INTERACT

The International Doctoral Programme ‘Interdisciplinary Marie Skłodowska-Curie Action for Health'

Guide for Applicants
Call 2

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Thank you for your interest in the INTERACT programme. Please read this guide carefully before applying. If you have any remaining questions after reading the guide, please consult the FAQ guide on the webpage: https://interact-msca.ku.dk/faq/. If your question remains, please contact the Management Team on interact-msca@bric.ku.dk.

1. BEFORE YOU APPLY

Make sure you are eligible. Your application will not be evaluated if you do not fulfil the eligibility criteria (3).

Also, application can ONLY be submitted through the University of Copenhagen's online job application system. Incomplete or late applications will not be evaluated.

2. OVERVIEW OF THE INTERACT PROGRAMME

The International Doctoral Programme Interdisciplinary Marie Skłodowska-Curie Action for Health (INTERACT) is supported by the Horizon Europe Marie Skłodowska-Curie (MSCA) programme. 66 PhD students will be recruited in 3 calls and work at one of eight host environments.[1] All projects will be interdisciplinary crossing from biology/biomedicine to physics, chemistry, or engineering. All PhD-students will have an interdisciplinary supervisor team (IST) with the main supervisor from the main field of the project and a co-supervisor for the other discipline embedded in the project. The PhD-student will be employed at the main supervisor's institute at either University of Copenhagen (UCPH), Technical University of Denmark (DTU) or Danish Cancer Institute (DCI).

3. ELIGIBILITY CRITERIA

International mobility

Candidates can have any nationality but must undertake transnational mobility according to the MSCA rules. Thus, candidates must not have resided or carried out their main activity (work, studies, etc.) in Denmark for more than 12 months in the 36 months immediately before the call deadline - unless as part of a compulsory national service or a procedure for obtaining refugee status under the Geneva Convention.

Education

Candidates must hold a master's degree in a relevant field, obtained no longer than four years before application deadline.[2] To ensure equal opportunities, exceptions to the 4-year rule are made for applicants with documented career breaks (parental leave, illness, mandatory military/civil service or a procedure for obtaining refugee status under the Geneva Convention). If a candidate holds more than one master's degree, the four-year limit is calculated from the date of the first master's degree awarded. Candidates must not already hold a PhD degree.

[1] University of Copenhagen (UCPH): 1. Biotech Research and Innovation Centre. 2. Niels Bohr Institute. 3. Department of Chemistry. 4. Department of Science Education. Technical University of Denmark (DTU): 5. Department of Chemistry. 6. Department of Health Technology. 7. Department of Biotechnology and Biomedicine. 8. Danish Cancer Institute.

[2] If the master's degree is not completed at the time of application, a certified/signed copy of a recent transcript of records and a written statement on the expected completion date from the enrolling institution is required. The master's degree needs to be complete, incl. defense of the thesis, no later than September 1st, 2026.

4. APPLICATION REQUIREMENTS

Application process

- ❖ a complete set of application material (in English), submitted in due time is required.
- ❖ mandatory templates MUST be used where indicated (can be downloaded on the INTERACT website). All mandatory templates come with instructions on how to fill out the templates. Make sure to read the instructions carefully before submission. Instructions must be deleted before submission.
- ❖ application can only happen online through the UCPH job application portal, no matter which of the open positions you have interest in at UCPH, DTU or DCI.[3]

⚠**Important:** Applications that do not follow the above requirements are **ineligible** and will not be evaluated.

Application material

- Online application form including personal details
- Motivation letter/cover letter (mandatory template, max 2 pages)
- CV (mandatory template, max 4 pages)
- A signed eligibility declaration and consent form (mandatory template)[3]
- List of two referees, whereof one should preferably be the master's degree supervisor (mandatory template)
- Certified copy of original bachelor diploma and transcripts records in the original language, including an authorized English translation if issued in other language than English[4]
- Certified copy of original master diploma and transcripts records in the original language, including an authorized English translation if issued in other language than English[5]

[3] You are asked to consent to University of Copenhagen handing over data to Technological University of Denmark or Danish Cancer Institute, if the hiring takes place at Technological University of Denmark or Danish Cancer Institute.
[4] Please ensure that all uploaded documents (e.g. diplomas, transcripts, certificates) are not password-protected or encrypted. Documents must be accessible for download and review.
[5] An assessment of your master's degree may be required from the Danish Agency for Higher Education and Science. We encourage you to read more in the assessment database at the Ministry of Higher Education and Science's webpage. At the time of application, you are asked to consent that the Faculty's HR office, (SUND HR) may request an assessment of your non-Danish qualifications from the Danish Agency for Higher Education and Science. You are also asked to consent to the Danish Agency for Higher Education and Science requesting information about your qualifications for the purpose of the agency's assessment.

- Documentation of English test[6]
- Documentation of career breaks, if any

5. KEY SELECTION CRITERIA

The selection will be merit-based, using weighed criteria in three defined areas: Education and track record, scientific potential and motivation.

Criteria for evaluation of application material

Education and track record (Weight 70%)

- Master-degree and concrete competences relevant to the prioritized projects the candidate wishes to engage in during the fellowship
- Grades obtained during education
- Experience with original research project for master thesis/additional research experiences
- Interdisciplinary experiences (as part of studies, work experiences or other professional/personal experiences)
- Scientific communication/ Publications
- Other professional merits (teaching, supervision, outreach, fellowships, awards etc.)

Motivation (Weight 30%)

- The candidate's general motivation for taking on doctoral training
- Specific motivation for applying to the INTERACT programme
- Motivation for the specific projects the candidate would like to work with, with specific focus on the interdisciplinary aspects of the projects

Criteria for shortlisting based on Selection Committee interviews

Scientific potential (Weight 70%)

- Outcome of master thesis project (exploitation, dissemination and communication)

[6] If you are hired at University of Copenhagen, please see here if you need to upload an English test. If a test is not available at the time of application, it will be required from shortlisted applicants before the selection committee interviews.

- Scientific communication skills
- Scientific abilities and competences obtained in previous work
- Ability to reflect and form scientific ideas
- Competences/knowledge relevant for the interdisciplinary aspects of the PhD programme/project

Motivation (weight 30%)

- The candidate's general motivation for taking on doctoral training
- Specific motivation for applying to the INTERACT programme
- Motivation for the specific projects the candidate would like to work with, with specific focus on the interdisciplinary aspects of the projects

6. SCORING SYSTEM

In each phase, the predefined selection criteria and scoring of 1-5 will be used. Only applicants receiving a score above the quality cut-off (≥3) will be considered qualified. Candidates with a score below will not be further evaluated.

Table 1. Scoring	
5	Excellent. The candidate meets all the evaluation criteria in the category with high quality and any shortcomings are minor.
4	Very good. The candidate meets most of the evaluation criteria in the category with high quality and only a few shortcomings.
3	Good. The candidate meets most of the evaluation criteria in the category with a good quality, but improvements could be expected.
2	Fair. The candidate meets most of the evaluation criteria in the category with a fair quality and there are several shortcomings
1	Poor. The candidate meets the evaluation criteria the category inadequately and there are significant shortcomings

Table 1: Based on the candidate scores, a ranked list of candidates scoring above the quality cut-off (≥3) will be made. Candidates scoring below 3 will not be ranked

7. EVALUATION PROCEDURE

Evaluation and selection of candidates will occur in three steps:

1. Evaluation of application material

- Each eligible application will be evaluated individually by two remote expert evaluators following strictly predefined evaluation criteria and scoring system (Please see section above).
- Based on each candidate's score, a ranking list of candidates scoring above the quality cut-off (≥3) will be made. Candidates scoring below 3 will not be ranked.
- Based on the ranking, up to three candidates per position will be invited for online interviews with the Selection Committee (SC).
- All candidates will be informed of their evaluation result.

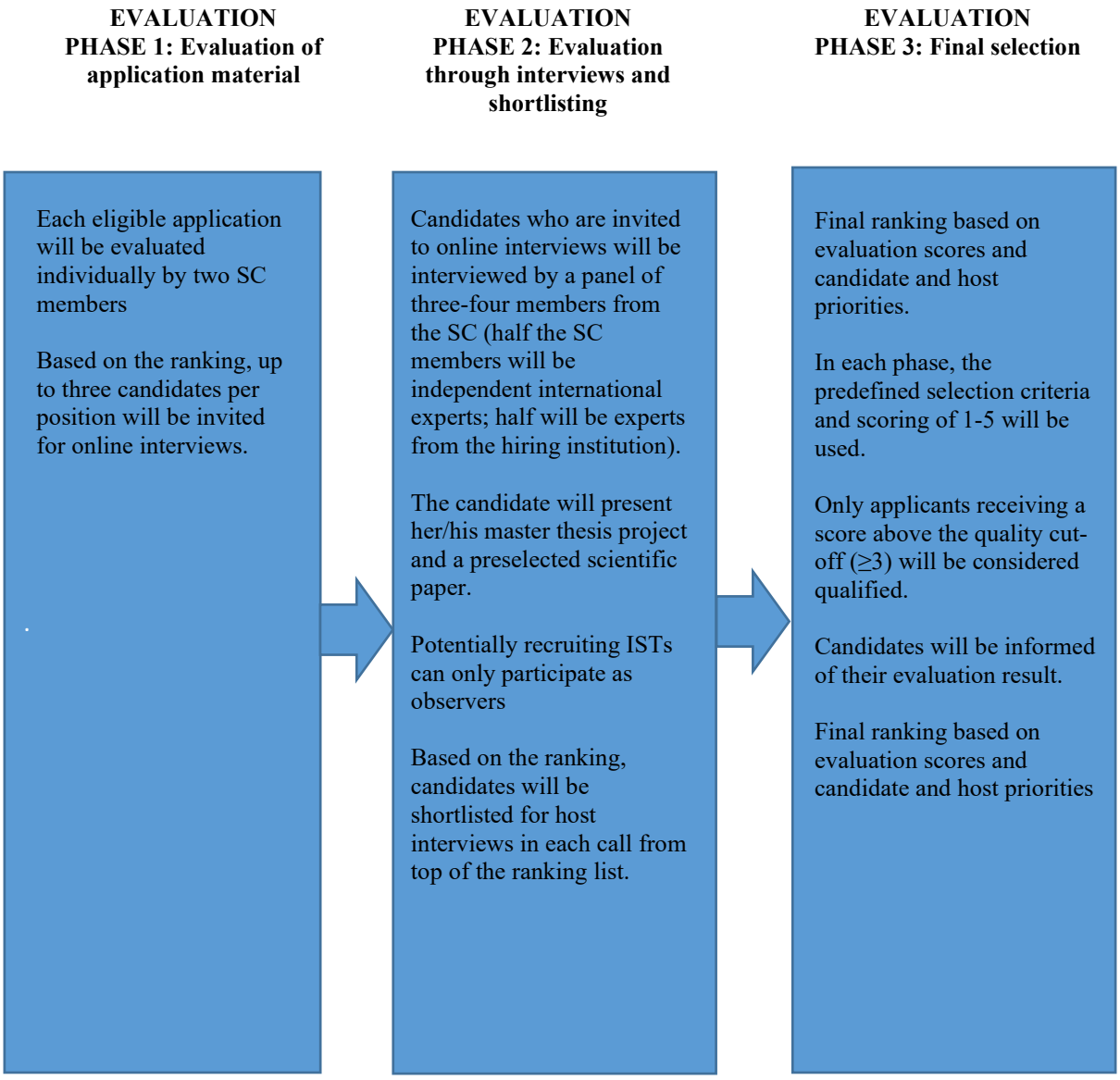
2. Evaluation through SC interviews and shortlisting

- Candidates who are invited to online SC interviews will be interviewed by a panel consisting of independent international experts and experts from UCPH, DTU or DCI (who are not hiring candidates interviewed in that panel). The candidate will present her/his master thesis project, and a preselected scientific paper followed by a question-based interview session.
- Each SC member will individually score each candidate using the predefined evaluation criteria and scoring system (see the section above). Based on the SC's scores, a ranked list will be made of candidates scoring above the quality cut-off (≥3). Candidates scoring below 3 will not be ranked.
- Based on the ranking, candidates will be shortlisted for online host interviews from top of the ranking list. All shortlisted applicants will go through formal assessment according to the UCPH HR procedures, assessing their formal qualification for obtaining a PhD student position at UCPH, DTU or DCI.
- All candidates will after the online interviews receive their assessment/evaluation result
- Ranked candidates will dependent on their rank be invited to host interviews with up to four of their prioritized host research groups. Here, research project opportunities will be discussed, and the candidate will beside the main supervisor potentially have a chance to meet the co-supervisor and other key persons in the research group. Following the host interviews, each candidate and potential host supervisor, submit a prioritized matchmaking list to the programme manager.

3. Final selection

The final selection of the candidates to receive a PhD position in a call will be based on the SC's ranking, also taking into consideration the candidates' host priorities and the hosting supervisors'

interest in the shortlisted candidates. In case of ex-aequo candidates, diversity of the selected candidates will be given priority in terms of gender, field of research and professional background. The remaining shortlisted candidates will be placed on a reserve list. All shortlisted candidates will receive their result of the evaluation.



8. REDRESS PROCEDURES

Applicants who wish to request a redress following a rejection decision may do so by contacting the INTERACT programme at interact-msca@bric.ku.dk. The redress must be submitted within 7 calendar days from the date the rejection email was sent. Please note that redress requests can only address procedural errors or factual inaccuracies in the evaluation process. Disagreement with the evaluation outcome is not grounds for redress.

9. AVAILABLE PROJECTS

There are 18 potential research projects open for application in the second INTERACT call (2025) – see table 2. Each project is supervised by an interdisciplinary supervisory team (IST). A description of the host environments, IST and specific project opportunities can be found at https://interact-msca.ku.dk/open-projects/.

Table 2. Title (column 1), Main supervisor (column 2) interdisciplinary co-supervisor(s) (column 3) and three key competences to take on the project (column 4)

Project 1			
A replicative helicase as a putative new target for antiviral treatments	Eva Kummer	Mads Clausen	1. Basic experience in molecular biology 2. Basic knowledge/experience in recombinant protein production and/or purification 3. Basic knowledge/experience in biochemical, or biophysical, or structural assays to assess protein function
Project 2			
Harnessing RNA modifications to steer immune stem cell function in aging and disease	Cristian Bellodi	Mads Clausen	1. Immunology 2. RNA biology 3. Proteomics
Project 3			
Genomic, transcriptomic and proteomic profiling of Parkinson's disease	Shohreh Issazadeh-Navikas	Erwin Schoof	1. Bioinformatic and computational science 2. Familiar with multiOMICs analysis 3. Cell, molecular, and/or neurobiology

Table 2. Title (column 1), Main supervisor (column 2) interdisciplinary co-supervisor(s) (column 3) and three key competences to take on the project (column 4)			
Project 4			
Engineering antibody–drug conjugates with optimized lysosomal trafficking for enhanced payload release	Lars Henning Engelholm	Katrine Qvortrup	1. Basic knowledge of protein biochemistry and molecular cloning. 2. Hands-on experience with cell culture, microscopy, or biochemical assays. 3. The project includes in vivo studies; therefore, candidates should hold - or be willing to obtain - a FELASA certification and demonstrate motivation to work with animal models as part of the experimental training.
Project 5			
Deciphering oncogenic 3D chromatin changes using genetic engineering	Joachim Lütken Weischenfeldt	Erwin Schoof and Lisa Reidmayr	1. Molecular biology 2. Genetics and epigenetics 3. Bioinformatics
Project 6			
Immunogenomics in bile duct cancers	Jesper Bøje Andersen	Sine Reker Hadrup	1. T cell immunology 2. Bioinformatics is a clear advantage if you know R language 3. Cell culture is nice to have
Project 7			
Identification of novel targets in glioblastoma with single-cell proteomics	Bjarne Winther Kristensen	Erwin Schoof	1. Knowledge in human biology 2. Proteomics 3. Experimental research in vitro and in vivo
Project 8			
How cell microenvironment affects signalling outputs in breast cancer cells	Chiara Francavilla	Janine Erler and Erwin Schoof	1. Mammalian cell culture 2. Cell biology and biochemistry assays (including immunoblotting, cell proliferation assays, etc) 3. Knowledge of cancer biology and signalling or metabolism

Table 2. Title (column 1), Main supervisor (column 2) interdisciplinary co-supervisor(s) (column 3) and three key competences to take on the project (column 4)			
Project 9			
Next-Generation Disease Models: Towards a Digital Twin of Parkinson's Disease Combining Organoid-on-Chip Technology and Mathematical Modelling	Jenny Emnéus	Ala Trusina	1. Degree in biotechnology, biomedical engineering, or a related field 2. Experience with mammalian culture and microscopy 3. Experience with molecular techniques
Project 10			
Mechanistic Insights into Colorectal Cancer Prevention by Bioactive Metabolites	Susanne Brix Pedersen	Nikos Hatzakis	1. Immunology and host-microbe interactions 2. Microbial fermentations 3. Data integration
Project 11			
Decoding Gut–Brain Axis Dysregulation in Chronic Intestinal Inflammation	Susanne Brix Pedersen	Ole Lund	1. Computational biology and bioinformatics, including experience with multi-omics data integration and proficiency in programming (e.g., R or Python). 2. Statistical modeling and machine learning for biological data, including familiarity with dimensionality reduction, clustering, and predictive modeling. 3. Chronic inflammation biology, with a solid understanding of host–microbe interactions.
Project 12			

Table 2. Title (column 1), Main supervisor (column 2) interdisciplinary co-supervisor(s) (column 3) and three key competences to take on the project (column 4)			
CRISPR-based precision cell selection for targeted cancer therapy	Erwin Schoof	Joachim Lütken Weischenfeldt and Lisa Reidmayr	1. CRISPR technology 2. Molecular biology methods 3. Large scale biological data sets
Project 13			
Engineering Cas13-based purification system for safer cell therapies	Jenny Emnéus	Eva Kummer & Lisa Reidmayr	1. CRISPR technology 2. Molecular biology methods (main focus on cloning) 3. Structural biology
Project 14			
Engineering bispecific antibody–drug conjugates for efficient blood–brain barrier transport	Katrine Qvortrup	Lars Henning Engelholm	1. Hands-on experience with chemical synthesis, biochemistry and/or cell culture 2. Strong interest in chemical biology, drug delivery, and translational research 3. The project includes in vivo studies; therefore, candidates should hold - or be willing to obtain - a FELASA certification and demonstrate motivation to work with animal models as part of the experimental training
Project 15			
Isoform-level Analysis of Hematopoietic Diseases using Single-Cell Proteomics	Kristoffer Vitting-Seerup	Bo Porse	1. Strong R or Python programming skills 2. Applied bioinformatic analysis of omics data 3. A strong interest in molecular biology
Project 16			
Novel targets for cancer immunotherapy	Sunil Kumar	Fran Supek	1. Masters degree in bioinformatcis or data science or similar 2. Prior experience with genomic analysis or single-cell transcriptomic analysis 3. Cell culture and molecular biology techniques

Table 2. Title (column 1), Main supervisor (column 2) interdisciplinary co-supervisor(s) (column 3) and three key competences to take on the project (column 4)			
Project 17			
Developing digital twins of in vitro organoids	Ala Trusina	Jenny Emnéus	1. Strong computational skills. extensive experience with programming (preferably in Python) is required. Experience with numerical methods, image processing and analysis of other biological data is a plus. 2. Background in physics or mathematics. Either as a major, or alternatively mixed biology and physics background (e.g. BSc in Biology, Master in Physics or other combinations where Phsyics course have been a significant part). 3. Experience with modeling biological systems.
Project 18			
Molecular roles and therapeutic potential of DCAF15 in neurodegeneration and cancer	Lisa Frankel	Luca Lareia	1. Background in cellular and molecular biology 1. Experience in the areas of biochemistry, protein interactions and/or protein purification 2. Strong interest in disease applications and therapeutic potential

Table 2: ISTs open for application in the second INTERACT call 2025

10. TRANING PROGRAMME CONTENT

INTERACT's vision is to cultivate agile and responsible researchers capable of working seamlessly across STEM disciplines, with implications for transforming health solutions. We will do so by implementing

- Excellent research opportunities in a top international research environment
- Expert supervision and mentoring
- Networking opportunities with other sectors and internationally
- Transferable skills training
- Career development activities

The PhD students will build a broad set of competences and skills within research, research governance and transferable skills and participate in career development activities supporting their individual career goals. The goal is to empower all students to fully exploit the potential of their talent.

PhD students will be formally enrolled at the University of Copenhagen or Technical University of Denmark to obtain a PhD degree following successful fulfilment of the PhD position and need to take courses of 30 ECTS in their PhD position period (scientific and transferable skills courses) according to the Danish PhD order.

YEAR 1				YEAR 2				YEAR 3			
1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	31-33	34-36
Research Own research project Research Secondments (min 1 month) and dissemination of research project											
Training Course programme of 30 ECTS credits (option to have ECTS from main INTERACT activities if of student's interest)											
Research ethics (0,5 day) Open Science (1d) • FAIR • DMP	Responsible conduct of research Personal development (0.5d) • CDP • networking	**Training school 1** (2.5d): • Think like a···The different disciplines in short • Team science • Peer mentoring group kick-off	Open Science (0.5d) • Open access • Data publication • Copyright		Personal development (0.5 day) • CDP revision • Networking	**Training school 2** (2d): • AI in science • Science communication • Peer group meet	Innovation and entrepreneurship (1-1.5d)		**Training school 3** (2d) • Funding and grant application basics • Strategic career planning • CV and cover letter writing • Peer group meet		
Scientific seminars and conferences 'Convergence science' seminars (1h per month online) 'Convergence science for health' conference (once in programme)											
Mentoring and career activities Peer mentoring group *Career mentoring* *Career Seminars* *Career networking events* *Career day*											
Network-wide activities for both fellows and supervisors in a cohort Kick-off meeting (month 1) Network symposium (month 28)											

In blue: Danish PhD education. In red: Provided by enrolling institution. *In italics:* Voluntary activities.

11. EMPLOYMENT AND WORKING CONDITIONS

In Denmark, PhD students are employees, and the PhD students have identical employment and working conditions as other researchers. The UCPH/DTU employment conditions are in accordance with agreements between the Ministry of Finance and The Danish Confederation of Professional Associations on Academics in the State. The INTERACT PhD students will receive a UCPH/DTU/DCI contract specifying the host institute that will be their daily workplace. The terms of employment, salary and pension are specified in Table 3. The working conditions are centred around a set of principles ensuring an open, collaborative, secure, including and developing work environment with equality for all staff and is outlined in the UCPH Personnel Policy Handbook, DTU's Work Culture document and DCI.

Table 3: Employment and working conditions for INTERACT PhD students

EMPLOYMENT CONDITIONS

- Salary regulated by collective agreements
- Salary is regulated annually to reflect increased seniority and general salary increases
- 17.1% pension of basic salary (transferable if not staying in DK)
- Regulated work week (37 hours/week)
- Full social benefits including public health care
- Right to paid holidays (five weeks plus five special holidays, on top of national holidays)
- Right to salary during own illness and child's first two sick days
- Right to parental leave (up to 32 weeks paid leave) and two childcare days/child/year until age 7

WORKING CONDITIONS

- Flexible work hours
- Family friendly environment (e.g. regular meetings only between 9-17)
- Annual Performance and Development Reviews with nearest leader (main supervisor)
- Healthy physical work environment
    - Mandatory onboarding training in occupational health, safety issues and handling of potential hazardous reagents.
    - Governmental-regulated laboratory facilities and work procedures
    - Controlled indoor climate
    - Non-smoking and alcohol policy
- Healthy psychosocial work environment
    - Regular satisfaction and well-being assessments with mandatory managerial action plans
    - Flat organization with freedom of speech
    - Student and staff representatives in local Liaison Committees
    - Student and postdoc alliance engaged in dialogue with management
    - Policy with no-tolerance of harassment and bullying

- Individual coaching on stress-handling and in case of long-term illness

12. ETHICAL PROCEDURES IN PLACE

INTERACT will follow the Horizon Europe ethical principles and guidelines. All INTERACT fellows will have to self-evaluate and get their research project ethically approved. This will take place in the first part of the fully funded PhD position. However, all applicants for the INTERACT fellowships need to state as part of the application that they will adhere to the general Horizon Europe (HE) ethical principles and guidelines and as part of this, follow the ethical procedure outlined for INTERACT:

- Ethics workshop for PhD students, including information part for supervisors
- Self-evaluation of all individual PhD student projects selected on the main list and those selected on the reserve list, using the HE ethics self-evaluation template
- Evaluation and local approval from all hosts (UCPH, DTU or DCI)
- Monitoring of the ethics of individual projects will occur with 9-month intervals, as part of the PhD student progression reports
- Obtaining relevant national ethical permits (e.g. the Regional Committees on Health Research Ethics (use of patient data and material) and The Animal Experiments Inspectorate (use of animal models)).
- In case of projects with potential use of hESC, early onset of HE Ethical Clearance with the EC project officer

The process has been designed to comply with local (UCPH, DTU & DCI), national and European regulations regarding safety and ethics. The process will be completed during the first months of PhD students' employment on the COFUND action. In general, the three Rs (replace, reduce, refine), will be applied to relevant projects. Project activities with potential ethical concerns will only be initiated after all relevant permits have been obtained. Overall INTERACT ethical review will take place for each call-specific ethical report (call 1, 2 and 3) and for the final ethics report.