



DOROTHY COFUND

DevelOp InterdisciplinaRy ApprOaches to HeaLTH Crises CollaborativELY

Guide for Applicants

2022

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 101034345.

The Irish Research Council reserves the right to amend this call document.

Version	Date	Author	Primary Changes
2.0	08/04/2022	IRC	Page 6

Contents

1.	Overview of the DOROTHY COFUND.....	3
2.	Public Health Crises: Why do we need DOROTHY?.....	3
3.	Benefits to Fellows	4
3.1.	Benefits of a DOROTHY fellowship.....	4
3.2.	DOROTHY training programme	5
3.3.	Supervision and support	5
3.4.	Remuneration.....	6
4.	Key dates	7
5.	Eligibility	7
5.1.	Eligibility requirements for applicants	7
5.2.	Eligibility requirements for the Host Higher Education Institutions/Research Performing Organisations	8
5.3.	Eligibility requirements for the non-academic secondment partner	8
5.4.	Eligibility requirements for supervisors	8
6.	Preparing to apply	9
7.	How to apply	10
7.1.	The online application system	10
7.2.	The OLS application form	11
8.	Gender-blinding of applications for evaluation purposes	12
9.	Information for successful applicants	12
	Appendix I: The Training Programme	14
	Appendix II Guidance on selected sections of the application form.....	17
	Appendix III Eligible higher education institutions (HEIs) and research-performing organisations (RPOs).....	26
	Appendix IV Research Categorisation.....	28
	Appendix V Ethical Table	39
	Appendix VI Guidance on the Sex/Gender Dimension Statement.....	48
	Appendix VII Non exhaustive list of non-academic secondment hosts	51
	Appendix VIII Resources on Data Management Plans and FAIR Principles.....	54
	Appendix IX Assessment Process.....	55

1. Overview of the DOROTHY COFUND

DOROTHY (DevelOp interdisciplinaRy apprOaches to heALTH crisis collaboratively), is a postdoctoral research programme that is co-funded by the European Union's Horizon 2020 research and innovation programme under Marie Skłodowska-Curie Actions. The Irish Research Council (IRC) in partnership with the Health Research Board (HRB) and the Environmental Protection Agency (EPA) has provided this guide with practical information to potential applicants in preparing and submitting an application for DOROTHY MSCA COFUND.

The three Irish funding agencies, the IRC, HRB and EPA, have come together to create this new interdisciplinary fellowship programme on the topic of public health crises and their legacies. The complementary expertise of the three agencies - namely funding excellence in pan-disciplinary research (Irish Research Council), health perspectives (Health Research Board) and environmental policies (Environmental Protection Agency) - is key to DOROTHY's scope and ambitions. The lead agency, the Irish Research Council, will manage the programme, supported by two other co-funding agencies.

2. Public Health Crises: Why do we need DOROTHY?

Public health is defined as “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society” (Acheson 1988; WHO). The public health approach is to promote better health and wellbeing in society as a whole, preventing illness through working across sectors. According to the World Health Organization, challenges to public health include economic crises, inequalities, ageing populations, increasing levels of chronic disease, migration and urbanisation, and environmental damage and climate change¹. Research is key to finding solutions to public health crises. The COVID-19 pandemic has naturally focused the attention of governments and state agencies into research focused on addressing the medical and technical aspects of the pandemic. Aiming to complement these efforts with a more holistic and long-term strategy, the DOROTHY MSCA COFUND will train and launch the careers of experts able to tackle public health crises not only as medical problems but also as multi-faceted societal challenges, which require solid understanding of how best to effect change in behaviour in response to public health crises. An international, intersectoral and interdisciplinary perspective is needed to resolve such crises. Concerted research efforts are needed to effectively mitigate the rapid spread of infections and to minimise direct and indirect impacts on individuals and communities. In addition to the challenges posed by the spread of infectious diseases, environmentally driven public health crises are increasingly a concern in our societies, for example respiratory illness caused by particulates in the air we breathe. DOROTHY fellows will conduct research into some of the most pressing societal challenges of our times.

DOROTHY aims to:

1 [WHO/Europe | Public health services](#)

- Create a critical mass of well-networked experts, from all disciplinary areas, who will be fully able to engage with the Irish and EU innovation ecosystem.
- Support fellows' career development, through an innovative multidisciplinary research and training platform, supervision and mentoring, and prepare them for future career opportunities, tackling future public-health crises.
- Promote the dissemination and communication of impactful research beyond traditional academic channels, targeting policymakers and population at large, with the objective of contributing to resourceful and resilient societies.
- Pioneer an innovative multidisciplinary approach to the way the complex and broad-ranging phenomena underlying public health crises are understood and tackled, with solutions emerging from cooperation between disciplines, sectors and research areas.

DOROTHY will recruit and train 25 outstanding researchers from a variety of disciplines who will shed light on public health crises from wide-ranging perspectives. Fellows will be recruited for 36-month projects by an Irish higher education institution (HEI). They will be hosted in the first 18 months (outgoing phase) in a higher education institution outside Ireland, and in the following 18 months (return phase) in a higher education institution in Ireland. Applicants are encouraged to include a *non-academic secondment* (between 3 and 6 months) in their project, which can take place at any stage of the project. Fellows will benefit from extensive training opportunities provided by their outgoing and return HEIs, and from programme-wide training. They will gain valuable intersectoral exposure (including through the intersectoral secondments) and will become adept at communicating their research findings to a wide array of relevant stakeholders, including policymakers and the population at large.

DOROTHY aims to recruit top-class researchers from anywhere in the world, funding their projects on the basis of excellence. All disciplines are welcome across the sciences, engineering, arts and humanities provided that the projects relate to public health crises. Although applicants may have a specialist background and core scientific skills, interdisciplinary projects that generate new knowledge across more than one discipline are welcome.

DOROTHY fellowships are governed by the Terms and Conditions underlying the fellowship, and the Award Acceptance Form. The contents of this Guide are for general information purposes and the assistance of applicants. In the event of any discrepancy arising between this Guide and the Terms and Conditions/Acceptance Form, the latter will prevail.

3. Benefits to Fellows

3.1. Benefits of a DOROTHY fellowship

The successful applicants will participate in a unique, innovative and high-level fellowship programme. Fellows will:

- Be provided with a 36-month fully paid internationally recognised MSCA COFUND fellowship, employed by an Irish higher education institution (their main host HEI). Fellowships will include a family allowance, where applicable.

- Be free to choose their own topic, their HEI in Ireland, their outgoing-phase institution, their non-academic secondment host where applicable, and their supervisors. DOROTHY, in line with the 'Charter and Code'², is based on individual-driven research.
- Come from any discipline, provided their project is relevant to public health crises.
- Deepen their disciplinary expertise while developing their interdisciplinary competencies through immersion in individual and programme-wide training opportunities.
- Avail of enhanced intersectoral upskilling, growing their professional networks, as a result of substantial targeted exposure to policymakers and practitioners in the context of DOROTHY training events, conferences, non-academic secondments, and high-profile circulation of programme reports.
- Develop both research and transferable skills as a result of DOROTHY training.
- Be supported in their research projects, attainment of training goals, and career development planning by a dedicated supervisory panel.
- Be supported in carrying out their research project through provision of a research budget.
- Develop partnerships, research and support networks with their co-fellows through collaboration opportunities during the fellowships.
- Develop public profiles as experts in their scientific areas and beyond, supporting their future career prospects.

3.2. DOROTHY training programme

Given the highly ambitious nature of DOROTHY's goals, the training programme includes individualised training at local level in the host HEIs, as well as programme-wide training. Individual training will take place in the main host HEI, the partner host HEI and during the non-academic secondment, where applicable. Fellows will work with their supervisors in each setting to identify their training needs, identify local training opportunities to meet those needs, and to gain access to that training.

The programme-wide training will consist of four training events and a final conference, delivered by international experts in a variety of areas related to or necessary for multifaceted research into public health crises (see Appendix I for details of the training programme).

At all levels, training in research-related skills and transferable skills will be made available to DOROTHY fellows, facilitating their consistent upskilling. The training programme is informed by members of the DOROTHY Steering Committee, which is both multidisciplinary and intersectoral in composition.

3.3. Supervision and support

Each fellow will have a supervisory panel, consisting of their main supervisor, their outgoing supervisor, a secondment supervisor if relevant and a mentor (chosen by the fellow after commencing the fellowship). Supervisory panels will support the DOROTHY fellows in identifying training needs, and consequently in drafting their Career Development Plan (CDP), and in revising it throughout the fellowship. Ultimately, the CDP should facilitate alignment between fellowship activities (research, training, outputs) and long-term career plans and

² <https://euraxess.ec.europa.eu/jobs/charter-code-researchers>

training needs. All supervisors must agree on the ‘DOROTHY supervisory Charter’ which will be available on the DOROTHY website.

Fellows will meet individually with their supervisors during their various placements on a very regular basis, so that they are supported to progress with their research projects and to avail of the best training opportunities available to them locally. They will meet with their supervisory panel as a whole every 3 months.

3.4. Remuneration

Fellows Allowance	Amount per month	Amount per year
Living and Mobility Allowance (Prior to income tax and social deductions)	€3,669	€44,028 per year (Without family allowance)
Family Allowance (If applicable €450) (Prior to income tax and social deductions)	€4,119	€49,428 per year (With family allowance)

The mobility allowance will be paid throughout the whole duration of the fellowship.

The employment contracts will be in line with Irish Law and the Terms of Employment (Information) Acts 1994 and 2001. All fellows will be covered by standard Irish employees’ rights and entitlements (regulating for instance maternity/paternity leave; health coverage; pension scheme; safety and equal treatment in the workplace), as per the most recent employment legislation³.

Note: the salary paid to fellows will be adjusted for the outgoing phase country. It will be calculated using the country correction coefficient applicable to the country where the fellow chooses to reside for the first 18 months of the fellowship.

The DOROTHY programme will also cover training and research expenses (including non-academic secondment costs, if applicable), which amounts to €8400 per year per fellow, for a total of €25,200 over three years. The IRC will transfer this budget to the Irish HEI, which will set up a budget account (that the fellow can charge for the relevant expenses at all stages of the fellowship). Also, expenses related to attending DOROTHY training events, including travel and accommodation during the outgoing phase, will be covered by the programme.

³https://www.citizensinformation.ie/en/employment/employment_rights_and_conditions/employment_rights_and_duties/employment_law_update.html

Training Allowances	Sum Amount
Training and research expenses (including non-academic secondment costs, if applicable)	€8400 paid to host HEI per year for each fellow
For a total of €25,200 over three years	

4. Key dates

Call open	23 rd March 2022 at 4pm (Irish time)
FAQ deadline	16 th May 2022 at 4pm (Irish time)
Deadline for applications	23 rd May 2022 at 4pm (Irish time)
Research office endorsement/verification deadline	7 th June 2022 at 4pm (Irish time)
Outcome	August 2022

5. Eligibility

5.1. Eligibility requirements for applicants

- In order to be eligible to apply for a DOROTHY fellowship, the applicant must be an **Experienced Researcher (ER)**. The definition of Experienced Researchers in the H2020 MSCA programme will be applied: ERs must, at the time of the call deadline, be in possession of a doctoral degree or have at least four years of full-time equivalent research experience. Full-time equivalent research experience is measured from the date when an applicant obtained the degree that would formally entitle them to embark on a doctorate, either in the country in which the degree was obtained or in Ireland, even if a doctorate was never started or envisaged.
- **Fellows must engage in international mobility.** Following the MSCA IF-Global Fellowship model, all DOROTHY projects start with an outgoing phase in an institution outside of Ireland. Fellows must relocate to the country of their proposed outgoing phase, integrating themselves in the outgoing-phase host team in the partner HEI.
 - The applicant cannot have resided or carried out their main activity in the outgoing-phase country for more than 12 months in the three years immediately before the call deadline.
 - For refugees under the Geneva Convention, the duration of the refugee procedure will not be counted as a period of residence in the country of the proposed outgoing phase.
 - Compulsory national service and/or short stays such as holidays, attending conferences/meetings/workshops will not be counted as a period of residence in the country of the proposed outgoing phase.

- DOROTHY welcomes applicants from all over the world. If the outgoing phase is to a country other than a Member State (MS) or Associated Country (AC), the applicant must be a national or long-term resident of a MS or AC. If the outgoing phase is to a MS or AC, the applicant can be of any nationality. If in doubt, applicants can contact the programme manager (PM) to check their eligibility.
- Permanent employees of an eligible Irish HEI cannot apply to DOROTHY listing their current employer as the Irish host organisation.
- Applicants must be in a position to engage full-time in fellowship-related activities should they be funded.
- Applicants must be fluent in written and spoken English.
- At application stage, applicants will not need to attach documentary evidence of their experience and residency. However, the Irish Research Council reserves the right to request it after the call deadline. Should this information be found to be incorrect, contradictory or unavailable, the funders reserve the right to withdraw the award offer.

5.2. Eligibility requirements for the Host Higher Education Institutions/Research Performing Organisations

- Applicants must choose their Irish host HEI from the list of eligible HEIs (Universities and Institutes of Technology/Technological Universities provided in the Appendix III), as per the IRC eligibility rules.
- The eligible Irish HEI chosen by the applicant must provide institutional verification of the application.

5.3. Eligibility requirements for the non-academic secondment partner

- Applicants are encouraged to include a non-academic secondment (between 3 and 6 months) in their project, which can take place at any stage of the project. This is a secondment to any non-academic organisation fulfilling the requirements of the Horizon 2020 Rules for Participation Regulation (EU) No 1290/2013.
- Should a secondment not have been envisaged at proposal stage, it can be inserted at a later stage, in agreement with the supervisory panel (see Appendix VIII for a list of potential non-academic secondment organisations)

5.4. Eligibility requirements for supervisors

- At proposal preparation stage, applicants must identify a main and outgoing supervisor, of their own choosing.
- Both the main and outgoing supervisors must be staff of the selected main (Irish) host HEI and partner host HEI, and they both need to be experts in their field and have appropriate supervisory experience.
- At proposal stage, applicants should highlight the research track-record and supervision experience of their chosen supervisors.
- When a non-academic secondment is foreseen (at proposal submission stage), a secondment supervisor must also be identified.

- The supervisors must be in a position to devote adequate time to the supervision of the fellow.
- The suitability of all supervisors will be evaluated at remote peer-review stage.

Summary of the Main Eligibility Criteria for DOROTHY Fellowships

Applicant	Is an Experienced Researcher as per the MSCA definition
	Meets the mobility requirement
	Is not a permanent employee of the chosen Irish host HEI
	Is fluent in English
Supervisors	Are staff members of the Irish host HEI and of the partner host HEI, respectively
	Both the main and outgoing supervisor are experts in their field and have appropriate supervisory experience
Host Institutions	The Irish host HEI is an eligible HEI , as per IRC rules
	The research office or equivalent of the Irish host HEI has verified the application form

6. Preparing to apply

Identify a suitable fellowship topic

Researchers from all disciplines are welcome across the sciences, engineering, arts and humanities provided that the projects relate to public health crises⁴.

The IRC is not in a position to advise on suitability of research topics or to comment on the content of applications.

Confirm support of your proposed main supervisor

Prior to creating an application, applicants should contact and discuss their fellowship application with their proposed academic supervisors, including their main supervisor in the Irish host organisation. It is the responsibility of each applicant to identify a suitable Irish main host HEI.

Confirm support of your proposed outgoing supervisor

Prior to creating an application, applicants should also contact and discuss their fellowship application with their proposed outgoing supervisor. It is the responsibility of each applicant to identify a suitable partner HEI for the outgoing phase.

⁴ Please note specific prohibited areas as specified in the Terms and Conditions of the scheme.

Contact the Research Office in your proposed Irish host higher education institution

It is highly recommended that applicants contact the research office (RO) of their proposed main host organisation as soon as they decide to apply for a DOROTHY fellowship and identify a suitable academic supervisor. Applicants are advised to ensure that their proposed host organisations familiarise themselves with the eligibility requirements and Terms and Conditions of the scheme, in particular with the amount available under the scheme as contribution towards indirect research costs (overheads), requirements applicable to hosting the fellow and the requirement to sign an agreement including, among other, clauses pertaining to conditions of the fellow's secondment to the partner organisation, confidentiality, intellectual property rights etc. The Research Office will be required to submit their verification decision in relation to the application once it has been submitted.

FAQs

If you have any questions regarding the application process, please address them to the Research Office (RO) in your proposed main host organisation (the Irish host HEI). If the RO is unable to answer your query, they should send the query to the Irish Research Council⁵. Queries received from Research Offices will be answered through the Frequently Asked Questions process. A Frequently Asked Questions (FAQs) document will be available on the Irish Research Council's website and updated frequently until the applicable deadline. The deadline for submission of queries by Research Offices under the FAQ process is **16 May 2022 16:00 (GMT)**.

Please note that for reasons of transparency and fairness to all applicants, the Irish Research Council will not enter into individual written or telephone correspondence with individual applicants. Please be advised that should an applicant contact the Irish Research Council by telephone or by email, they will be advised to contact their RO as specified above

7. How to apply

7.1. The online application system

The entire application process is online *via* a web-based online application system (OLS). The applicant and their the main (Irish) supervisor will be required to complete their participant forms through the OLS. Guides to using the OLS are provided for applicants and for supervisors.

Note the outgoing supervisor does not complete a participant form. They rather provide the applicant with a letter of commitment for the fellowship, which the applicant uploads to the OLS.

⁵ These queries should be sent by your Research Office to dorothy@research.ie with the subject line 'DOROTHY 2022 FAQ'.

The main (Irish) supervisor will submit a statement of commitment *via* the OLS. It is essential that the main supervisor will be available to complete their respective form prior to the applicable deadline. Submission of their form is an integral part of a fully completed application and failure to submit these forms by the call deadline will result in the application being deemed ineligible.

The main supervisor can create and submit their online form once their details have been added and saved to the application form by the applicant. Once these participants are added to an application, the online system generates an automatic email notifying them of the application and providing them with log in details for the OLS.

Research offices are also notified by the OLS once they are added to an application. However, they can only create and submit their form after the applicant has submitted their application.

Important note regarding application deadline:

The call will close automatically **at 16:00 (Irish time) 23rd May** and applications not received by the OLS by this deadline will be ineligible.

The Irish Research Council encourages the submission of applications well in advance of the closing date for the competition, as on the day that the call closes there will be heavy traffic on the server, which may slow down the submission of your application. To prevent problems with heavy server traffic, do not wait until the final day of the call to submit your application.

7.2. The OLS application form

The table below summaries the key parts of the application form. Appendix II provides a template of the application form and further guidance on selected sections.

Key Parts of the Application Form
<p>Applicant details and primary participants</p> <ul style="list-style-type: none"> • Applicant details (including questions relating to eligibility requirements) • English language competency • Main (Irish) supervisor (participant – completes form on OLS) • Main (Irish) host organisation • Outgoing supervisor (provides applicant with letter of commitment to upload with the application form) • Details of the non-academic secondment supervisor and organisation, if applicable
<p>Academic qualifications</p> <ul style="list-style-type: none"> • Academic qualifications • Research awards • Other education

<p>Fellowship proposal</p> <ul style="list-style-type: none"> • Project title • Primary area and discipline • Abstract and lay abstract • Excellence includes details of the proposed project • Impact which includes career training and development plan • Implementation, with uploaded Gantt chart detailing milestones, deliverables, dissemination •
<p>Relevant work experience</p> <ul style="list-style-type: none"> • Relevant work experience • Breaks in your research career
<p>Publications & other research outputs</p> <ul style="list-style-type: none"> • Professional achievements
<p>Ethical and sex/gender dimension statements</p>
<p>Indicative budget</p>
<p>Applicant declarations</p> <ul style="list-style-type: none"> • Personal Statement

8. Gender-blinding of applications for evaluation purposes

The Irish Research Council maintains gender-blinding of applications for evaluation purposes to mitigate any gender bias in the assessment of excellence. Applications are provided to assessors without the applicant's name and without other sensitive information, such as the date of birth or career break reasons. The assessors are briefed about avoiding gender bias, including subconscious gender bias, before the assessment process commences.

To facilitate gender-blinding of applications for evaluation purposes, applicants are asked not to disclose their gender within their fellowship proposal (with the exception of the question which explicitly asks about the applicant's gender).

Important: The overall responsibility for the proposal preparation, for timely completion of all steps of the application process, and for compliance with the Terms and Conditions of the scheme if an award is made, lies with the applicant/fellow.

Once the completed application has been submitted and the call deadline has passed, the application will be evaluated. See Appendix IX for details of the assessment process.

9. Information for successful applicants

If recommended for funding, the status of successful applications in the OLS will change to 'conditional award'. The IRC will issue a Letter of Offer and an Award Acceptance Form outlining the approved fellowship budget for the award to the successful applicants. Each award is made subject to the terms of the Letter of Offer, the application, the approved budget, and the Terms and Conditions of the Scheme.

The conditional offer is subject to the following:

1. Award Acceptance Form must be returned to the IRC by the applicable deadline and fully signed by the successful applicant, the academic supervisor, and authorised representative of the main host organisation.
2. Any other documentation specified in the Letter of Offer (including but not limited to academic transcripts and documentation required in relation to mobility rules) is supplied to the IRC in a timely fashion; and
3. A copy of a fully signed agreement between the proposed main host organisation and the main partner organisation (as specified in the Terms and Conditions) is provided to the IRC by the applicable deadline.

Compliance with the scheme's rules and eligibility of applicants at the time of recruitment will be checked when all relevant documentation is received. Once it is established by the IRC that the applicable conditions have been met, the award will be confirmed, and the fellowship can commence on the approved fellowship start date.

Appendix I: The Training Programme

Individual training: Each fellow will implement a 36-months individual research project at host institutions of their choice, comprising of an Outgoing and Return phase, and optionally a non-academic secondment. In their career development plan, all fellows (supported by the supervisory panels) will be asked to identify their training needs and training opportunities offered by both the outgoing and return host (and secondment host if relevant).

Such opportunities should be about both research-skills and transferable-skills (e.g., leadership skills, IP management, presentation skills). *Research skills* will be acquired through hands-on training, under supervision of / in collaboration with team members. Fellows also have the possibility to follow relevant courses (e.g., methodology, discipline-specific advanced training) at their host organisations. There is no required number of research courses to follow, as this will depend on the training needs of the fellow. The individual training plan will be included in the fellows' proposal and evaluated at recruitment stage. *Transferable skills* will be acquired through dedicated courses and through hands-on training.

In terms of courses, when appropriate, supervisors will help to make contact with the dedicated offices (such as the Staff Development Office, or equivalent in outgoing-phase HEIs). Whenever a relevant training opportunity is not available at institutional level, availing of it elsewhere will be treated as an eligible cost. It is expected that each fellow will complete at least two relevant training modules (or equivalent) per year of employment. In terms of research ethics training, all DOROTHY fellows will need to complete the research ethics Epigeum online training, available in all HEIs. Through on-the-job training, fellows will learn how to manage their projects (progress monitoring, financial management, risk management), undertake dissemination, exploitation (if relevant) and communication activities, lead a team or meetings etc.

Finally, the supervisory team will support the fellow in the *knowledge-transfer activities, facilitating synergies between the outgoing and return phase*. In particular, each DOROTHY fellow will a) Present their project and the DOROTHY programme at the start of the outgoing phase, and b) Present their project, the DOROTHY programme (briefly if appropriate) and selected elements of the outgoing phase (to be selected with the supervisory panel) at the start of the return phase.

Non-academic secondment: Promoting good communication between sectors is one of DOROTHY's main goals. In addition to inviting a wealth of stakeholders to the DOROTHY training and conference event, engagement with the non-academic sector will take the form of (optional) non-academic secondments and study visits. Research skills will be acquired through these secondments, with a focus on how research is done and approached in a non-

academic setting (e.g., different methodologies, infrastructures). Transferable skills will be acquired through dedicated courses when these are available, but mostly through hands-on experiences (e.g., tailor-made presentation style, commercial research practices, interfacing stakeholders). Fellows may also undertake study visits (modelled on the successful Irish Research Council 'shadowing scheme', which will consist in being based on the premises of a non-academic partner, for a period of 1-2 weeks and shadow a staff member (managerial level or higher). These study visits will give fellows a grasp of working in the non-academic sector, including specific ways of mentoring and knowledge-transfer. Responsibility for proposing/agreeing a commitment with such an organisation rest with the applicant.

DOROTHY-wide training: A crucial element of this COFUND project will be developing a well-integrated critical mass of interdisciplinary experts in public health crises. To support this, DOROTHY fellows will benefit from programme-wide training opportunities. The training allows for *networking, interaction and communication, and for presenting the fellows' research results* to the wider research community. Also, reflecting the expertise of the three funders (multidisciplinary, health & environmental research), relevant training sessions will be included.

DOROTHY will organise 4 training events and a final conference (indicative timing included in the table below). The costs related to attend these training events (including the travel costs of fellows during the outgoing phase) will be covered by the DOROTHY programme. To facilitate work-life balance and organisation, fellows will be notified of the dates well in advance.

With awareness of the unnecessary of replicating training modules offered at HEI-level, the training events learning objectives will focus on developing: a) unique interdisciplinary understanding of public health crises, gained from the interaction with the other fellows (presentations, structured workshop-style initiatives); b) Extraordinary abilities to communicate research to communities, including marginalised ones, through a mix of in-person and on-line initiatives; c) In-depth understanding of the link between research and policymaking, and practical advice on how to channel findings to policy-makers d) tailor-made expert advice for further career development.

Training events will also facilitate new interdisciplinary ideas, by featuring workshop-style activities in small groups, in which fellows from different disciplines will work together (first structured discussion in small groups, pre-arranged by the PM, and after collective sharing of finding and further brainstorming). Additionally, to allow for ideas and initial contacts to springboard into sustained long-term cooperation, a DOROTHY Slack online platform will be set up, enabling continuous interaction and communication.

Training events will involve some elements of informal networking. Finally, to facilitate the good management of DOROTHY, events will allow time for fellows' assemblies.

Training Event (indicative times)	Description
Cohort 1: Month 10 Training event 1: 'DOROTHY: e pluribus unum': DOROTHY	Enable cohort 1 to familiarise a) with each other b) with DOROTHY's main features. It will enable Cohort 1 fellows to peer-facilitate the integration of Cohort 2 fellows, when they start employment. Also, through the first 'Fellows assembly', they will be able to give valuable feedback on the training event to the funders.
Cohort 1 & 2: Month 22 Training event 2 "Public and Global health: combining serendipity and cooperation"	This training school will be devoted to learning from top-experts in 'global health crises' (including environmental perspectives) from different sectors and disciplines. That will give fellows a) relevant knowledge, also about the link between science and policy-making b) exposure to high-profile 'public health' networks c) input for cooperating in interdisciplinary fashion. Also, they will receive valuable transferable skills training.
Cohort 1&2; Month 33 Training event 3, 'DOROTHY: creative translation of knowledge'	This training event will focus on channelling knowledge, to experts, stakeholders and the population at large.
Cohort 1&2; Month 43 Training event 4: "Beyond DOROTHY: getting ready for next chapter"	This training event will focus on impact, also in terms of career development. Former COFUND alumni will be involved
Cohort 1 & 2: Month 54 DOROTHY: Final Conference	This conference will enable fellows to showcase their findings to a wide audience (policymakers, academics, industry representatives, non-profit practitioners). The conference will be livestreamed and widely advertised, enabling the outreach to a wide and diverse audience, both in Ireland and abroad.

Appendix II Guidance on selected sections of the application form

Guidance on selected sections of the application form

General Information

Please note that the word document with indicative application questions available on the Irish Research Council's and Dorothy websites are not used for submitting an actual application; the purpose of the indicative application questions document is to provide applicants with information about the content of the application form, its structure, level of detail that will be required, etc. Applicants should familiarise themselves with the actual online application form as soon as possible. Where differences exist between the indicative application questions document and the online application form, it is the requirements specified in the online application form in the OLS to which the applicant must adhere.

The application form is structured in a number of tabs. Most of the information is to be entered as text directly into the online application form; some of the questions will ask you to upload material in pdf format.

Please note that a guide to the online application system is provided as a separate document.

Main (Irish) host organisation and academic supervisor details

Applicants will select their proposed main host organisation from the list of organisations provided by the Council on the online application system.

Applicants will select their proposed academic supervisor from the list of supervisors registered in the online application system. The main (Irish) supervisor will submit a statement of commitment via the OLS. It is essential that the main supervisor will be available to complete their respective form prior to the applicable deadline. Submission of their form is an integral part of a fully completed application and failure to submit these forms by the call deadline will result in the application being deemed ineligible. If the proposed academic supervisor does not appear in the list of registered academic supervisors in the given main host organisation, applicants should liaise with the research office of the relevant main host organisation.

Outgoing supervisor and organisation details

Applicants will provide the details of the outgoing supervisor and their affiliated organisation. Applicants will upload a letter of commitment from the outgoing supervisor.

Minimum requirements:

- With heading or stamp from the institution.
- Up-to-date document, i.e., not dated prior to the call publication.
- Demonstrating the will to actively participate in the (identified) proposal.
- Explanation of the precise role.

Non-binding example of template letter of commitment for IF associated partners:

I undersigned [title, first name and surname], in my quality of [role in the organisation] in [name of the organisation] commit to set up all necessary provisions to participate as associated partner in the proposal [proposal number and/or acronym] submitted to the call MSCA-IF-2021, should the proposal be funded.

On behalf of [name of the organisation], I also confirm that we will participate and contribute to the research, innovation and training activities as planned in this project. In particular, [name of the organisation] will be involved in [free field for any additional information that the participating organisation wishes to indicate in order to describe its role and contribution to the project].

I hereby declare that I am entitled to commit into this process the entity I represent.

Name, Date, Signature

Secondment supervisor (if applicable)

Applicants can select their proposed secondment supervisor's organisation from the list of DOROTHY secondment partner organisations registered on the online application system. If the proposed secondment partner organisation does not appear in the list, applicants can select 'other' and manually insert the details of their own secondment host. Responsibility for proposing/agreeing a commitment with such an organisation rest with the applicant.

Academic qualifications

Applicants with degrees awarded in countries other than the Republic of Ireland will need to establish equivalency of such degrees to awards existing within the Irish [National Framework of Qualifications](#) (NFQ)⁶. Applicants will be asked to indicate the corresponding NFQ level and award type in the application form. Online resources are available to support applicants in this process, such as the Foreign Qualifications Database available at the Quality Qualifications Ireland/NARIC Ireland [website](#)⁷ or a referencing document with comparison of the NFQ with the European Qualifications Framework for Lifelong Learning ([available here](#)). Applicants might also seek advice from the International Office (or relevant) of the higher education institution which awarded the concerned degree, or from the International Office (or relevant) of their proposed home host organisation in cases where the proposed home host organisation is a higher education institution.

If your academic qualification corresponds to the NFQ level specified in the application form but not to the degree specified in the instructions provided in the application form (i.e. bachelor's degree, master's degree, or doctoral degree) due to significant differences between the degree and the relevant degree on the NFQ, for example in the number of ECTS or in the nature of learning outcomes, please explain and indicate the corresponding NFQ award in the field provided for "additional information".

⁶ see <http://www.nfq-qqi.com/index.html>

⁷ <http://www.qli.ie/Pages/Qualifications-Recognition.aspx>

Note that the above applies also to Irish degrees that are on the relevant NFQ level but are not the degree specified in the application form (for example higher diploma, postgraduate diploma or postgraduate certificate).

Examination results, qualification names and other information entered into the application form must correspond exactly with information provided on relevant official transcripts/parchments/diploma supplements; in particular applicants should not convert examination results into another grading system such as for example GPA. Successful applicants will be required to provide official certified transcripts / parchments / diploma supplements before awards are confirmed. If the language of a transcript/parchment/diploma supplement is not English, successful applicants will be required to provide an English translation.

In case of discrepancies between results provided in the application form and those on an official document, offers of awards may be withdrawn.

If the language of a transcript/parchment/diploma supplement is not English, the name of the degree and overall result if expressed verbally/in non-numerical format (such as, for example, “*mention très honorable avec félicitations du jury*” or “*отлично/otlichno*”) must be provided in the language of the transcript/parchment/diploma supplement as well as in English. It is not sufficient to provide only English translation/equivalent of the name of the degree or result.

English language competency

DOROTHY fellows must be able to communicate to the requisite standard through the English language. A statement confirming same by the home host institution will be required as part of the verification of the application.

As a guide, the minimum expected level of English language competency is level C1 on the [Common European Framework of Reference for Languages](#) (CEFR) scale. Applicants should undertake a self-assessment of their English language competency using the framework before completing the application form. English language competency using the framework before completing the application form. The CEFR self-assessment grid is provided below. For the purposes of the scheme, the scale has been expanded to include an additional "native speaker" option.

If English is your second/additional language and you have undertaken an internationally recognized English language exam/test (including but not limited to TOEFL, IELTS or PTE), you can provide details of your exam/test in the application form. Please note that the Council reserves the right to request evidence of your exam/test result after the application deadline. Applicants should therefore only include information about such English language exams/tests for which they can provide the relevant documentary evidence. In case of discrepancies between exam/test results provided in the application form and those on an official document, or where applicants are unable to provide the relevant documentary evidence if required by the Council, offers of awards may be withdrawn.

Common European Framework of Reference for Languages⁸ (CEFR) grid



Fellowship proposal abstract and Lay abstract of proposed research

You will be required to provide an abstract of your fellowship proposal (to include research as well as career development and training aspects of the proposed fellowship) and a lay abstract of proposed research. It is important to note differences between the two abstracts, in particular that the former is to cover all key aspects of the proposal while the latter should be formulated for the purposes of non-expert audiences and should focus solely on the proposed research.

Note also that elsewhere in the application form applicants are required to indicate the 'primary area', 'discipline' and 'other research area' under which their proposed research programme fits (see Appendix IV for further information on Research Classification).

Project Description Sections

The project description will feature excellence, impact and implementation sections. All tables, figures, references, and any other element pertaining to these sections must be uploaded as a PDF with reference to the specific heading and section.

⁸ <http://europass.cedefop.europa.eu/sites/default/files/cefr-en.pdf>

Definitions

DEFINITIONS	
Deliverable	A report that is sent to the Commission or Agency providing information to ensure effective monitoring of the project. There are several types of deliverables (e.g., a report on specific activities or results, data management plans, ethics, or security requirements).
Impacts	Wider long-term effects on society (including the environment), the economy and science, enabled by the outcomes of R&I investments (long term). Impacts generally occur sometime after the end of the project. For this call Impacts refers to subsection 2.3 Example: <i>The deployment of the advanced forecasting system enables each airport to increase maximum passenger capacity by 15% and passenger average throughput by 10%, leading to a 28% reduction in infrastructure expansion costs.</i>
Milestone	Control points in the project that help to chart progress. Milestones may correspond to the achievement of a key result, allowing the next phase of the work to begin. They may also be needed at intermediary points so that, if problems have arisen, corrective measures can be taken. A milestone may be a critical decision point in the project where, for example, the consortium must decide which of several technologies to adopt for further development. The achievement of a milestone should be verifiable.
Objectives	The goals of the work performed within the project, in terms of its research and innovation content. This will be translated into the project's results. These may range from tackling specific research questions, demonstrating the feasibility of an innovation, sharing knowledge among stakeholders on specific issues. The nature of the objectives will depend on the type of action, and the scope of the topic.
Outcomes	The expected effects, over the medium term, of projects supported under a given topic. The results of a project should contribute to these outcomes, fostered in particular by the dissemination and exploitation measures. This may include the uptake, diffusion, deployment, and/or use of the project's results by direct target groups. Outcomes generally occur during or shortly after the end of the project. Example: <i>9 European airports adopt the advanced forecasting system demonstrated during the project.</i>
Research output	Results generated by the action to which access can be given in the form of scientific publications, data or other engineered outcomes and processes such as software, algorithms, protocols, and electronic notebooks.
Results	What is generated during the project implementation. This may include, for example, know-how, innovative solutions, algorithms, proof of feasibility, new business models, policy recommendations, guidelines, prototypes, demonstrators, databases and datasets, trained researchers, new infrastructures, networks, etc. Most project results (inventions, scientific works, etc.) are 'Intellectual Property,' which may, if appropriate, be protected by formal 'Intellectual Property Rights.' Example: <i>Successful large-scale demonstrator: trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management.</i>

1. Excellence

In the **excellence section**, applicants will need to describe how their project relates to public health crises. Applicants should also detail the proposed research design and methodology that will be employed. Applicants must also refer to the benefits of 'programme-wide' training.

2. Impact

In the **impact section**, applicants should provide a description of plans for the acquisition of new knowledge and skills. This may include for example, gaining research skills and techniques, enhancing communication skills, developing research management experience, networking, and other transferable skills during the period of the fellowship.

Applicants should also detail how the fellowship will enable the acquisition of skills relevant to employment outside the traditional academic sector. Applicants will be required to explain how being involved in DOROTHY COFUND will impact on their career.

The Vitae website and Researcher Development Framework is an excellent career development resource that you may find useful when preparing your career impact statement.

An outline of how the fellowship will enable the applicant to acquire competencies that improve the prospects of reinforcing a position of professional maturity, diversity and independence should also be included. Should also include proposed measures to exploit and disseminate the project results, both in academic and non-academic settings and proposed measures to communicate the project activities to different target audiences.

3. Implementation

In the **implementation section**, applicants will need to upload a GANTT chart, using a template that includes DOROTHY training events.

Examination results, qualification names and other information must be provided and must correspond exactly with that on relevant official transcripts. Successful applicants will be required to provide official transcripts/parchments before awards are confirmed.

Research Awards

Applicants can include any research awards received.

Relevant work experience

Please provide details of your relevant work experience in reverse chronological order, starting with your most recent post. Include details of e.g., any postdoctoral research, research assistant posts, relevant teaching posts and / or enterprise employment.

Breaks in your research career

Applicants can provide details of any periods of leave from research (for example, due to parental leave, long-term absence through illness or working in industry).

Publications & other research outputs

Applicants can provide details of the applicant's top 5 peer-reviewed publications (including peer-reviewed journals, articles, books/book chapters etc.) and details of up to 15 other publications or research outputs (e.g. publications to date, research awards achieved, creation of data sets & databases, conference papers, patents, excavations, public broadcasts, stage performances, creative writing (such as novels, poetry), creative productions, exhibitions, etc.). Applicants who have no significant peer-reviewed publications or no other publications and research outputs will be required to upload samples of their written work.

Professional achievements

Provides the applicant with an opportunity to outline key contributions you have made as a researcher. These could but not be limited to academic activities and/or support; contributions to individuals or teams and collaboration; engagement outside the academy including policy engagement and knowledge exchange; contributions supporting an improved environment and culture for researchers, including Equality/Diversity/Inclusion.

Ethical Statement

Applicants are required to carefully consider the ethical implications of their proposed fellowship. As specified in the Terms and Conditions of the scheme, DOROTHY is subject to ethical requirements applicable under Horizon 2020⁹. Applicants are advised to familiarise themselves with all relevant documentation, including rules and procedures in place in their proposed host institutions as relevant.

Where ethical issues may arise in the research, applicants are required to submit to the Irish Research Council a written statement that full consideration has been given to the ethical implication of the research proposal. Full ethical approval from the relevant HEI Ethics Committee is not required at the application stage. However, if the application is successful, evidence of full ethical approval will be required before activities for which ethical approval is needed commence, but no later than three months after the start date of the fellowship.

It is the applicants' responsibility to identify any potential ethics issues, to handle the ethics aspects of their proposal, and to detail how they plan to address them. This will be part of the assessment criteria used to evaluate the proposals, and in the monitoring of funded projects. Applicant researchers will be required to complete an Ethics self-Assessment¹⁰, as part of their application, which will follow current H2020 guidelines, and will be assessed during the evaluation process.

Applicant researchers must explain in detail how they intend to address the ethical issues flagged, in particular with regard to the research objectives (e.g. study of vulnerable populations, cooperation with a Third Country, etc.); the research methodology (e.g. clinical

⁹ See <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/ethics>

¹⁰ See https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020_hi_ethics-self-assess_en.pdf.

trials, involvement of children and related information and consent/assent procedures, data protection and privacy issues related to data collected, etc.); and potential impact of the research (e.g. dual use issues, environmental damage, malevolent use, etc.). If a proposal requires access to archival material in private custodianship or archival material with restricted access, written evidence of appropriate permission to consult such material must be furnished to IRISH RESEARCH COUNCIL.

Also, to ensure that all participants are familiar with best research practices, all awardees will be required to complete the Epigeum Research Integrity online training (available in all HEIs) by month three of their fellowship start date.

See Appendix V for details of the Ethical Table completing this section.

Sex/Gender Dimension Statement

All applicants to Council schemes are required to complete the Sex/Gender Dimension statement in the application. Please refer to Appendix VI 'Guidance on the Sex/Gender Dimension Statement', which summarises the Toolkit Gender in EU-funded research¹¹, for assistance.

Indicative budget

The DOROTHY programme will cover training and research expenses (including non-academic secondment costs, if applicable), which amounts to €8400 per year per fellow, for a total of €25,200 over three years. Applicants are required to outline in their application how they plan to use this allowance for the implementation of their fellowship. International expert evaluators will be instructed to consider the appropriateness of the proposed budget to the fellowship proposal.

The funding categories are:

- Essential research supplies such as small consumables
- Pay as you go access to national research infrastructure
- Software and hardware critical for the proposed research
- Archival research costs
- Conference travel and participation
- Generic and/or specialist disciplinary skills training
- Dissemination and communication
- Other costs eg, publishing and write-up costs.

Only eligible vouched expenses necessary for implementation of the fellowship, incurred within the funding term and invoiced during the funding term will be funded.

All expenses related to attending DOROTHY training events, including travel and accommodation during the outgoing phase, will be covered by the programme. A dedicated 'COFUND training costs' heading, has been included in the programme budget and will be managed at central level.

¹¹ http://www.yellowwindow.be/genderinresearch/downloads/YW2009_GenderToolKit_Module1.pdf

Applicants should indicate the total amount to be requested across the lifetime of the award. An appropriately itemised budget is required, for example the cost and justification for individual pieces of computer equipment and software should be listed separately, while small consumables such as general lab or stationary supplies should be grouped.

Please note below clarifications regarding some of the above categories:

3 - Hardware and software critical for implementation of the proposed fellowship is to be purchased in the first year of the award. A maximum of €1,000 applies for the purchase of a laptop or desktop computer. The Irish Research Council recognises that in exceptional circumstances, applicants may request the purchase of a laptop or desktop that exceeds this limit. In those instances, applicants must provide a detailed justification that will be subject to review on a case-by-case basis. There is no guarantee that the IRC will approve requests that exceed the limit.

5 – Only conference related travel costs should be included in this category. Travel costs related to other fellowship activities should be categorized under other headings (for example under “archival research costs” if related to travel to archives, under “generic and/or specific disciplinary skills training” if related to training, or under “other costs”).

Ineligible costs:

- Membership fees are not an eligible cost.
- Subsistence/per diem rates are not an eligible cost. Living expenses (e.g., rent, food and phone) are ineligible.
- Apart from hardware critical for implementation of the proposed fellowship, funds may not be used to purchase capital items.
- Stipends for students and salary for research assistants or similar are not eligible costs. No student/staff costs can be covered from the allocation for eligible direct research expenses.

Personal statement

Applicants are expected to demonstrate their suitability for a DOROTHY fellowship, in particular they should explain why a fellowship is the appropriate next step at the current stage of their career. It is important to outline how applicants intend to maximise potential benefits of the tripartite structure of the fellowship as well as its intersectoral and international dimensions.

The personal statement also gives applicants the opportunity to provide additional relevant information which has not been included elsewhere in the application, for example reasons for proposing the chosen research topic, and the applicant's attributes, experience and achievements to date that demonstrate their capability to successfully implement the fellowship.

Appendix III Eligible higher education institutions (HEIs) and research-performing organisations (RPOs)

- The current policy of the Irish Research Council is that in order to be considered an eligible higher education institution for the purpose of applying to our funding programmes (at postgraduate, postdoctoral and principal investigator level) an institution must be:
- A third-level institution within the meaning of Section One of the [Higher Education Authority Act, 1971](#) and/or in receipt of public funding as approved by the Department of Further and Higher Education, Research, Innovation and Science for the purposes of the [Free Fees Initiative](#).
- In receipt of public funding from the Department of Further and Higher Education, Research, Innovation and Science for the purpose of higher education and research.
- In compliance with the [HEA Statement on Athena SWAN Charter in Ireland](#) (July 2019).

These institutions are:

- Coláiste Mhuire Marino
- Dublin City University
- Dublin Institute for Advanced Studies
- Dublin Dental Hospital
- Dundalk Institute of Technology
- Dún Laoghaire Institute of Art, Design & Technology
- Galway–Mayo Institute of Technology
- Institute of Technology, Carlow
- Institute of Technology, Sligo
- Letterkenny Institute of Technology
- Mary Immaculate College
- Maynooth University
- Munster Technological University
- National College of Ireland
- National University of Ireland, Galway
- RCSI University of Medicine and Health Sciences
- Royal Irish Academy
- Royal Irish Academy of Music
- Technological University Dublin
- Technological University of the Shannon: Midlands Midwest
- University College Cork
- University College Dublin
- University of Dublin, Trinity College
- University of Limerick
- Waterford Institute of Technology

In recognition of the contribution of publicly funded research performers to Ireland's research base, the research-performing organisations (RPOs) which are eligible to apply to the Irish Research Council's postdoctoral and principal investigator-led funding programmes are:

- Economic & Social Research Institute

- Marine Institute
- Teagasc
- The Discovery Programme

Appendix IV Research Categorisation

The aim to build a cohort of excellent public health researchers with a wide variety of backgrounds.

Applicants are required to indicate the 'primary area', 'discipline' and 'other research area' under which their proposed research programme fits.

If the proposed research is interdisciplinary, applicants should indicate this by categorising their research via the drop-down menus provided and then by using the 'second categorisation if interdisciplinary' free form box in the application form. For the first categorisation, please select the primary area, discipline and other research area with which the research is most closely associated. The second categorisation should also be provided on the basis of the primary areas, disciplines and other research areas provided below.

Primary areas

Applicants are required to select a primary area from the following defined list:

- Biological Sciences A
- Biological Sciences B
- Chemistry
- Computer Science
- Earth and Environmental Sciences
- Engineering
- Mathematics
- Physics
- Study of the Human Past
- Cultures and Cultural Production
- Individuals, Institutions, Markets, Values, Behaviour the Mind and Environment

Disciplines

Under each primary area there is a defined list of disciplines from which to select. These are listed in the tables that follow. Applicants should choose the discipline that most closely matches his/her proposed research. In considering the selection, the applicant should consider the methodology and techniques used in the research project.

Other Research Areas

An indicative non-exhaustive list of typical other research areas is also provided under the primary areas and disciplines in order to further categorise the research and aid in the selection of peer-reviewers. In the application form this is a free text box. So if you don't see an 'Other Research Area' which you feel matches your particular area, then please type in what you feel is an accurate descriptor for your research area.

Primary Area: Biological Sciences A	
<i>Disciplines</i>	<i>Other Research Areas</i>
Agricultural Biotechnology	including but not limited to: Agricultural Biotechnology Diagnostics (incl. Biosensors); Agricultural Marine Biotechnology; Agricultural Molecular Engineering of Nucleic Acids and Proteins; Genetically Modified Technology; Livestock Cloning; Marker Assisted Selection; Biomass Feedstock Production Technologies; Biopharming.
Biology (Theoretical, Mathematical, Cryobiology, Rhythm) (Theoretical, Thermal, Biological)	including but not limited to: Theoretical Biology; Mathematical Biology; Thermal Biology; Cryobiology; Biological Rhythm.
Environmental Biotechnology	including but not limited to: Biodiscovery; Biological Control; Bioremediation; Environmental Biotechnology Diagnostics (incl. Biosensors); Environmental Marine Biotechnology; Environmental Molecular Engineering of Nucleic Acids and Proteins.
Evolutionary Biology	including but not limited to: Animal Systematics and Taxonomy; Biogeography and Phytogeography; Biological Adaptation; Ethology and Socio-biology; Evolution of Developmental Systems; Evolutionary Impacts of Climate Change; Host-Parasite Interactions; Life Histories; Phylogeny and Comparative Analysis; Plant Systematics and Taxonomy; Speciation and Extinction.
Marine Biology, Freshwater Biology	including but not limited to: Marine Biology, Freshwater Biology.
Microbiology, Mycology and Virology	including but not limited to: Bacteriology; Infectious Agents; Microbial Ecology; Virology; Mycology.
Microbial Genetics	including but not limited to: Microbial Genetics.
Plant Sciences, Botany	including but not limited to: Phycology (incl. Marine Grasses); Plant Cell and Molecular Biology; Plant Developmental and Reproductive Biology; Plant Pathology; Plant Physiology; Botany.
Zoology, Entomology, Sciences Biology (Ornithology, Behavioural)	including but not limited to: Animal Behaviour; Animal Cell and Molecular Biology; Animal Developmental and Reproductive Biology; Animal Immunology; Animal Neurobiology; Animal Physiological Ecology; Animal Structure and Function; Invertebrate Biology; Vertebrate Biology.

Primary Area: **Biological Sciences B**

<i>Discipline</i>	<i>Other Research Areas</i>
Biochemical Research Methods	including but not limited to: Biochemical Research Methods.
Biochemistry and Molecular Biology	including but not limited to: Analytical Biochemistry; Bioinformatics (Bioinformatics Software to be Computer Science); Enzymes; Protein Trafficking; Proteomics and Intermolecular Interactions; Receptors and Membrane Biology; Signal Transduction; Structural Biology (incl. Macromolecular Modelling); Synthetic Biology; Systems Biology.
Cell Biology	including but not limited to: Cell Development, Proliferation and Death; Cell Metabolism; Cell Neurochemistry; Cellular Interactions (incl. Adhesion, Matrix, Cell Wall).
Developmental Biology	including but not limited to: Developmental Biology.
Genetics and Heredity	including but not limited to: Anthropological Genetics; Cell and Nuclear Division; Developmental Genetics; Epigenetics (incl. Genome Methylation and Epigenomics); Gene Expression (incl. Microarray and other genome-wide approaches); Genetic Immunology; Genome Structure and Regulation; Genomics; Molecular Evolution; Neurogenetics; Population, Ecological and Evolutionary Genetics; Quantitative Genetics (incl. Disease and Trait Mapping Genetics).
Industrial Biotechnology	including but not limited to: Biocatalysis and Enzyme Technology; Bioprocessing, Bioproduction and Bioproducts; Fermentation; Industrial Biotechnology Diagnostics; Industrial Microbiology (incl. Biofeedstocks); Industrial Molecular Engineering of Nucleic Acids and Proteins.
Medical Biotechnology	including but not limited to: Gene and Molecular Therapy; Medical Biotechnology Diagnostics; Medical Molecular Engineering of Nucleic Acids and Proteins; Regenerative Medicine (incl. Stem Cells and Tissue Engineering).
Reproductive Biology	including but not limited to: Reproductive Biology.

Primary Area: Chemistry	
<i>Discipline</i>	<i>Other Research Areas</i>
Analytical Chemistry	including but not limited to: Analytical Spectrometry; Electroanalytical Chemistry; Flow Analysis; Immunological and Bioassay Methods; Instrumental Methods; Quality Assurance, Chemo metrics, Traceability and Metrological Chemistry; Sensor Technology; Separation Science.

Colloid and Nanochemistry	including but not limited to: Colloid and Surface Chemistry; Nanochemistry; Molecular and Organic Electronics; Nanotoxicology (chemical aspects).
Electrochemistry	including but not limited to: Dry Cells; Batteries; Fuel cells; Corrosion metals; Electrolysis.
Inorganic, Organometallic and Nuclear Chemistry	including but not limited to: Bioinorganic Chemistry; f-Block Chemistry; Inorganic Green Chemistry; Main Group Metal Chemistry; Non-metal Chemistry; Solid State Chemistry; Transition Metal Chemistry; Inorganic Chemistry; Organometallic Chemistry, Supramolecular Chemistry (inorganic and organometallic aspects); Nuclear Chemistry.
Macromolecular and Materials Chemistry	including but not limited to: Chemical Characterisation of Materials; Supramolecular Chemistry (materials chemistry aspects); Optical Properties of Materials; Physical Chemistry of Materials; Polymerisation Mechanisms; Synthesis of Materials; Theory and Design of Materials; Molecular and Organic Electronics.
Medicinal and Biomolecular Chemistry	including but not limited to: Biologically Active Molecules; Biomolecular Modelling and Design; Characterisation of Biological Macromolecules; Cheminformatics and Quantitative Structure-Activity Relationships; Molecular Medicine; Proteins and Peptides.
Organic Chemistry	including but not limited to: Free Radical Chemistry; Natural Products Chemistry; Organic Chemical Synthesis; Organic Green Chemistry; Physical Organic Chemistry.
Physical Chemistry	including but not limited to: Catalysis and Mechanisms of Reactions; Chemical Thermodynamics and Energetics; Solution Chemistry; Structural Chemistry and Spectroscopy; Transport Properties and Non-equilibrium Processes.
Theoretical and Computational Chemistry	including but not limited to: Quantum Chemistry; Radiation and Matter; Reaction Kinetics and Dynamics; Statistical Mechanics in Chemistry.

Primary Area: Computer Science	
<i>Discipline</i>	<i>Other Research Areas</i>
Artificial Intelligence and Image Processing	including but not limited to: Adaptive Agents and Intelligent Robotics; Artificial Life; Computer Graphics; Computer Vision; Expert Systems, Image Processing; Natural Language Processing; Neural, Evolutionary and Fuzzy Computation; Pattern Recognition and Data Mining; Simulation and Modelling; Virtual Reality and Related Simulation.
Computation Theory and Mathematics	including but not limited to: Analysis of Algorithms and Complexity; Applied Discrete Mathematics; Computational

	Logic and Formal Languages; Mathematical Software; Numerical Computation.
Computer Software	including but not limited to: Bioinformatics Software; Computer System Architecture; Computer System Security; Concurrent Programming; Multimedia Programming; Open Software; Operating Systems; Programming Languages; Software Engineering.
Data Format	including but not limited to: Coding and Information Theory; Data Encryption; Data Structures; Markup Languages.
Distributed Computing	including but not limited to: Distributed and Grid Systems; Mobile Technologies; Networking and Communications; Ubiquitous Computing; Web Technologies.
Information Systems	including but not limited to: Computer-Human Interaction; Conceptual Modelling; Database Management; Decision Support and Group Support Systems; Global Information Systems; Information Engineering and Theory; Information Systems Development Methodologies; Information Systems Management; Information Systems Organisation; Information Systems Theory; Interorganisational Information Systems and Web Services.

Primary Area: Earth and Environmental Sciences	
<i>Discipline</i>	<i>Other Research Areas</i>
Biodiversity Conservation	including but not limited to: Conservation and Biodiversity.
Ecology	including but not limited to: Behavioural Ecology; Community Ecology; Ecological Physiology; Freshwater Ecology; Marine and Estuarine Ecology (incl. Marine Ichthyology); Paleoecology; Population Ecology; Terrestrial Ecology. Ecological Impacts of Climate Change; Ecosystem Function; Invasive Species Ecology.
Environmental Sciences	including but not limited to: Environmental Impact Assessment; Environmental Management; Environmental Monitoring; Environmental Rehabilitation; Natural Resource Management; Wildlife and Habitat Management.
Geochemistry	including but not limited to: Exploration Geochemistry; Inorganic Geochemistry; Isotope Geochemistry; Organic Geochemistry.
Geophysics	Electrical and Electromagnetic Methods in Geophysics; Geodynamics; Geophysical Fluid Dynamics; Geothermics and Radiometrics; Gravimetrics; Magnetism and Palaeomagnetism; Seismology and Seismic Exploration.
Geology	including but not limited to: Basin Analysis; Extraterrestrial Geology; Geochronology; Igneous and Metamorphic Petrology; Marine Geoscience; Ore Deposit Petrology;

	Petroleum and Coal Geology; Sedimentology; Stratigraphy (incl. Biostratigraphy and Sequence Stratigraphy); Structural Geology; Tectonics, Volcanology.
Meteorology and Atmospheric Sciences	including but not limited to: Atmospheric Aerosols; Atmospheric Dynamics; Atmospheric Radiation; Climate Change Processes; Climatology (excl. Climate Change Processes); Cloud Physics; Meteorology; Tropospheric and Stratospheric Physics, Atmospheric Chemistry.
Mineralogy	including but not limited to: Mineralogy and Crystallography.
Oceanography, Hydrology, Water Resources	including but not limited to: Biological Oceanography; Chemical Oceanography; Physical Oceanography, Hydrology; Surfacewater Hydrology, Water Resources.
Palaeontology	including but not limited to: Palaeontology; Palynology.
Physical Geography	including but not limited to: Geomorphology and Regolith and Landscape Evolution; Glaciology; Hydrogeology; Natural Hazards; Palaeoclimatology; Quaternary Environments; Surface Processes.

Primary Area: Engineering	
<i>Discipline</i>	<i>Other Research Areas</i>
Chemical Engineering	including but not limited to: Chemical engineering (plants, products); Chemical Process Engineering.
Civil Engineering	including but not limited to: Civil engineering; Architecture engineering; Construction Engineering, Municipal and Structural Engineering; Transport Engineering; Geotechnics.
Electrical Engineering, Electronic engineering, Information Engineering	including but not limited to: Electrical and Electronic Engineering; Robotics and Automatic Control; Automation and Control Systems; Communication Engineering and Systems; Telecommunications; Computer Hardware and Architecture;
Environmental Engineering	including, but not limited to: Environmental and Geological Engineering,; Petroleum Engineering (fuel, oils); Energy and Fuels; Remote Sensing; Mining and Mineral Processing; Marine Engineering, Sea Vessels; Ocean Engineering.
Food and Beverage Engineering	including but not limited to: Food Engineering; Beverage Engineering.
Materials Engineering	including but limited to: Materials Engineering; Ceramics; Coating and Films; Composites (including laminates, reinforced plastics, cermets, combined natural and synthetic fibre fabrics; filled composites); Paper and Wood; Textiles (including synthetic dyes, colours and fibres); Nanoscale Materials (engineering aspects only).

Mechanical Engineering	including but not limited to: Mechanical Engineering; Applied Mechanics; Thermodynamics; Aerospace Engineering; Nuclear-related Engineering; (Nuclear Physics to be Physics); Audio Engineering, Reliability Analysis.
Medical and Biomedical Engineering	including but not limited to: Medical Engineering; Medical Laboratory Technology (including laboratory samples analysis; diagnostic technologies).

Primary Area: Mathematics	
<i>Disciplines</i>	<i>Other Research Areas</i>
Applied Mathematics	including but not limited to: Approximation Theory and Asymptotic Methods; Biological Mathematics; Calculus of Variations, Systems Theory and Control Theory; Dynamical Systems in Applications; Financial Mathematics; Operations Research; Theoretical and Applied Mechanics; Numerical Analysis; Numerical Solution of Differential and Integral Equations; Optimisation.
Pure Mathematics	including, but not limited to: Algebraic and Differential Geometry; Category Theory, K Theory, Homological Algebra; Combinatorics and Discrete Mathematics; Group Theory and Generalisations; Lie Groups, Harmonic and Fourier Analysis; Mathematical Logic, Set Theory, Lattices and Universal Algebra; Operator Algebras and Functional Analysis; Ordinary Differential Equations; Difference Equations and Dynamical Systems; Partial Differential Equations; Real and Complex Functions (incl. Several Variables); Topology.
Statistics and Probability	including but not limited to: Applied Statistics; Biostatistics; Forensic Statistics; Probability Theory; Statistical Theory; Stochastic Analysis and Modelling.

Primary Area: Physics	
<i>Disciplines</i>	<i>Other Research Areas</i>
Acoustics	including but not limited to: Acoustics and Acoustical Devices; Waves.
Astronomy and Space Science	including but not limited to: Astrobiology; Astronomical and Space Instrumentation; Cosmology and Extragalactic Astronomy; Galactic Astronomy; General Relativity and Gravitational Waves; High Energy Astrophysics; Cosmic Rays; Mesospheric, Ionospheric and Magnetospheric Physics; Planetary Science; Space and Solar Physics; Stellar Astronomy and Planetary Systems.

Atomic, Molecular and Chemical Physics	including but not limited to: Magnetic Resonances; Moessbauer effect; Atomic and Molecular Physics; Chemical Physics.
Biophysics	including but not limited to: Biological Physics; Medical Physics.
Condensed Matter Physics	including but not limited to: Condensed Matter Characterisation Technique Development; Condensed Matter Imaging; Condensed Matter Modelling and Density Functional Theory; Electronic and Magnetic Properties of Condensed Matter; Superconductivity; Soft Condensed Matter; Surfaces and Structural Properties of Condensed Matter.
Fluids and Plasma Physics	including but not limited to: Surface Physics; Plasma Physics; Fusion Plasmas; Electrical Discharges; Fluid Physics.
Nuclear Physics	including but not limited to: Nuclear Physics.
Optics	including but not limited to: Laser Optics; Quantum Optics; Classical and Physical Optics; Lasers and Quantum Electronics; Nonlinear Optics and Spectroscopy; Photonics, Optoelectronics and Optical Communications.
Particles and Fields Physics	including but not limited to: Particle Physics; Degenerate Quantum Gases and Atom Optics; Field Theory and String Theory.
Theoretical Physics	including but not limited to: Mathematical Aspects of Classical Mechanics, Quantum Mechanics and Quantum Information Theory; Mathematical Aspects of General Relativity; Mathematical Aspects of Quantum and Conformal Field Theory, Quantum Gravity and String Theory; Statistical Mechanics, Physical Combinatorics and Mathematical Aspects of Condensed Matter; Electrostatics and Electrodynamics; Thermodynamics and Statistical Physics.

Primary Area: Study of the Human Past	
Disciplines	Other Research Areas
Archaeology Celtic Studies History	including but not limited to: Archaeology, Archaeometry, Landscape Archaeology Prehistory and Protohistory Ancient History Medieval History Early Modern History Modern and Contemporary History Colonial and Post-colonial History, Global and Transnational History, Entangled Histories Social and Economic History

	Sex/Gender History History of Ideas, Intellectual History, History of Sciences and Techniques Cultural History, History of Collective Identities and Memories Historiography, Theory and Methods of History.
--	---

Primary Area: Cultures and Cultural production	
Disciplines	Other Research Areas
Classics Cultural Studies Film Studies Folklore Studies French German Irish Language Studies Italian Languages Literature Musicology Philosophy Spanish Theatre Studies	including but not limited to: Classics, Ancient Greek and Latin literature and Art History of Literature Literary Theory and Comparative Literature, Literary Styles Textual Philology, Palaeography and Epigraphy Visual Arts, Performing Arts, Design Philosophy, History of Philosophy Philosophy of Mind, Epistemology and Logic Museums and Exhibitions Music and Musicology, History of Music History of Art and Architecture Cultural Studies, Cultural Diversity Cultural Heritage, Cultural Memory.

Primary Area: Individuals, Institutions, markets, values, behaviour the mind and environment

Disciplines	Other Research Areas
<p>Anthropology Business & Management Economics Education Environmental Studies Geography Law Linguistics, Media Politics Psychology Sociology Theology Equality Studies</p>	<p>including but not limited to: Macroeconomics, Development, Economic Growth, Microeconomics, Behavioural Economics Marketing Political Economy, Institutional Economics, Law and Economics Econometrics, Statistical Methods, Financial Markets, Asset Prices, International Finance, Banking, Corporate Finance, Accounting, Competitiveness, Innovation, Research and Development, Organization Studies: Theory & Strategy, Industrial Organization, Labour Economics, Income Distribution and Poverty Public Economics, International Trade, History of Economic Thought and Quantitative Economic History, Social Structure, Inequalities, Social Mobility, Interethnic Relations, Social Policies, Work and Welfare, Kinship, Cultural Dimensions of Classification and Cognition, Identity, Sex/gender, Myth, Ritual, Symbolic Representations, Religious Studies, Democratization, Social Movements, Violence, Conflict and Conflict Resolution Political Systems and Institutions, Governance Legal Studies, Constitutions, Comparative Law, Human Rights Global and Transnational Governance, International Studies Communication Networks, Media, Information Society Social Studies of Science and Technology Environment, Resources and Sustainability Environmental Change and Society Environmental Regulations and Climate Negotiations Social and Industrial Ecology Population Dynamics, Aging, Health and Society Households, Family and Fertility Migration Mobility, Tourism, Transportation and Logistics Spatial Development and Architecture, Land Use, Regional Planning Urban Studies, Regional Studies Social Geography, Infrastructure, Geo-information and Spatial Data Analysis</p>

<p>Anthropology Business & Management Economics Education Environmental Studies Geography Law Linguistics, Media Politics Psychology Sociology Theology Equality Studies</p>	<p>including but not limited to: Evolution of Mind and Cognitive Functions, Animal Communication Human Life-span Development Neuropsychology Cognitive and Experimental Psychology: Perception, Action, and Higher Cognitive Processes Social and Clinical Psychology Linguistics: Formal, Cognitive, Functional and Computational Linguistics Linguistics: Typological, Historical and Comparative Linguistics Psycholinguistics and Neurolinguistics: Acquisition and Knowledge of Language, Language Pathologies Use of Language: Pragmatics, Sociolinguistics, Discourse Analysis, Second Language Teaching and Learning, Lexicography, Terminology Education: Systems and Institutions, Teaching and Learning Women's Studies, Gender Studies Pedagogy International Development Childhood Studies Criminology Government, Political Science, Political Theory Health Promotion Religious Studies Social and Economic Geography Social Policy Social Work</p>
---	---

Appendix V Ethical Table

Applicants are required to consider carefully ethical implications of their proposed research. The Ethical table below should be completed by applicants as they are undertaking the relevant assessment in advance of completing the application form in the OLS. Detailed guidance on completing the Ethical table below and further information is available on European Commission's [website](#)¹².

Section 1: HUMAN EMBRYOS / FOETUSES				
Does your research involve Human Embryonic Stem Cells (hESCs)?		YES	NO	Information to be provided:
If YES:	Will they be directly derived from embryos within this project?			<i>Research cannot be funded</i>
	Are they previously established cells lines?			Origin and line of cells. Details on licensing and control measures by the competent authorities of the Member States involved.
Does your research involve the use of human embryos? If YES:				Origin of embryos. Details on recruitment, inclusion and exclusion criteria and informed consent procedures.
Does your research involve the use of human foetal tissues / cells? If YES:				Origin of human foetal tissues / cells. Details on informed consent procedures.
Section 2: HUMANS				
Does your research involve human participants?		YES	NO	Information to be provided in one of the subcategories below:
If YES:	Are they volunteers for social or human sciences research?			Details on recruitment, inclusion and exclusion criteria and informed consent procedures.
	Are they persons unable to give informed consent?			Information above plus: details on the procedures to obtain approval from guardian / legal representative. Details on the procedures used to ensure that there is no

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020_hi_ethics-self-assess_en.pdf

				coercion on participants.
	Are they vulnerable individuals or groups?			Details on the type of vulnerability. Details on recruitment, inclusion and exclusion criteria and informed consent procedures. This must demonstrate appropriate efforts to ensure fully informed understanding of the implications of participation.
	Are they children / minors?			Information above plus: details on the age range. Details on children / minors assent procedures and parental consent. This must demonstrate appropriate efforts to ensure fully informed understanding of the implications of participation. Describe the procedures to ensure welfare of the child / minor.
	Are they patients?			Details on the nature of disease / condition / disability. Details on recruitment, inclusion and exclusion criteria and informed consent procedures. Details on policy for incidental findings.
	Are they healthy volunteers for medical studies?			Information as above
Does your research involve physical interventions on the study participants?		YES	NO	
If YES:	Does it involve invasive techniques (e.g. collection of human cells or tissues, surgical or medical interventions, invasive studies on the brain, TMS etc.)?			Risk assessment for each technique and as a whole

	Does it involve collection of biological samples?			Details on the type of samples to be collected. Details on procedures for collection of biological samples.
<i>If your research involves processing of genetic information, please also complete the section "Protection of Personal Data" i.e. Section 4.</i>				
Section 3: HUMAN CELLS / TISSUES				
	Does your research involve human cells or tissues? (Other than from "Human Embryos/Foetuses" i.e. Section 1)	YES	NO	Information to be provided in one of the subcategories below: details of the cells and tissue types involved.
If YES	Are they available commercially?			Details on cell types and provider (company or other).
	Are they obtained within this project?			Details on cell types.
	Are they obtained within another project?			Details on cell types. Provider of the cell types. Country in which the material is located.
	Are they deposited in a biobank?			Details on cell types. Name of the biobank. Country in which the biobank is located
Section 4: PROTECTION OF PERSONAL DATA				
	Does your research involve personal data collection and/or processing? <i>It should be noted that:</i> 1. "Personal data" can be defined as identifiers: any information that could, in any way, lead to the specific identification of one unique person, such as name, social security numbers, date of birth, address, mails IPs etc. 2. Any data that you are using should be taken into account, regardless of the method by which they are/were collected: for example, through interviews, questionnaires, direct online retrieval etc. 3. Processing should be understood to not only include data usage, but also merging, transformation, transfer and, more generally, as all actions using data for research purposes.	YES	NO	Information to be provided:
If YES:	Does it involve the collection and/or processing of sensitive personal data (e.g.	YES	NO	Details of the data safety procedures

	<p>health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?</p> <p><i>It should be noted that this involvement applies, whatever the research topic or Programme. The above list is only indicative. If the type of data that you will be handling in your research is not included the list, it does not mean you should not take into consideration the subject of data processing.</i></p>			<p>(compliance with privacy by design and protection of privacy/confidentiality).</p> <p>Details of procedures for data collection, storage, protection, retention, transfer if any, destruction or re-use.</p> <p>Explicit confirmation of compliance with national and EU legislation</p>
	<p>Does it involve processing of genetic information?</p>	YES	NO	<p><i>Information as above</i></p>
	<p>- Does it involve tracking or observation of participants?</p> <p><i>It should be noted that this issue is not limited to surveillance or localization data. It also applies to Wan data such as IP address, MACs, cookies etc.</i></p>			<p><i>Information above plus:</i></p> <p>Details on methods used for tracking or observing participants.</p>
	<p>Does your research involve further processing of previously collected personal data (secondary use)?</p> <p>If YES:</p> <p><i>It should be noted that this question is threefold. If you answer YES to any of the 3 questions below, you fall within its scope:</i></p> <ol style="list-style-type: none"> <i>1. Are you planning not to collect any data directly but rather to use pre-existing other data sets or sources and/or does your research involve further processing of previously collected data?</i> <i>2. Does your research involve merging existing data sets?</i> <i>3. Are you planning to share data with non-EU member states?</i> 	YES	NO	<p>Details of the database used or the source of data.</p> <p>Confirmation of open public access to the data or of authorisation for secondary use. More specifically, detail how this consent was obtained specifically in case of public archives usage (Automatic opt in, etc.). Permissions from the owner/manager of the data sets.</p> <p>A mitigation procedure to avoid private appropriation of the data.</p>

			<p>A mitigation procedure to avoid the unforeseen disclosure of personal information (i.e.: mosaic effect).</p> <p>Explicit confirmation of compliance with national and EU legislation.</p> <p>Conformity to Safe Harbour, if applicable.</p>
--	--	--	--

Section 5: ANIMALS			
Does your research involve animals?	YES	NO	Information to be provided:
			<p>Details on implementation of the Three Rs (Replacement, Reduction and Refinement).</p> <p>Justification of animal use and why alternatives cannot be used.</p> <p>Details on species and rationale for their use, numbers of animals to be used, nature of the experiments, procedures and techniques to be used in a chronological order. Details on procedures to ensure animal welfare during their lifetime and during the experiment and how its impact will be minimised.</p> <p>Details on severity assessment and justification.</p>
If YES	Are they vertebrates or live cephalopods?		Information as above

	Are they non-human primates (NHP)?			<i>Information above plus:</i> Confirmation of Compliance with Art. 8, 10, 28, 31, 32 (Directive 2010/63/EU). Discussion of specific ethics issues related to their use.
	Are they genetically modified? ⁴			Confirmation of compliance with relevant EU and national legislation and details as for no genetically modified animals above.
	Are they cloned farm animals?			<i>Information as above</i>
	Are they an endangered species?			<i>Information above plus:</i> Discussion of specific ethics issues related to their use.
Please indicate the species involved (Maximum number of characters allowed: 1000)				
Section 6: THIRD COUNTRIES				
	Does your research involve third countries? <i>Countries:</i> (Maximum number of characters allowed: 1000)	YES	NO	Information to be provided: Details on activities carried out in non-EU countries.
	Do you plan to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)? If YES:			Details on type of local resources to be used and modalities for their use.
	Do you plan to import any material, including personal data, from non EU/third countries into the EU? <i>If your research involves importing data, please also complete the section "Protection of Personal Data" i.e. Section 4.</i>			Details on type of materials or data to be imported.
	If YES: Specify the materials and countries involved (maximum number of characters allowed: 1000)			

<p>Do you plan to export any material, including personal data, from the EU to third/non-EU countries?</p> <p><i>If your research involves exporting data, please also complete the section “Protection of Personal Data” i.e. Section 4.</i></p>			<p>Details on type of materials or data to be imported.</p>
<p>If YES: Specify the materials and countries involved (maximum number of characters allowed: 1000)</p>			
<p>If your research involves low and/or lower-middle income countries, are any benefit-sharing actions planned?</p>			<p>Details on benefit sharing measures.</p> <p>Details on responsiveness to local research needs.</p> <p>Details on procedures to facilitate effective capacity building.</p>
<p>Could the situation in the country put the individuals taking part in the research at risk?</p>			<p>Details on safety measures that will be implemented, including personnel training.</p>

Section 7: ENVIRONMENTAL PROTECTION AND SAFETY			
<p>Does your research involve the use of elements that may cause harm to the environment, animals or plants?</p> <p>If YES:</p>	YES	NO	<p>Information to be provided:</p> <p>Details on safety measures to be implemented.</p>
<p>Does your research deal with endangered fauna and/or flora /protected areas?</p> <p>If YES:</p>			
<p>Does your research involve the use of elements that may cause harm to humans, including research staff?</p> <p>If YES:</p>			<p>Details on health and safety procedures.</p>
<p>Does your research involve the use of elements that may cause harm to humans, including research staff?</p>			<p>Details on health and safety procedures.</p>
<p>If YES</p>	<p>Does your research involve harmful biological agents?⁵</p>		

	Does your research involve harmful chemical and explosive agents? ⁶			
	Does your research involve harmful radioactive agents? ⁷			
	Does your research involve other harmful materials or equipment, e.g. high-powered laser systems?			
Section 8: DUAL USE				
Does your research have the potential for military applications?		YES	NO	Information to be provided:
If YES	Does your research have an exclusive civilian application focus?			Explanations on the exclusive civilian focus of the research.
	Will your research use or produce goods or information that will require export licenses in accordance with legislation on dual use items?			Details on what goods and information used and produced in your research will need export licences.
	Does your research affect current standards in military ethics – e.g., global ban on weapons of mass destruction, issues of proportionality, discrimination of combatants and accountability in drone and autonomous robotics developments, incendiary or laser weapons?			Details on how the research might affect current standards in military ethics.
Section 9: MISUSE				
Does your research have the potential for malevolent/criminal/terrorist abuse?		YES	NO	Information to be provided:
If YES	Does your research involve information on/or the use of biological-, chemical-, nuclear/radiological-security sensitive materials and explosives, and means of their delivery?			Details on the legal requirements of the possession of such items and proposed risk mitigation strategies.
	Does your research involve the development of technologies or the creation of information that could have severe negative impacts on human rights standards (e.g. privacy, stigmatization, discrimination), if misapplied?			Details on measures to prevent malevolent abuse. Details on risk mitigation strategies.

	Does your research have the potential for terrorist or criminal abuse, e.g. infrastructural vulnerability studies, cybersecurity related research?			Details on measures to prevent malevolent abuse. Details on risk mitigation strategies.
Section 10: OTHER ETHICS ISSUES				
Are there any other ethics issues that should be taken into consideration? Please specify: (Maximum number of characters allowed: 1000)	YES	NO	Information to be provided:	

Appendix VI Guidance on the Sex/Gender Dimension Statement

While there are research projects in which biological sex and/or gender may not be relevant in terms of the research content, it is well established that, where relevant, not integrating sex and gender analysis into the design, implementation, evaluation and dissemination of the research can lead to poor results and missed opportunities.

The following is provided to help applicants complete the sex/gender dimension statement in the application. This is taken from the Toolkit Gender in EU-funded research¹³, which aims to give the research community practical tools to integrate gender aspects into their research, including gender equality (equal outcomes for women and men) and integration of sex/gender analysis in research content. Please also refer to <http://genderedinnovations.stanford.edu/> for examples of case studies in Science, Health and Medicine, Engineering and Environment.

A Summary from the ‘Toolkit Gender in EU-funded research’

The best possible research validity: Research should take into account the differences between men and women in the research population, so the results will be more representative. General categories such as ‘people’, ‘patients’ or ‘users’ do not distinguish between men and women. Research based on such categories may well draw partial conclusions based on partial data. For example, research on a new breast cancer treatment should include male patients, so as to draw a complete picture. Most basic research with animal models focuses on males to the exclusion of females (Zucker et al., 2010; Marts et al., 2004). Research on economic migrants cannot limit itself to male points of view if it wants to understand the whole migrant population.

Research ideas and hypotheses: The relevance of biological sex and/or gender for and within the subject matter needs to be analysed and an assessment made as to whether these are relevant variables. The formulation of hypotheses can draw upon previous research and existing literature. Indeed, the body of knowledge on sex/gender issues has been steadily growing over recent decades and can serve as interesting reference material to build new hypotheses for future research.

Project design and research methodology: While research methodologies may vary, they all strive to represent (aspects of) reality. Whenever this reality concerns humans, any sound methodology should differentiate between the sexes and take into account the men’s and women’s situations equally. Groups such as ‘citizens’, ‘patients’, ‘consumers’, ‘victims’ or ‘children’ are therefore too general as categories.

Research implementation

Data collection tools (such as questionnaires and interview checklists) need to be gender-sensitive, use gender neutral language, and should make it possible to detect the different

¹³ http://www.yellowwindow.be/genderinresearch/downloads/YW2009_GenderToolKit_Module1.pdf

realities of men and women. This will help to avoid gender bias. For example, answers to be provided by the 'head of household' are not necessarily valid for all household members.

Data analysis: In most research concerning human subjects, data is routinely disaggregated by sex, which would logically lead to analyses according to sex. However, to date this is still not common practice. Systematically taking sex as a central variable and analysing other variables with respect to it (e.g., sex and age, sex and income, sex and mobility, sex and labour) will provide significant and useful insights. Involving gender-balanced end-user groups in the course of the research is also a good way of guaranteeing the highest impact.

Dissemination phase – reporting of data: Collecting and analysing sex and/or gender specific data is not enough if it is omitted from the published results. Sex and/or gender should be included in 'mainstream' publications as it is as much part of daily reality as any other variable studied. Specific dissemination actions (publications or events) for sex and/or gender findings can be considered. Institutions and departments that focus on gender should be included in the target groups for dissemination. Publications should use gender-neutral language.

CHECKLIST FOR SEX AND/OR GENDER IN RESEARCH CONTENT

Research ideas phase:

- o If the research involves humans as research objects, has the relevance of biological sex and/or gender to the research topic been analysed?
- o If the research does not directly involve humans, are the possibly differentiated relations of men and women to the research subject sufficiently clear?
- o Have you reviewed literature and other sources relating to differences in the research field?

Proposal phase:

- o Does the methodology ensure that (possible) sex/gender differences will be investigated: that sex/gender differentiated data will be collected and analysed throughout the research cycle and will be part of the final publication?
- o Does the proposal explicitly and comprehensively explain how sex/gender issues will be handled (e.g. in a specific work package)?
- o Have possibly differentiated outcomes and impacts of the research on women and men been considered?

Research phase:

- o Are questionnaires, surveys, focus groups, etc. designed to unravel potentially relevant sex and/or gender differences in your data?

- o Are the groups involved in the project (e.g. samples, testing groups) gender-balanced? Is data analysed according to the sex variable? Are other relevant variables analysed with respect to sex?

Dissemination phase:

- o Do analyses present statistics, tables, figures and descriptions that focus on the relevant sex/gender differences that came up in the course of the project?
- o Are institutions, departments and journals that focus on gender included among the target groups for dissemination, along with mainstream research magazines?
- o Have you considered a specific publication or event on sex/gender-related findings?

Appendix VII Non exhaustive list of non-academic secondment hosts

These organisations have indicated an interest in hosting a secondment for DOROTHY fellows where there is alignment between the organisation’s mission and the topic of the DOROTHY applicant. Responsibility for proposing/agreeing a commitment with such an organisation rest with the applicant. All fellows will be encouraged to undertake a non-academic secondment, either during the outgoing or the return stage. All non-academic settings (e.g. non-profit, governmental, NGO, industry) will be eligible. Fellows will be able to propose alternative non-academic secondment hosts. Should a secondment not have been envisaged at proposal stage, it can be inserted at a later stage, in agreement with the supervisory panel. Where applicable, reasonable relocation expenses will be treated as eligible research costs. The IRC cannot enter into discussions with applicants on non-academic hosts.

Organisation	Website
<i>Youth Work Ireland</i>	www.youthworkireland.ie
<i>Alcon Laboratories Ire Ltd</i>	www.alcon.com
<i>TobaccoFree Research Institute Ireland</i>	www.tri.ie
<i>An Saol Foundation</i>	www.ansaol.ie
<i>Gavin and Doherty Geosolutions Ltd</i>	http://www.gdgeo.com/
<i>Radmol AI Systems</i>	www.radmol.com
<i>Dublin Town</i>	www.wearedublintown.ie
<i>Kinesis Health Technologies Ltd</i>	www.kinesis.ie
<i>WHCLAB</i>	WHCLAB
<i>Plantik Biosciences</i>	plantik.bio
<i>NanoMEGAS SPRL</i>	www.nanomegas.com
<i>TASC</i>	www.tasc.ie
<i>Novartis</i>	https://www.novartis.com
<i>Young Social Innovators</i>	https://www.youngsocialinnovators.ie/
<i>National Women's Council of Ireland Education and Training Company CLG</i>	www.nwci.ie
<i>Bodywhys The Eating Disorders Association of Ireland</i>	https://www.bodywhys.ie
<i>Crosscare</i>	www.crosscare.ie
<i>SiriusXT</i>	www.SiriusXT.com
<i>Milis Bio Ltd.</i>	www.milisbio.com
<i>SLR Environmental Consulting Ireland (Ltd)</i>	www.slrconsulting.com
<i>Science Gallery International</i>	sciencegallery.org
<i>Nevin Economic Research Institute</i>	https://www.nerinstitute.net/
<i>ElectroRoute</i>	https://electroroute.com/
<i>Jigsaw - The National Centre for Youth Mental Health</i>	www.jigsaw.ie
<i>Bantry Marine Research Station</i>	https://www.bmrs.ie/
<i>Cystic Fibrosis Ireland</i>	www.cfireland.ie
<i>Men's Health Forum in Ireland (MHFI)</i>	www.mhfi.org
<i>Drinkaware</i>	www.drinkaware.ie

<i>Lumcloon Energy Ltd</i>	https://lumcloonenergy.com/
<i>Cerenovus (part of the Johnson and Johnson family of companies)</i>	https://www.jnjmedicaldevices.com/en-US/companies/cerenovus
<i>BioSimulytics Limited</i>	www.biosimulytics.ai
<i>Nutritics</i>	www.nutritics.com
<i>Carlow County Council</i>	https://www.carlow.ie/
<i>An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta</i>	www.cogg.ie
<i>Cardiac Risk in the Young (CRY Ireland)</i>	www.cry.ie
<i>Irish Cancer Society</i>	www.cancer.ie/research
<i>ADHD Ireland</i>	www.adhdireland.ie
<i>Age & Opportunity</i>	www.ageandopportunity.ie
<i>Dublin Rape Crisis Centre</i>	www.drcc.ie
<i>RemedyBio</i>	https://remedybiologics.com/
<i>Marigot Ltd.</i>	https://aquamin.com/
<i>Celtic Sea Minerals</i>	https://celticseaminerals.com/
<i>Brandon Bioscience</i>	http://www.brandonbioscience.com/
<i>Global Legal Action Network</i>	www.glanlaw.org
<i>Evolve Technologies</i>	www.evolve.tech
<i>Radmol AI</i>	www.radmol.com
<i>Dublin Simon Community</i>	https://www.dubsimon.ie/
<i>IBM Research</i>	https://research.ibm.com
<i>Arts Council</i>	www.artscouncil.ie
<i>Disability Federation of Ireland</i>	www.disability-federation.ie
<i>Boston Scientific Galway</i>	www.bostonscientific.com
<i>Institute of Public Health in Ireland</i>	www.publichealth.ie
<i>Department of Justice</i>	https://www.justice.ie/
<i>The Wheel</i>	www.wheel.ie
<i>Concern Worldwide</i>	https://www.concern.net/
<i>(KSSCA) Kilkenny South Sudanese Community Association Company Limited by Guarantee.</i>	www.SoloCheck.ie
<i>Deciphex</i>	www.deciphex.com
<i>The Rediscovery Centre</i>	www.rediscoverycentre.ie
<i>Rediscovery Centre</i>	www.rediscoverycentre.ie
<i>Glycome-Bio</i>	https://glycome-bio.com/
<i>Youth Work Ireland</i>	www.youthworkireland.ie
<i>Alcon Laboratories Ire Ltd</i>	www.alcon.com
<i>TobaccoFree Research Institute Ireland</i>	www.tri.ie
<i>An Saol Foundation</i>	www.ansaol.ie
<i>Gavin and Doherty Geosolutions Ltd</i>	http://www.gdgeo.com/
<i>Radmol AI Systems</i>	www.radmol.com
<i>Dublin Town</i>	www.weariedublintown.ie
<i>Kinesis Health Technologies Ltd</i>	www.kinesis.ie
<i>WHCLAB</i>	WHCLAB
<i>Plantik Biosciences</i>	plantik.bio
<i>NanoMEGAS SPRL</i>	www.nanomegas.com
<i>TASC</i>	www.tasc.ie

Novartis	https://www.novartis.com
Young Social Innovators	https://www.youngsocialinnovators.ie/
National Women's Council of Ireland Education and Training Company CLG	www.nwci.ie
Bodywhys The Eating Disorders Association of Ireland	https://www.bodywhys.ie
Crosscare	www.crosscare.ie
SiriusXT	www.SiriusXT.com
Milis Bio Ltd.	www.milisbio.com
SLR Environmental Consulting Ireland (Ltd)	www.slrconsulting.com
Science Gallery International	sciencegallery.org
Nevin Economic Research Institute	https://www.nerinstitute.net/
ElectroRoute	https://electroroute.com/
Jigsaw - The National Centre for Youth Mental Health	www.jigsaw.ie
Bantry Marine Research Station	https://www.bmrs.ie/
Cystic Fibrosis Ireland	www.cfireland.ie
Men's Health Forum in Ireland (MHFI)	www.mhfi.org
Drinkaware	www.drinkaware.ie
Lumcloon Energy Ltd	https://lumcloonenergy.com/
Cerenovus (part of the Johnson and Johnson family of companies)	https://www.jnjmedicaldevices.com/en-US/companies/cerenovus
BioSimulytics Limited	www.biosimulytics.ai
Nutritics	www.nutritics.com
Carlow County Council	https://www.carlow.ie/
An Chomhairle um Oideachas Gaeltachta agus Gaelscolaíochta	www.cogg.ie
Cardiac Risk in the Young (CRY Ireland)	www.cry.ie
Irish Cancer Society	www.cancer.ie/research
ADHD Ireland	www.adhdireland.ie
Age & Opportunity	www.ageandopportunity.ie
Dublin Rape Crisis Centre	www.drcc.ie
RemedyBio	https://remedybiologics.com/
Marigot Ltd.	https://aquamin.com/
Celtic Sea Minerals	https://celticseaminerals.com/
Brandon Bioscience	http://www.brandonbioscience.com/
Global Legal Action Network	www.glanlaw.org
Evolve Technologies	www.evolve-tech.ie
Radmol AI	www.radmol.com
Dublin Simon Community	https://www.dubsimon.ie/
IBM Research	https://research.ibm.com
Arts Council	www.artscouncil.ie
Disability Federation of Ireland	www.disability-federation.ie
Boston Scientific Galway	www.bostonscientific.com
Institute of Public Health in Ireland	www.publichealth.ie
Rediscovery Centre	www.rediscoverycentre.ie
Glycome-Bio	https://glycome-bio.com/

Appendix VIII Resources on Data Management Plans and FAIR Principles

- [DMPonline](#), including [templates](#)
- [Science Europe \(2018\) Practical Guide to the International Alignment of Research Data Management](#)
- [H2020 Programme \(2016\) Guidelines on FAIR Data Management in Horizon 2020](#)
- [H2020 Programme \(2016\) Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020.](#)
- [OpenAire](#) - The OpenAIRE2020 project
- [FAIR data principles FORCE 11](#)
- [ROAR](#) - Registry of Open Access Repositories
- [OpenDoar](#) – Directory of Open Access Repositories
- [Registry of Research Data Repositories](#)

Appendix IX Assessment Process

DOROTHY's evaluation criteria are based on the MSCA IF evaluation criteria¹⁴, with deviations to reflect the specific nature and objectives of DOROTHY. All applications are first reviewed for eligibility and adherence to the Terms and Conditions of the scheme. Relevant checks will be performed by the IRISH RESEARCH COUNCIL's Executive and documentary evidence as appropriate may be requested from applicants during this stage.

Assessment is a two-step process consisting of initial remote peer review, followed by panel interview, for those who progress to the second step.

Step One

In the first step, applications will be evaluated remotely by 3 independent international expert reviewers per proposal, chosen on the basis of the keywords indicated by the applicants and their abstracts. These three expert assessors submit their qualitative and quantitative evaluation. The applications will then be ranked. Reviewers will score the proposals on a range from 0 – 5, using weighting for the different sections. They will be asked to provide short written feedback, in the form of an Individual Evaluation Summary Report, based on the MSCA IF Evaluation Summary Report.

Evaluation Criteria and Scoring

Applications are assessed under three evaluation criteria during as detailed in the table:

Evaluation criteria, weight scores and ex-aequo information

Criteria		
Excellence	Impact	Implementation
Weighted scores		
50%	30%	20%
-Relevance of the research project to public health crises -Quality and credibility of the research/innovation project; novelty, inter/multidisciplinary aspects. Considerations on gender, equality and diversity -Quality of Training and knowledge transfer (both during the outgoing and return phase) -Quality of the supervision and integration in (all) teams	-Enhancing the potential and future career prospects of the applicant (in relation to being part of a multi-disciplinary research platform focused on public health crises). -Quality of the proposed measures to exploit and disseminate the project results, both in academic	-Coherence and effectiveness of the work plan and GANTT chart; including appropriateness of the allocation of tasks and resources. -Appropriateness of the management structure and procedures, including risk management.

¹⁴ <https://enspire.science/guide-understanding-the-msca-if-scheme/#:~:text=MSCA%20IF%20is%20an%20Individual,prior%20to%20the%20call%20deadline.>

-Potential of the researcher to reach or re-enforce professional maturity/independence during the fellowship in DOROTHY	and non-academic settings -Quality of the proposed measures to communicate the project activities to different target audiences, both during the outgoing and the return phase.	-Appropriateness of the institutional environment, including complementarity of return and outgoing host.
Threshold to proceed to step two: 70%		
In the case of ex-aequo , proposals scoring higher in the excellence section will rank higher. In the case both the overall and excellence scores are the exact same (decimals included), and if in the range of invited for interview, both proposals will progress to interview stage.		

Evaluators will give scores between 0 and 5 to each criterion¹⁵.

Interpretation of the scores is as follows:

0	The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.
1	Poor. The criterion is inadequately addressed, or there are serious inherent weaknesses.
2	Fair. The proposal broadly addresses the criterion, but there are significant weaknesses.
3	Good. The proposal addresses the criterion well, but a number of shortcomings are present.
4	Very good. The proposal addresses the criterion very well, but a small number of shortcomings are present.
5	Excellent. The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

The threshold for progression from step 1 to step 2 of the evaluation process is 70%¹⁶.

Step two

Once the remote peer review assessment process is complete, applicants will be informed of the outcome by email. Applicants who do not progress to interview stage will receive their evaluation summary report and redress information. Those who progress to interview stage will be notified and requested to prepare a presentation of their project, tailored to a non-scientific audience (the researcher will be asked to further narrow which specific audience they are addressing, for example schoolchildren, senior citizens, members of an

¹⁵ Steps of 0.1 can be used.

¹⁶ The threshold must be met for each evaluation criterion before the weighting is applied.

environmental group of citizens). All interviews will start with their 10-minute presentation (slides will be allowed). Interviewers will follow up with a pre-agreed set of questions. The IRC will send out a written email communication, inclusive of the individual interview report, to all interviewed applicants, including the mention of whether they are offered a fellowship or not. Unsuccessful applicants will receive information about the redress process. Successful applicants will be offered a fellowship. For each call, a reserve list (6 people maximum) will be in place for one year. Reserve list applicants will be notified of that. Applicants will have 15 days after being notified of relevant outcomes to appeal the outcome. The appeal can only be about procedural aspects. All decisions of the redress committee will be final. All appeal requests (max 1 A4) must be sent to the IRC, who will convene the Redress Committee, which will review the case and see if there is ground for a new evaluation process. In such case, a new review process will be granted (from the stage where the redress winner has been deemed ineligible/unsuccessful).

The IRC's Executive are precluded from discussing the results of the competition over the telephone or discussing the outcome of individual applications *via* email or post. Feedback to candidates will consist of the score that the assessment board assigned to the application and the decision in relation to funding. Additional feedback will not be provided beyond that which is provided with the assessment result.

Please note that this decision is final and that no correspondence will be undertaken in relation to individual assessments or scoring¹⁷. Under no circumstance will feedback provided by IRC compromise the confidentiality of a reference submitted to the IRC.

¹⁷ IRISH RESEARCH COUNCIL 'Declined Funding' Appeals Policy and Procedures document is available at the Council's website <http://www.research.ie/aboutus/irish-research-council-policies>