MuSkLE

PhD programme

Building, maintaining and repairing the functional locomotor system

Musculo-Skeletal system, Locomotion, Exercise (MuSkLE)-PhD Programme: Building, maintaining and repairing the functional locomotor system

Guide for applicants

Co-funded by the European Union

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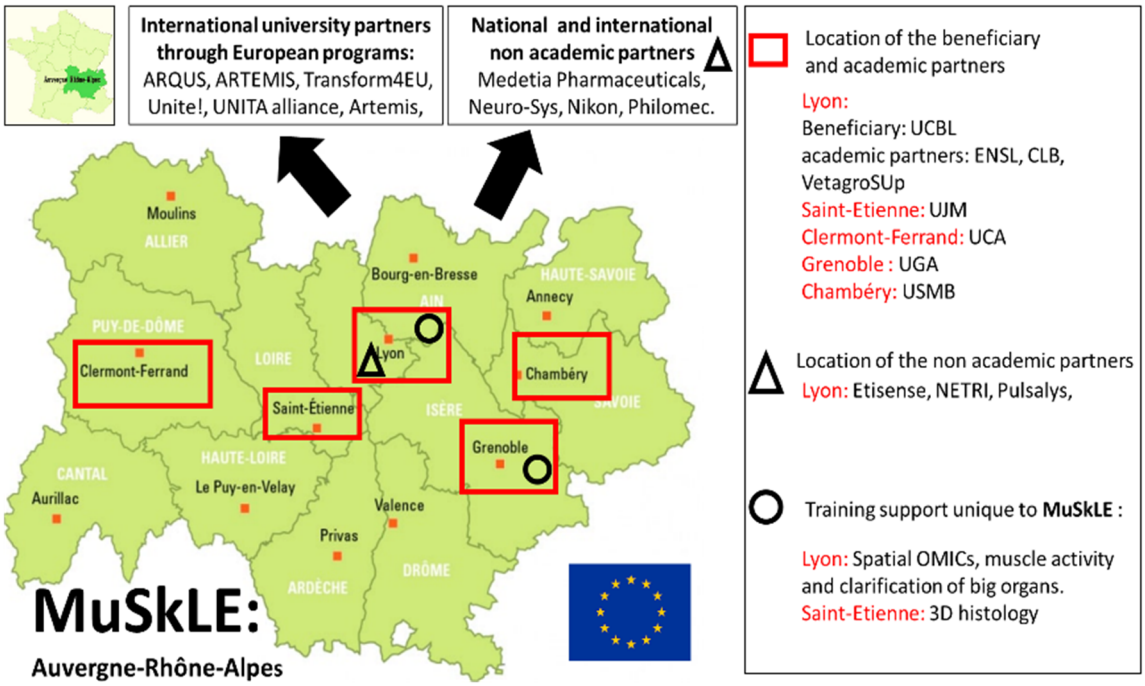
1. MuSkLE - PhD programme at a glance

1.1 Summary description

The coming decades will be shaped by two major societal challenges: climate change and demographic transitions, particularly population ageing. These global trends are transforming how we live, work, and move. On one hand, efforts to mitigate climate change are encouraging shifts toward more sustainable mobility solutions, such as walking and cycling—forms of active transportation that place greater demands on the human locomotor system. On the other hand, demographic ageing is accompanied by a rise in physical inactivity, especially among older adults, which the World Health Organization has identified as the fourth leading risk factor for global mortality. These trends converge on a single need: preserving locomotor function across the lifespan.

Understanding how the locomotor system develops, functions, and repairs itself is therefore essential to address these emerging needs. The **MuSkLE-PhD programme** is built around this vision. It aims to train a new generation of researchers capable of investigating the locomotor system from its developmental origins to its physiological function in adulthood and its capacity to regenerate and repair after injury or disease. While grounded in the biological sciences, this scientific ambition requires the **integration of complementary disciplines such as physics, mathematics, and the social sciences, an interdisciplinary approach rarely offered within conventional doctoral programmes**. To achieve this, the programme offers secondment and short-visit opportunities with partner institutions across diverse fields, providing students with diverse, hands-on, interdisciplinary experience.

The MuSkLE-PhD programme builds on the scientific foundations and institutional network established by the international MuSkLE-Graduate School, led by Université Claude Bernard Lyon 1 (UCBL). The MuSkLE- Graduate School brings together 20 research teams from 3 institutions: ENS de Lyon, UCBL, and Jean Monnet University (Saint-Étienne). The MuSkLE-PhD programme will expand this consortium to include partners across the entire Auvergne-Rhône-Alpes region, providing students with access to cutting-edge laboratories and interdisciplinary training focused on the locomotor system, studied at multiple levels —from molecules to whole organisms —using a wide range of technologies and model systems.



The consortium comprises 1 university hospital and 7 universities and higher education institutions across 5 cities in the Auvergne-Rhône-Alpes region: UCBL, ENSL de Lyon, Université Grenoble Alpes (UGA), Université Jean Monnet (UJM), Université Savoie Mont Blanc (USMB), Université Clermont Auvergne (UCA), and VetAgro Sup.

1.2 Recruitment

The MuSkLE-PhD programme will support the training of **55 PhD students**, each funded through a 36-month fellowship, over a total programme duration of 60 months. Fellows will be selected through 3 competitive calls for applications, conducted with full transparency and in alignment with European Union principles of fairness, inclusiveness, gender equality, merit-based evaluation, open competition, ethics, international mobility, environmental responsibility, and sustainability.

1.3 Working conditions

The proposed working conditions under this MuSkLE-PhD programme are highly competitive and supportive, offering an attractive environment for international doctoral fellows. Doctoral fellows will be employed under a full-time contract aligned with French statutory working conditions for early-stage researchers.
The specific working conditions, salary, and benefits are detailed for each open PhD position on the Recruitment page of the MuSkLE website.

1.4 Training

The description of the training capacities and the entire training programme offered to applicants is available in the Training section of the MuSkLE website.

2. List of open PhD positions

The complete list of the open PhD positions is available on the Recruitment page of the MuSkLE website.

3. Applicants' selection

The MUSKLE network implements an open, transparent, impartial, and equitable recruitment procedure. Fellows are selected through 3 competitive calls for applications, conducted with full transparency and in alignment with European Union principles of fairness, inclusiveness, gender equality, merit-based evaluation, open competition, ethics, international mobility, environmental responsibility, and sustainability.
The first competitive call opens on 1st March 2026 with a deadline set on 6th May 2026.

3.1 Eligibility criteria

The recruited applicant **must be a doctoral fellow** (i.e., not already in possession of a doctoral degree at the date of application call deadline). Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will not be considered eligible.

The applicant **should not have resided or carried out his/her main activity (work, studies, etc.) in the country where he/she is being recruited**, i.e., France, for more than 12 months in the 3 years before the application call deadline, unless this time was part of a compulsory national service or a procedure for obtaining refugee status under the Geneva Convention.

3.2 Application process

To guarantee the equal treatment of all candidates, applications must be:

- exclusively submitted through the application form available on the MuSkLE website. Applications sent via other means will not be evaluated.
- complying with the following requirements and formats, and meeting the standards of academic English used in international research, allowing independent experts to evaluate the scientific quality of the application without ambiguity,
- limited to only one application per candidate per call,
- submitted before the call deadline.

Each application shall include:

- The completed online application form, including the projects chosen by the applicant, with the corresponding preference order. Within his/her unique application, the applicants can select (from a drop-down menu) up to 3 projects they are particularly interested in. One of these projects can be proposed by the candidates themselves.
- A detailed CV of maximum 2 pages, including:
  - Contact details (email address and phone number),
  - Education and degrees,
  - Professional background,
  - Distinctions,
  - Current country of residence,
  - If applicable: A listing of the 5 most relevant publications, with a single-sentence statement detailing their relevance to the selected project,
  - A list of technical and scientific skills, as well as any other activity demonstrating impact (such as outreach, training, scientific communications, and general public engagement activities…),
  - A short description of the performed academic and/or industrial internships,
  - The contact details of two academic or industrial referees (name, title, affiliation, e-mail, and telephone number) who are willing to provide, upon request, detailed recommendation letters about the applicant.

  This CV must clearly state where the applicants worked or studied / and or resided for the three years preceding the competitive call deadline (occupation, institutions, cities, countries) and from where they are applying, so that the Selection Committee can assess the application's eligibility.

- A personal statement (max 1 page) detailing general motivation to participate in the programme, professional objectives of the applicant, career development objectives, as well as:
  - reasons for choosing up to 3 PhD projects among the proposed ones. A detailed justification of the choice of the project(s) is expected, especially if the academic background of the applicant does not fully match the topic of the project,
  - If the applicant opts to propose his/her own PhD project, the personal statement should include an additional 1-page description of the project proposal, which should fit within the research topics of one of the recruiting supervisors. The application should also include the completed ethics self-assessment tables (see annexes).

  In any case, applicants may apply to **no more than 3 projects** in total.

One single file gathering all the supporting documents must be submitted. It cannot exceed 8 MB.
Copies or transcripts of academic degrees obtained will be requested upon selection.

3.3 Selection process overview

The selection process is composed of 6 steps, as shown in the following figure:

3.4 Completeness and eligibility requirements (Step 1)

Upon reception of the applications, a first check will be made to ensure:

- That the application is complete, meaning that it includes all the documents and information listed in section 2.1 above, that it complies with the requirements and formats, is submitted in English, does not exceed one application per candidate per call, and is submitted before the call's deadline,
- That the candidate satisfies the eligibility requirements set for a Doctoral Fellow funded by the Marie Sklodowska-Curie COFUND programme as follows:

- The recruited applicant **must be a doctoral fellow** (i.e., not already in possession of a doctoral degree at the date of application call deadline). Researchers who have successfully defended their doctoral thesis but who have not yet formally been awarded the doctoral degree will not be considered eligible.
- The applicant **should not have resided or carried out his/her main activity (work, studies, etc.) in the country where he/she is being recruited**, i.e., France, for more than 12 months in the 3 years before the application call deadline, unless this time was part of a compulsory national service or a procedure for obtaining refugee status under the Geneva Convention.

3.5 Ethics review (Step 2)

- At the application phase:

The candidates are requested to confirm, when submitting their application, that they have read and commit to comply with the ethical checklist included as section 5 of the present Guide for applicants.

- At the interview phase:

The short-listed fellows will be required to present an ethical self-assessment of their PhD project that will be evaluated and screened by the Ethics Advisory Board (EtAB), composed of members from the various existing Ethics Committees at each partner's institution.
The EtAB will review all ethical dimensions of the research project (main and reserve lists) and the accompanying ethics self-assessment submitted by the applicant to ensure compliance with the highest ethical standards. If the project complies with ethical principles, the application will be declared eligible. However, if the research project violates ethical standards—such as involving activities prohibited in all EU Member States or in the Member State where the research is to be conducted—the application will be deemed ineligible. If the ethics self-assessment is incomplete or contains inaccuracies, the project will be flagged and forwarded to the next stage for further ethical review. The EtAB will address its recommendations to the Selection Committee.
All projects that raise ethical issues must obtain ethics approval from the relevant committees before research activities begin.

3.6 Selection criteria and sub-criteria – application phase (Step 3)

Applications that meet the eligibility requirements will be evaluated by external experts. These experts will receive a briefing on the assessment criteria and selection process and will be asked to complete a comprehensive review of each application. Their assessment will consider a broad range of factors to evaluate the applicant's potential to produce original, independent work and to demonstrate the vision and creativity necessary to establish themselves as future international research leaders. The assessment will also consider the fit between the candidate and the project, based on the project(s) selected by the applicants. For applicants who selected projects outside of their previous area of expertise, a well-motivated justification of this deviation is expected. When properly justified, such deviation can be positively evaluated. The review will focus on three main criteria—drawn from the extended CV, personal statement, and reference letters—and will be scored according to the weightings outlined below:

- Evaluation of the applicant's experience (Max score 7/10): qualifications, grades, and ranking at master's level, research track record, training, recommendations, mobility (geographic and/or thematic), experience in dissemination, soft skills.
- Fit between the candidate and the lab (Max score 3/10): justification of the choice of the project(s). Does the applicant's experience align with the project(s) they have selected? If not, is the change in scientific orientation motivated?

Following the consensus meeting, the Project Coordinator and CoCoordinator (COO/cCOO), the Project Manager (PM) and the Selection Committee (SC) will consolidate the feedback from the independent external experts and calculate an average score for each proposal, resulting in a ranked list ordered from highest to lowest scores. If any scores are identified as outliers, ad-hoc experts from the SC will be asked to assess the proposal. Based on the final ranking, the COO/cCOO and PM will decide which applicants will be invited for an interview. To qualify for the interview stage, applicants must achieve a minimum score of 7 out of 10. The number of interview invitations *per* call will be limited to 50.

After Step 3, all pre-selected applicants will have the opportunity, upon their own request, to contact the recruiting supervisors to gain more insights into the projects, be exposed to the lab culture and available infrastructure, and ask for scientific questions to prepare for the interview.
Upon request, meetings can be organised by the supervisors to discuss with applicants. Such meetings will help matching the applicants with the labs and adjusting their understanding of the projects. It cannot constitute a rehearsal or a training for subsequent selection stages"
Applicants can contact any supervisor, even if they have not selected their project in the written application. This will enable applicants to choose the project that they are most likely to undertake. After this step, applicants will be asked to select a single project to present during the interview stage.

3.7 Criteria/sub-criteria - interview phase (Step 4)

Shortlisted candidates will be invited to participate in a 20 min online interview, during which they will present their curriculum (with a particular focus on their last internship, if relevant), their research proposal (based on the project they have selected as their first choice either in the written application or after contacting the supervisors), followed by a question-and-answer session. The interview panel may ask questions about projects ranked as the 2nd or 3rd choice by applicants. The applicants will be evaluated by the interview panel based on the following criteria:

- Presentation (Max score 4/10): scientific knowledge, research vision, confident and clear communication, evidence that the applicant has appropriated the project and potentially adapted it to their own expertise, understanding of ethical implications.
- Scientific questions (Max score 4/10): Does the applicant demonstrate a clear understanding of the project? Knowledge of relevant scientific literature.
- Motivation (Max 2/10): Does the applicant have a career plan? Is the project choice well motivated?

Based on the evaluation criteria, each interviewed candidate will receive a score, which will be used to generate a ranked list. To be included in the final ranking, candidates must achieve a minimum score of 7 out of 10.
In the event of a tie, preference will be given to 1) researchers at risk, followed by 2) researchers with disabilities, 3) applicants from countries with the lowest Human Development Index (HDI), and 4) less represented gender. If several successful applicants have chosen the same project, priority will be given to the top-ranking applicant. The other applicants will have the opportunity to select 1 of the 2 remaining projects they pre-selected.
If more highly ranked students have already selected these projects, the applicant will be placed on the reserve list. Reserve list applicants may be offered the opportunity to be enrolled as a DF on a project that did not attract a successful candidate. They will also have the opportunity to reapply at the next call and skip the pre-selection step if they still meet the eligibility criteria. Moreover, reserve list applicants may be contacted directly by any supervisor of the MuSkLE-PhD programme to be enrolled as a DF outside the MuSkLE-PhD programme.
The Supervisory Board (SB) will determine the number of Fellowships to be awarded under each call—particularly if the number of proposals exceeding the threshold is lower than the number of available positions.

3.8 Funding Decision (Step 5) and Feedback to Applicants (Step 6)

The Steering Committee will review the shortlisted applications and decide on funding. Successful applicants will be contacted and proposed for the position. Practical information for their recruitment and settlement arrangements will also be provided by the Project Manager and the Human Resources representatives. Confirmation of their acceptance of the position will be requested within a month to allow sufficient time for them to consider the offer. Applicants who are not selected will be informed in due time, and the redress procedure and timeline will be communicated.

3.9 Implementation of the equal opportunities policy

The MuSkLE-PhD programme will apply the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (Charter and Code), promoting open, merit-based, and transparent recruitment, as well as attractive working and employment conditions at all host organisations. The MuSkLE-PhD programme will pay particular attention to equal opportunities and inclusiveness. In line with the Charter and Code, the MuSkLE-PhD programme will embrace diversity and take measures to facilitate mobility and reduce barriers for researchers at risk or with disabilities. The beneficiary and implementing partners are already fully engaged in reflections and actions to integrate the dimension of equality between women and men, as well as the fight against discrimination and other aspects of diversity.

Researchers at risk. As mentioned above, the MuSkLE-PhD programme will aim to reach researchers at risk, for example, through the SAR network. After validation by their institutional policies, all institutions will also include the following language on their websites and in media communications when announcing recruitment calls: “Researchers at risk are encouraged to apply.” The definition of researchers at risk, *“Researchers at risk include researchers, scholars and scientists at all stages of their careers who are experiencing threats to their life, liberty or research career, and those who are forced to flee or have been displaced because of such threats”* will always be specified. MuSkLE COFUND will also promote the *EU Science4Refugees* initiative, which supports researchers with refugee status.

Researchers with disabilities. As mentioned above, particular attention will be given to encouraging and facilitating the recruitment of researchers with disabilities. Researchers with disabilities are already covered by the UCBL human resources chart (equal opportunity policy); therefore, these principles will be incorporated into the recruitment principles and procedures of this doctoral programme. All rules and criteria for selection and evaluation are available in the Guide for applicants, downloadable from the MuSkLE-PhD programme website, to ensure transparency and align with the HSR4R excellence policies established by all MuSkLE-PhD programme partners. The MuSkLE-PhD programme will also ensure that the MSCA Special Needs Allowance is activated whenever relevant. This financial

support will help with the additional costs entailed by the recruitment or secondment of DFs with disabilities whose long-term physical, mental, intellectual, or sensory impairments would not be possible without extra financial support.

Applicants from countries with the lowest Human Development Index (HDI) will also be actively encouraged to apply. The MuSkLE-PhD programme will ensure fair access to information and support throughout the application and relocation processes for these candidates. Additional measures—such as dedicated guidance, mentoring, or financial support for relocation and integration—may be proposed on a case-by-case basis to remove potential barriers and foster their participation in the programme. This effort aligns with the programme's broader commitment to global inclusiveness and research capacity-building.

Gender equality. One of the objectives of the MuSkLE-PhD programme will be to achieve gender balance among recruited DFs and across scientific domains, particularly by increasing female representation in underrepresented areas. This will be achieved through a communication campaign specifically targeting women to apply for the calls, and by ensuring that selection panel members are gender-balanced. It is expected that achieving a gender-balanced group of DFs within the MuSkLE-PhD programme will lay the groundwork for future work and have transformative potential for the next generation of researchers.

Career restart. Specific attention will be given to candidates who wish to pursue a career in research after having been active in a different field following the completion of their degree.

Other diversity aspects. The MuSkLE-PhD programme is fully committed to fostering diversity, equity, and inclusion throughout its implementation. Particular vigilance will be exercised to identify and address any diversity-related issues that may arise during the course of the programme, with the highest level of consideration and support for individual circumstances. Doctoral studies may be affected by various personal or external challenges, and the programme is designed to accommodate such situations with flexibility and understanding.
While the standard duration of the PhD fellowship is 36 months, extensions may be granted for maternity, paternity, or adoption leave, as well as for long-term illness, accidents, or major disruptive events (*e.g.*, natural or human-made disasters, pandemics). Fellows requiring an extension will not be penalised; their salary will be secured for the full 36-month duration, as planned in the programme budget. These measures are fully compatible with and aligned with applicable national regulations on family leave and long-term absences.

3.10 Redress Committee and procedure

In line with the Code of Conduct for the Recruitment of DFs, a redress procedure will be implemented for DFs who believe that their application rejection was based on a flaw in the selection procedure. Requests can be submitted for admissibility/eligibility or evaluation review at any step of the evaluation process (eligibility check, application assessment, and interview) within the timeframe specified in the information provided to applicants. Candidates may request a review of any decision that establishes whether they can proceed to the next stage of the selection process. Review requests may be based on a material irregularity in the selection process, and/or non-compliance with the selection procedure. Candidates are not allowed to challenge the validity of the Selection Committee's assessment. Review requests will be examined by independent experts who have not been involved in the selection process for fairness and impartiality. The outcome of the evaluation review request will be sent to the applicant in due time. If the request is successful and re-evaluation of the application is recommended, the application will be re-evaluated, including an interview if relevant.

4. Job Applicant Privacy Notice

As part of its recruitment process, the MuSkLE consortium collects and processes personal data of job applicants. The network is committed to transparency about how it collects and uses data and to meeting its data protection obligations.

Accordingly when submitting an application, each candidate is requested to formally confirm having read the following Job Applicant Privacy Notice and expressly giving the MuSkLE network consent to hold his/her details in order to be considered for the complete MuSkLE recruitment process.

4.1 What information do we collect?

The MUSKLE network collects a range of information about each applicant. This includes:

- Name, address, and contact details, including email address and telephone number;
- Details of qualifications, skills, degrees, experience and employment history;
- Information on the country of residence, history of residence over the 3 years before the call's deadline, and entitlement to work in the EU, so as to perform the eligibility check.

The MuSkLE network may collect this information in a variety of ways. For example, data might be contained in application forms, CVs (resumes), copies of degrees, or through interviews or other forms of assessment.
Data will be stored in our Application database, shared among the recruiting institutions and backed up in other secure IT systems (including email correspondence where necessary).

4.2 Why does the MuSkLE network process personal data?

Given the objective of MuSkLE Phd programme, which is the recruitment and training of 55 Doctoral Fellows, we need to process data in order to select the most suitable candidate for each open position.
The MuSkLE network has a legitimate interest in processing personal data during the recruitment process and for keeping records of the process. Processing data from job applicants allows us to manage the recruitment process, assess and confirm a candidate's suitability for employment and prepare the reports required by the project funder.
In the case of unsuccessful applications, the MuSkLE network may keep the corresponding personal data on file in case there are future employment opportunities for which the applicant may be suited. Each applicant is free to withdraw consent at any time.

4.3 Who has access to data?

Information may be shared within the MuSkLE network of beneficiaries, implementing partners, associated partners, external experts, and with the funding agency, only with the applicant's consent.

4.4 How does the MuSkLE network protect your data?

We take the security of personal data seriously. Each implementing partner institution applies its internal data protection and information security policies and controls to ensure that data is not lost, accidentally destroyed, misused, or disclosed, and is not accessed except by our beneficiaries, implementing partners, associated partners, and external experts for the purpose of their recruitment(s), and by the funding agency upon request.

4.5 For how long does the MuSkLE network keep data?

The MuSkLE network will retain your data on file during the recruitment process and up to five years following the end of the MuSkLE project to be able to justify the complete recruitment process should an audit be performed by the funding agency.

4.6 Right to access your data

As a data subject, each applicant has a number of rights and can:

- Access and obtain a copy of his/her data on request;
- Require the organisation to change incorrect or incomplete data;
- Require the organisation to delete (right to be forgotten) stop or limit the processing of his/her data.

To exercise any of these rights, please contact the MuSkLE network through recruitment(at)muskle.eu

For all inquiries and complaints regarding the security and privacy of data please contact MuSkLE network through recruitment(at)muskle.eu.
If you believe that the MuSkLE network has not complied with your data protection rights, you can complain to the relevant Information Commissioner:
Commission nationale de l'informatique et des libertés (CNIL) - 3 Place de Fontenoy, 75007 Paris
https://www.cnil.fr/fr/notifier-une-violation-de-donnees-personnelles

5. Ethical checklist

The proposed COFUND doctoral programme will strictly comply with the ethical principles and relevant national, European and international legislation, including the Charter of Fundamental Rights of the European Union, the General Data Protection Regulation (GDPR), and the principles outlined in the Horizon Europe Ethics Appraisal Procedure.

5.1 Human Participants and Personal Data

The programme primarily supports doctoral research in life sciences and related disciplines. Most research projects are expected to involve model organisms and experimental systems that do not include human participants. However, in cases where projects involve human volunteers, the protection of volunteers' rights and well-being will be of utmost importance throughout the research process. All research involving human participants will adhere to ethical standards that prioritize the safety, dignity, and autonomy of volunteers.

-Informed Consent: Volunteers will be fully informed about the nature, purpose, and procedures of the research before participation. Consent will be freely given, specific, informed, and unambiguous, with participants fully understanding their rights and the voluntary nature of their involvement. Informed consent will be regularly updated and renewed if necessary.
-**Data Confidentiality**: All personal and sensitive data collected from volunteers will be treated with the highest degree of confidentiality. Identifiable information will be anonymized or pseudonymized wherever possible to ensure privacy. Volunteers' personal data will only be used for the specific purposes of the research and will not be shared without their explicit consent.
-**Right to Withdraw**: Volunteers will retain the right to withdraw from the study at any point without any negative consequences or impact on their personal rights. Participants will be informed of their right to discontinue participation and withdraw their data at any time, in accordance with GDPR guidelines.
-**Risk Minimization**: All research protocols will be designed to minimize any physical, psychological, or social risks to volunteers. Any potential risks will be disclosed clearly during the informed consent process. Volunteers will be given access to appropriate support services if required.

5.2 Animal Welfare

Where doctoral research involves animal models (*e.g.*, invertebrate or vertebrate organisms), all procedures will strictly adhere to:

-Directive 2010/63/EU on the protection of animals used for scientific purposes,
-Relevant national regulations,
-Institutional animal ethics committee approvals.

Projects will follow the 3Rs principle (Replacement, Reduction, Refinement) to ensure the highest standards of animal welfare. Ethical approvals will be obtained prior to the start of any experimental work involving regulated species.

5.3 Research Integrity and Good Scientific Practice

The programme is committed to promote:

- Research integrity,
- Transparency,
- Reproducibility,
- Responsible conduct of research.

All doctoral candidates will receive mandatory training in research ethics, data management and FAIR principles, open science practices, publication ethics, prevention of research misconduct.
The supervision structures will ensure compliance with institutional guidelines and the principles of the European Code of Conduct for Research Integrity.

5.4 Gender Equality and Non-Discrimination

The programme is aligned with institutional Gender Equality Plans (GEPs) and relevant European frameworks, including the objectives of Horizon Europe regarding inclusiveness and diversity.
The recruitment of doctoral candidates is following the principles of open, transparent, and Merit-Based Recruitment (OTM-R), equal opportunities, non-discrimination on the basis of gender, ethnicity, disability, religion, sexual orientation, age, or socio-economic background.
Gender balance will be actively promoted at all levels of the programme, including governance bodies, supervision panels, evaluation committees, and training activities.

5.5 Dual Use and Misuse Prevention

The scientific fields covered by the programme are not expected to raise significant dual-use concerns. Nevertheless, any potential misuse of research outcomes will be assessed at the project level.
Where relevant:
-Risk assessments will be conducted during proposal evaluation and project implementation,
-Supervisors will ensure awareness of dual-use regulations and biosecurity standards,
Appropriate safeguards and mitigation measures will be implemented.

5.6 Environmental Sustainability and Environmental Responsibility

The programme is committed to environmental sustainability and to minimizing the ecological footprint of its research and training activities, in line with the objectives of the European Green Deal and the sustainability principles embedded in Horizon Europe.
Research projects that contribute to environmental protection, climate resilience, biodiversity preservation, and sustainable innovation, will be encouraged where scientifically relevant.
Environmental responsibility will be integrated at multiple levels:

5.7 Sustainable Research Practices

-Promotion of resource-efficient laboratory practices (energy-efficient equipment, reduced water use, responsible procurement).
-Encouragement of environmentally friendly consumables and reduction of single-use plastics where scientifically feasible.
-Implementation of proper waste segregation and disposal procedures, including chemical and biological waste management in accordance with national regulations.
-Promotion of digital documentation to reduce paper consumption.

5.8 Green Mobility and Events

-Prioritisation of virtual meetings and hybrid training formats to reduce travel-related emissions.
-Encouragement of low-carbon travel options (e.g., rail over air travel where feasible).
-Organisation of environmentally responsible conferences and training events.

5.9 Sustainable Infrastructure

-Continuous efforts to improve energy efficiency in research infrastructures.
-Environmental Awareness and Training
-Inclusion of sustainability awareness within doctoral training activities.

6. Contact

Please make sure to read / check the Recruitment sections of the MuSkLE website and the frequently asked questions (FAQs).

If you do not find the answer to your question, please contact us directly at recruitment[at]MuSkLE.eu.

7. Annexes

7.1 Glossary

Associated Partners: entities which participate in the action (e.g. providing training or secondments), but without the right to charge costs or claim contributions. Associated Partners may not employ the researchers.

Beneficiary: sole signatory to the Grant Agreement, which receives the EU funding, claims costs, and takes complete responsibility for the proper implementation of the proposed programme. The Beneficiary must be a legal entity established in an EU Member State or HE Associated Country that funds or manages Doctoral or Postdoctoral Programmes for researchers.

Coordinator (COO): Rémi Mounier (Research Director at the CNRS) acts as the Coordinator of the PhD-MuSkLE programme.

Co-Coordinator (cCOO): Jonathan Enriquez acts as Co-coordinator (**cCOO**) supporting the Coordinator throughout the implementation of the MuSkLE PhD programme.

Doctoral fellows (DFs): researchers not already in possession of a doctoral degree at the deadline of the co-funded programme's call.

Ethics Advisory Board (EtAB). The **EtAB** is tasked with reviewing and monitoring the ethical aspects of the project. It will oversee the ethical dimensions of the doctoral training and ensure that all research conducted during the PhDs complies with the highest ethical standards. The board is composed of members from the existing Ethics Committees of each partner institution and will be chaired by Sophie Rome, who also leads WP5 on Ethics.

External Advisory Board (EAB). The **EAB** will play an advisory role regarding the strategic orientation of the project and support the decision-making of the **SB**. It includes external scientists from both academic and non-academic sectors, such as internationally recognised experts in the field of the musculoskeletal system.

Implementing Partners: third parties implementing the MSCA COFUND Doctoral Programme by recruiting researchers. Implementing Partners can receive financial support from the Beneficiary.

Project Manager (PM). The **PM** is responsible for the day-to-day operational management of the programme, reporting to the **COO**.

Redress Committee (RC). This committee is composed by the potential supervisors who are not recruiting in the current call and the **SB**.

Selection Committee (SC) is composed of the directors of the doctoral schools involved in the MuSkLE-PhD programme, as well as supervisors participating in the programme. It will also be supported by an External Scientific Committee (**ESC**) from both academic and non-academic sectors, who will be appointed by the SC to contribute to the evaluation and selection of the **DFs**.

Steering Committee (StC). The **StC** oversees the implementation of the project and make major decisions based on the **SB's** recommendations. It is composed of the **COO**, the **cCOO**, the **WP leaders**, and one representative from the Human Resources department of the beneficiary or implementing partners.

Supervisory Board (SB). The **SB** includes the **COO**, the **cCOO**, the PM**,** one representative from each implementing partner, three representatives of the DFs' supervisors, two representatives of the DFs (elected among the DFs), and representatives from the associated industrial partners, with particular attention to achieving gender balance.

WP leaders. A researcher member of the SFRI MuSkLE network has been appointed to lead each Work Package (WP) of the MuSkLE-PhD programme, ensuring close monitoring of all MSCA COFUND actions:

- **Dissemination of the call** is led by Michalis Averof,
- **Application evaluation and selection** is led by Yad Ghavi-Helm
- **Ethics** is led by Sophie Rome
- **Dissemination, Communication and Exploitation (DCE)** is led by Eglantine Heude
- **Training Activities** is led by Jérôme Lafont and Sylvie Ducreux

7.2 Ethics self-assessment tables applying to fellows' own PhD projects

1 HUMAN EMBRYONIC STEM CELLS AND HUMAN EMBRYOS		YES/NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does your activity involve Human Embryonic Stem Cells (hESCs)?					
If **YES:**	Will they be directly derived from embryos within this project?			*Activity not eligible for funding*	*Activity not eligible for funding*
	Are they previously established cells lines? Are the cell lines registered in the European registry for human embryonic stem cell lines?			1) Origin and line of cells. 2) Details on licensing and control measures by the competent authorities of the Member States involved 3) Declaration confirming that the 6 specific conditions *(see below)* for activities involving human embryonic stem cells are met.	1) Copies of ethics approval. 2) Declaration that the human embryonic stem cell lines used in the project are registered in the European hESC registry (www.hpscreg.eu).
Does your activity involve the use of human embryos?				1) Origin of embryos. 2) Details of the recruitment, inclusion and exclusion criteria and informed consent procedures. 3) Confirmation that informed consent has been obtained.	1) Copies of ethics approval. 2) Informed consent forms and information sheets.
If **YES:**	Will the activity lead to their destruction?			*Activity not eligible for funding*	*Activity not eligible for funding*
Does your activity involve the use of other human embryonic or foetal tissues / cells?				*See section 3 below*	

2 HUMANS		YES/ NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does your activity involve human participants?				Please provide information in one of the subcategories below	
If **YES:**	Are they volunteers?			1) Details on recruitment, inclusion and exclusion criteria and informed consent procedures. 2) Details on unexpected findings policy.	1) Copies of ethics approvals (if required by law or practice). 2) Informed consent forms and information sheets.
	Are they healthy volunteers for medical studies?			1) Details of the recruitment, inclusion and exclusion criteria and informed consent procedures. 2) Details on incidental findings policy.	1) Copies of ethics approvals 2) Informed consent forms and information sheets.
	Are they patients for medical studies?			1) Details on the disease/condition /disability 2) Details on the recruitment, inclusion and exclusion criteria and informed consent procedures. 3) Details on incidental findings policy	1) Copies of ethics approvals. 2) Informed consent forms and information sheets.
	Are they potentially vulnerable individuals or groups?			1) Details on the type of vulnerability. 2) Details of the recruitment, inclusion and exclusion criteria and informed consent procedures. 3) Procedures to ensure participants are not subject to any form of coercion and undue inducement.	1) Copies of ethics approvals (if required by law or practice). 2) Informed consent forms and information sheets.
	Are they children/minors?			1) Details on the age range. 2) Details on assent procedures and parental consent for children and other minors. 3) Procedures to ensure the welfare of the child or other minors 4) Justification for involving children/minors.	1) Copies of ethics approvals (if required by law or practice). 2) Informed consent forms and information sheets.
	Are there other persons unable to give informed consent?			1) Details on the procedures for obtaining consent from the guardian/legal representative. 2) Procedures to ensure participants are not subject to any form of coercion and undue inducement.	1) Copies of ethics approvals. 2) Informed consent forms and information sheets.

Does your activity involve interventions (physical also including imaging technology, behavioural treatments, tracking and tracing, etc.) on the study participants?					
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.)*?			1) Risk assessment for each technique and overall.	1) Copies of ethics approvals.
	Does it involve collection of biological samples?			1) Details on the type of samples to be collected. 2) Procedure for the collection of biological samples.	1) Copies of ethics approvals.
Does your activity involve conducting a clinical study as defined by the Clinical Trial Regulation 536/2014 (using pharmaceuticals, biologicals, radiopharmaceuticals, or advanced therapy medicinal products)?					
If **YES:**	Is it a clinical trial?			1) Details on the medical products that are being used and risk assessment. 2) Details on the disease/condition /disability of the participants 3) Details of the recruitment, inclusion and exclusion criteria and informed consent procedures. 4) Details on the incidental findings policy	1) Registration in the EU database (when applicable). 2) Copy of authorisation/ethics approval to conduct clinical trial. 3) Copy of the insurance and liability details.
	Is it a low-intervention clinical trial?			1) Details on the medical products that are being used and risk assessment. 2) Details on the disease/condition /disability of the participants 3) Details of the recruitment, inclusion and exclusion criteria and informed consent procedures. 4) Details on the incidental findings policy	1) Registration in the EU database (when applicable). 2) Copy of authorisation/ethics approval to conduct clinical trial. 1) 3) Copy of the insurance and liability details.

3 HUMAN CELLS / TISSUES		YES/ NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does your activity involve the use of human cells or tissues (other than those covered by *section 1*)**?**				Please provide information in one of the subcategories below.	
If **YES:**	Are they human embryonic or foetal cells or tissues?			1) Origin of human foetal tissues/cells. 2) Details on informed consent procedures. 3) Confirmation that the informed consent has been obtained. 4) If applicable, details on the induced human pluripotent cell lines.	1) Copies of ethics approvals. 2) Informed consent forms and information Sheets. 3) If applicable, registration certificates of the cell lines and project from the hPSCreg.
	Are they available commercially?			1) Details on cell types and provider (company or other).	1) Copies of import licences (if relevant).
	Are they obtained within this project?			1) Details on cell types including the source of the material, the amount to be collected and the procedure for collection. 2) Details on the duration of storage and what will be done with the material at the end of the activity. 3) Confirmation that informed consent has been obtained.	1) Copies of ethics approvals (if relevant). 2) Informed consent forms and information Sheets.
	Are they obtained from another project, laboratory or institution?			1) Details on cell types. 2) Country where the material is stored. 3) Details of the legislation under which material is stored. 4) Details on the duration of storage and what will you do with it at the end of the project? 5) Name of the laboratory/institution. 6) Country where the laboratory/institution is located. 7) Confirm that material is fully anonymised or that consent for secondary use has been obtained.	1) Authorisation by primary owner of cells/tissues (including references to ethics approvals) 2) Copies of import licences (if relevant). 3) Statement from the primary laboratory/institution that informed consent has been obtained.
	Are they obtained from a biobank?			1) Details on cell types 2) Details on the biobank (name and country where it is located) 3) Details of the legislation under which material is stored. 4) Confirmation that material is fully anonymised or that consent for secondary use has been obtained.	1) Copies of import licences (if relevant). 2) Statement of biobank that informed consent has been obtained.

4 PROTECTION OF PERSONAL DATA			YES/NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does your activity involve processing of personal data?					1) Details of the technical and organisational measures to safeguard the rights and freedoms of the participants/data subjects. These may include: - Project specific data protection policy and/or the contact details of the data protection officer (these must be provided to the participants) The security measures to prevent unauthorised access to personal data - Anonymisation /pseudonymisation techniques. 2) Details of the informed consent procedures with regard to the data processing (if relevant). 3) Explanation as to how all of the processed data is relevant and limited to the purposes of the project ('data minimisation' principle) 4) Justification of why personal data will not be anonymised/ pseudonymised (if relevant). 5) Details of the data transfers (type of data transferred and country to which data are transferred).	1) Informed consent forms and information Sheets (if relevant). 2) Data management plan (if relevant). 3) Data protection impact assessment (if relevant)
If **YES:**	Does it involve the processing of special categories of personal data *(e.g. sexual lifestyle, ethnicity, genetic, biometric and health data, political opinion, religious or philosophical beliefs)*?				1) Justification for the processing of special categories of personal data (if relevant). 2) Justification to why the project objectives cannot be reached by processing anonymised/ pseudonymised data (if applicable).	
	If **YES:**	Does it involve processing of genetic, biometric or health data ?				1) Declaration confirming compliance with the laws of the country where the data were collected
	Does it involve profiling, systematic monitoring of individuals, or processing of large scale of special categories of data or intrusive methods of data processing *(such as, surveillance, geolocation tracking etc.)*?				1) Details of the methods used for tracking, surveillance or observation of participants. 2) Details of the methods used for profiling. 3) Assessment of the ethics risks related to the data processing operations. 4) Explanation as to how the rights and freedoms of the participants/data subjects will be safeguarded and harm will be prevented. 5) Explanation as to how the data subjects will be informed of the existence of the profiling, its possible consequences and how their fundamental rights will be safeguarded.	1) Opinion of the data controller on the need for conducting data protection impact assessment under art 35 GDPR. (if relevant).

Does your activity involve further processing of previously collected personal data *(including use of pre-existing data sets or sources, merging existing data sets)***?**			1) Details of the database used or of the source of the data. 2) Details of the data processing operations. 3) Explanation as to how the rights of the participants/data subjects will be safeguarded. 4) Explanation as to how all of the processed data is relevant and limited to the purposes of the project ('data minimisation' principle) 5) Justification of why the data will not be anonymised/ pseudonymised (if relevant).	1) Confirmation that the data controller has a lawful basis for the data processing and that the appropriate technical and organisational measures are in place to safeguard the rights of the data subjects 2) Permission by the owner/manager of the data sets *(e.g. social media databases)* (if applicable). 3) Informed Consent Forms + Information Sheets + other consent documents (if applicable).
Is it planned to export personal data (data transfer) from the EU to non-EU countries? *Specify the type of personal data and countries involved*			1) Details of the types of personal data and countries involved. 2) Explanation as to how the rights and freedoms of the participants/data subjects will be safeguarded	1) Confirmation that data transfers will be made in accordance with Chapter V of the General Data Protection Regulation 2016/679
Is it planned to import personal data (data transfer) from non-EU countries into the EU or from a non-EU country to another non-EU country? *Specify the type of personal data and countries involved*			1) Details of the types of personal data and countries involved.	1) Confirmation of compliance with the laws of the country in which the data was collected.
Does your activity involve the processing of personal data related to criminal convictions or offences?			1) Details on the personal data to be processed and the legal basis for the processing; 2) Risk assessment for the data processing operations. 3) Explanation as to how harm will be prevented and the rights of the participants/data subjects will be safeguarded.	1) Opinion of the data controller on the need for conducting data protection impact assessment under art 35 GDPR (if relevant).

5 ANIMALS		YES/NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does your activity involve animals?				1) Details on the numbers of animals to be used, nature of the experiments, procedures and techniques to be used. 2) Details on species and rationale for their use. 3) Details on procedures to ensure animal welfare. 4) Details on implementation of the 3Rs Principle.	1) Copies of all appropriate authorisations for the supply of animals and the project experiments. 2) Copies of training certificates/ personal licences of the staff involved in animal experiments.
If **YES:**	Are they vertebrates?			Same information as above.	Same documents as above.
	Are they non-human primates (NHP) *(e.g. monkeys, chimpanzees, gorillas, etc.)*?			Same information as above plus: 1) Justification on why NHPs are the only subjects suitable for achieving your scientific objectives. 2) Details on the purpose of the animal testing. 3) Details on the origin of the animals.	Same documents as above plus: 1) Personal history file of NHP *(See art 31 of Directive 2010/63)*.
	Are they genetically modified?			1) Number of animals to be used, nature of the experiments, procedures, anticipated impact and how this will be minimised. 2) Details on species and rationale for their use. 3) Details on procedures to ensure animal welfare. 4) Details on implementation of the 3Rs Principle.	1) Copies of all appropriate authorisations for the supply of animals and the project experiments. 2) Copies of training certificates/ personal licences of the staff involved in animal experiments.
	Are they cloned farm animals?			*Same information as above.*	1) Copies of all appropriate authorisations for the supply of animals and the project experiments. 2) Copies of training certificates/ personal licences of the staff involved in animal experiments. 3) Copies of authorisations for cloning (if required).
	Are they an endangered species?			1) Justification on why there is no alternative to using this species. 2) Details on the purpose of the activity.	1) Copies of authorisations for supply of endangered animal species (including CITES) and the project experiments. 2) Copies of training certificates/ personal licences of the staff involved in animal experiments.

6 THIRD COUNTRIES	YES/ NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Will some of the activities be carried out in non-EU countries? *Specify the countries*			1) Countries involved. 2) Risk-benefit analysis. 3) Details on activities are carried out in non-EU countries.	
In case non-EU countries are involved, do the activities undertaken in these countries raise potential ethics issues? *Specify the countries*			1) Details on the materials and the countries involved.	1) Copies of ethics approvals and other authorisations or notifications (if required). 2) Confirmation that the activity could have been legally carried out in an EU country (for instance, an opinion from an appropriate ethics structure in an EU country).
Is it planned 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.)?*			1) Details on the type of local resources to be used and modalities for their use.	1) For human resources: copies of ethics approvals. 2) For animals, plants, micro-organisms and associated traditional knowledge: documentation showing compliance with the *UN Convention on Biological Diversity* (e.g. access permit and benefit sharing agreement).
Is it planned to import any material (other than data) from non-EU countries into the EU or from a non-EU country to another non-EU country? *For data imports, see section 4.* *For imports of human cells or tissues, see section 3.* *Specify the material and countries involved*			1) Countries involved. 2) Details on the type of materials to be imported.	1) Copies of import licences/ Material Transfer Agreement (MTA).
Is it planned to export any material (other than data) from the EU to non-EU countries? *For data exports, see section 4.* *Specify the material and countries involved*			1) Countries involved. 2) Details of the type of materials to be exported.	1) Copies of import licences/ Material Transfer Agreement (MTA).
Does your activity involve low and/or lower-middle income countries? *If yes, detail the benefit-sharing actions planned*			1) Details on the benefit sharing measures. 2) Details on the responsiveness to local needs. 3) Details on the procedures to facilitate effective capacity building.	
Could the situation in the country put the individuals taking part in the activity at risk?			1) Details of the safety measures you intend to take, including training for staff and insurance cover.	1) Insurance coverage (if relevant)

7 ENVIRONMENT, HEALTH AND SAFETY	YES/ NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does this activity involve the use of substances or processes (or technologies) that may cause harm to the environment, to animals or plants (during the implementation of the activity or further to the use of the results, as a possible impact)? *For activities involving animal experiments, see section 5.*			1) Risk-benefit analysis. 2) Show how you apply the precautionary principle (if relevant). 3) Details on safety measures to be implemented.	1) Safety classification of laboratory. 2) Copy of GMO and other authorisations (if required).
Does this activity deal with endangered fauna and/or flora / protected areas?			1) Details on endangered fauna and/or flora / protected areas.	1) Specific authorisations (if required).
Does this activity involve the use of substances or processes (or technologies) that may cause harm to humans, including those performing the activity (during the implementation of the activity or further to the use of the results, or the deployment of the technology as a possible impact)? *For activities involving human participants, see section 2.*			1) Details of the health and safety procedures.	1) Safety classification of laboratory. 2) Host Institution safety procedures.

7 ENVIRONMENT, HEALTH AND SAFETY	YES/ NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Does this activity involve the development, deployment and/or use of Artificial Intelligence-based systems?			1) Explanation as to how the participants and/or end-users will be informed about: - their interaction with an AI system/technology (if relevant); - the abilities, limitations, risks and benefits of the proposed AI system/technique; - the manner in which decisions are taken and the logic behind them (if relevant). 2) Details on the measures taken to avoid bias in input data and algorithm design; 3) Explanation as to how the respect to fundamental human rights and freedoms (e.g. human autonomy, privacy and data protection) will be ensured; 4) Detailed explanation on the potential ethics risks and the risk mitigation measures.	1) Detailed risk Assessment accompanied by a risk mitigation plan (if relevant). These must cover the development, deployment and post-deployment phases. 2) Copies of ethics approvals (if relevant).
Could the AI based system/technique potentially stigmatise or discriminate against people *(e.g. based on sex, race, ethnic or social origin, age, genetic features, disability, sexual orientation, language, religion or belief, membership to a political group, or membership to a national minority)*?			1) Detailed explanation of the measures set in place to avoid potential bias, discrimination and stigmatisation.	
Does the AI system/technique interact, replace or influence human decision-making processes *(e.g. issues affecting human life, health, well-being or human rights, or economic, social or political decisions)*?			1) Detailed explanation on how humans will maintain meaningful control over the most important aspects of the decision-making process; 2) Explanation on how the presence/role of the AI will be made clear and explicit to the affected individuals.	Information sheets/Template Informed consent forms (if relevant)
Does the AI system/technique have the potential to lead to negative social *(e.g. on democracy, media, labour market, freedoms, educational choices, mass surveillance)* and/or environmental impacts either through intended applications or plausible alternative uses?			1) Justification of the need for developing/using this particular technology 2) Assessment of the ethics risks and detailed description of the measures set in place to mitigate the potential negative impacts during the research, development, deployment and post-deployment phase.	For serious and/or complex cases: Algorithmic impact assessment / human right assessment. These must cover the development, deployment and post-deployment phases.
Does the AI to be developed/used in the project raise any other ethical issues not covered by the questions above *(e.g., subliminal, covert or deceptive AI, AI that is used to stimulate addictive behaviours, life-like humanoid robots, etc.)*?			1) Detailed explanation on how the potential ethics issues will be addressed and the measures set in place to mitigate ethics risks.	1) Detailed risk assessment accompanied by a risk mitigation plan. These must cover the development, deployment and post-deployment phases.

9 OTHER ETHICS ISSUES	YES/ NO		Information to be provided in the PhD project	Documents be provided/kept on file for the Ethics Advisory Board
Are there any other ethics issues that should be taken into consideration? *Please specify*			1) Any relevant information.	1) Any relevant document.