high so the urgent demand for progress remains.

The WCRF/AICR Network has always been at the forefront of innovative research, new ideas and fostering progress in the field of diet, nutrition and cancer. As part of our continued commitment to accelerating progress, WCRF International is running the **INSPIRE Research Challenge**, in parallel with our [Regular Grant Programme](#).

The INSPIRE Research Challenge is aimed at **Early Career Researchers (ECRs)** and will prioritise innovative, bold, and creative proposals with the potential to catalyse rapid and impactful advances in cancer prevention, treatment and survivorship.

In 2023, the WCRF/AICR Network piloted the INSPIRE Research Challenge, receiving 48 applications, shortlisting 6, all of which received funding.



## Eligibility

The **INSPIRE Research Challenge** is open to ECRs, defined as individuals who are within 2–6 years full-time equivalent (FTE) working in research since the award date of their PhD or equivalent higher research degree. Time spent on career breaks such as official parental or medical leave, may be subtracted from the time since PhD or equivalent higher research degree completion. If applicants have worked outside of research since their degree completion, they must be able to explain their relevant research experience that qualifies them to conduct this independent project.

Eligible applicants must be employed on a research contract within a department at a university-affiliated research institution or a medical school conducting research. The INSPIRE Research Challenge is open to investigators worldwide.

Applicants are expected to demonstrate conceptual independence from post-doctoral supervisors or mentor(s) and post-doctoral applicants must provide proof of support for their application from their current supervisor.

Only one application per Principal Investigator per grant cycle is permitted.

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.

## Scope

Applicants are encouraged to be bold. INSPIRE Research Challenge funding will accelerate novel research ideas that provide unique insights to challenge current conventions and longstanding dogma or take advantage of emerging themes and technologies. INSPIRE Research Challenge funding aims to support the development of new research ideas/concepts, the combination of research areas in innovative ways, the establishment of new collaborations, and/or the application of new innovative methods or technologies.

Proposed projects must have direct relevance to cancer prevention, treatment or survivorship and may address any or all stages of the cancer journey. Proposals should address modifiable factors including both lifestyle, such as diet, nutrition, physical activity, and environmental factors such as pollution/contaminants and pathogens. Particular priority will be given to novel exposures including stress, sleep and host factors such as immune function. We anticipate that the greatest opportunities will present themselves

at the intersection of previously independent ideas, approaches and topics that may not have previously been combined. Opportunities may also exist in the application of approaches or concepts adapted from other diseases or conditions that may not have yet been investigated with respect to cancer.

Proposals must address an explicitly stated hypothesis and clearly state objectives that will enable the applicant to test that hypothesis. The use of experimental models must be justified regarding their relevance to human cancers. Evidence synthesis approaches, such as systematic reviews and meta-analyses, and applications that propose solely cell line studies will not be considered.

Applicants should clearly state the expected outcomes of their proposal, and the anticipated potential for exploration with future funding. Applicants must demonstrate the feasibility of their proposal as well as the suitability of their research environment.

## Funding

Maximum funding: Up to £75,000

Funds can be used for any justifiable research expenses including salary (especially to protect time for the applicant to pursue the proposed project) and services. Please note that we do not cover overhead expenses.

Funding will be available for 12 months and stated objectives must be achievable within that timeframe. Extension of funding may be available, contingent on meeting original objectives plus demonstration of significant potential for further progress.

## Application process

- 1) **Letter of Intent:** Submission of a Letter of Intent (LOI) is a mandatory component of the INSPIRE Research Challenge application process. Only one LOI may be submitted by each applicant. LOIs will be critically reviewed and invitation to submit a full application will be highly competitive. The LOI phase is not merely an administrative step. Applicants are encouraged to consider application quality to be equivalent to standards required for scientific publication.
- 2) **Full Application:** Following the review of the LOIs, shortlisted applicants will be invited to submit a full application. Full applications will be reviewed by external independent content experts. The INSPIRE Research Challenge Panel will then review the feedback of the independent experts to adjudicate the merits of each application.

### 3) Video Presentation for Shortlisted Applicants:

“Dragon’s Den” style Zoom Interviews will be the final selection from fundable proposals. Video presentations will be conducted after the INSPIRE Research Challenge Panel meeting.

**Contact:** For queries regarding applications, please e-mail [inspire@wcrf.org](mailto:inspire@wcrf.org)

## INSPIRE Research Challenge: Research principles

The aim of the INSPIRE Research Challenge is to fund bold, innovative, and creative proposals with the potential to catalyse rapid and impactful advances in cancer prevention, treatment and survivorship. All applications must address all of the research principles (listed below) to be considered for review; applications that do not address all of our research principles will not be considered for funding.

### Relevant exposures

Relevant exposures encompass both confirmed and possible modifiable cancer risk factors. The rationale for the chosen exposure must be adequately justified in the application.

Exposures must be explicitly defined and could include, but are not limited to:

- Diet, dietary patterns, other diet related behaviours and – provided that they are part of the usual diet – food, food components and dietary supplements.  
**Please note:** proposals focusing on the role of isolated food constituents, dietary supplements or herbal extracts that are not part of the usual diet will not be considered.
- 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.

Additional lifestyle-related exposures such as sleep and stress, host factors such as immune function, and environmental-related factors such as pollution, contaminants and pathogens are considered relevant. Exposures must be relevant to usual human experiences. Mechanistic research exposures should be in a form that would feasibly be encountered in vivo and at a level that is relevant to usual human experience. Exposures in animal research must be justified in terms of relevance to exposure in humans and include the reasons why a human research model is not used.

*Extreme or unusual exposures (unlikely to be relevant to a large proportion of the population), in dose or method of administration, will not be considered.*

## Cancer-related outcomes

In this document the definition of “cancer” includes the whole cancer spectrum, both before and after diagnosis, from initiation to progression, metastasis and cancer mortality. Cancer-related outcomes should be specific and well defined. Relevant outcomes include cancer-related endpoints, including pre-malignant neoplastic changes (eg, colorectal adenomas, Barrett’s oesophagus and leukoplakia) or well-justified intermediate endpoints with acknowledged roles in carcinogenesis (eg, mammographic density, chronic inflammation and proliferation). Applications must justify the use of a particular intermediate or surrogate marker.

### Cancer prevention

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).

### Cancer survivors

In the Cancer Survivors Research Area, a wider range of outcomes is acceptable. These include: overall survival, cancer recurrence, metastasis, quality of life during treatment, effectiveness of treatment, quality of life after treatment, development of second primary cancers, late-effects, chronic disease, co-morbidities, prognosis and body composition.

## 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. The relevance of any proposed animal model to humans and to human cancer must be clearly explained. Applications that propose solely cell line studies will not be considered.

**Please note: Studies in non-mammalian systems will not be considered. The direct relevance of xenograft or induced- tumour models to human cancer prevention or survivorship, must be explicitly justified.**

Applications proposing the use of animals must provide a detailed description of the proposed research involving animals and a strong and clear justification addressing why the research aims could not be met using an alternative study model. The experimental

model must be clearly described, including the species and any genetic modification of an animal model.

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](https://nc3rs.org.uk)

Studies involving humans or animals must obtain the appropriate ethical approval and the relevant licenses 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](https://amrc.org.uk/our-work/animal-research)

## Appropriate study design

The study design must be appropriate to address the research question proposed. Sufficient information on the proposed study design must be provided so that the Review Panel can adequately assess the scientific merit and feasibility of the proposal. The research question should be formulated as a clear, specific and testable hypothesis and must be explicitly justified.

**Please note:** Applications proposing a case-control study or a cross-sectional study design, not nested in a cohort study, will only be considered if it is not feasible or appropriate to collect prospective data.

Applicants must provide a compelling rationale to support the hypothesis that will be tested and to demonstrate the feasibility of the study.

**Please note:** Applications must include adequate details of the proposed statistical methods, including power calculations.

We strongly recommend that input from a trained statistician/biostatistician is obtained before submitting an application.

Epidemiological and clinical study designs should consider evidence from basic science; experimental study designs should be supported by epidemiological and /or clinical evidence. A multi-disciplinary and interdisciplinary approach to the research is encouraged and 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).

## Novelty

Applicants must describe and justify the novelty of the proposed research. Applications should propose a novel research question from careful interpretation of existing evidence, and/or propose an innovative approach to an existing research question: the aim is to test new or innovative ideas, but feasibility of their proposed study must also be addressed.

## Impact

To make an impact, funded research must contribute to a better understanding of the role of modifiable factors in cancer prevention, treatment and survival, consistent with the vision and mission of the WCRF/AICR Network. Ultimately, proposed research should have a clear line of sight to making a difference in people's lives. The outcome of the research must, in some way, contribute toward helping to reduce people's risk of developing cancer or improve outcomes in cancer survivors.

Applicants must demonstrate they have considered the potential impact of their research in relation to at least one 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.

## Patient and public involvement and engagement

Patient and Public Involvement and Engagement (PPIE) is an emerging focus in the research landscape. WCRF International recognises and strongly supports the value of PPIE in ensuring that studies are relevant, meaningful, and aligned with the needs and perspectives of those directly affected by the outcomes. Therefore, applicants should understand the importance of PPIE and provide details of any PPIE activities already undertaken for the development of the proposal, or any plans for potential future PPIE as the study progresses.

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