

## Application summary

### Application title

The application title should be descriptive and concise. It should contain keywords relevant to the project.

*If this application is successful, we will make this information publicly available. It should not contain any proprietary information.*

### Proposed duration of funding (months)

This should be the total length of time required for the project, including activities such as the writing of final reports.

### Proposed start date

This date must be at least eight months after the application is submitted.

### Administering organisation type

Select the relevant administering organisation type.

*We welcome applications from academic, not-for-profit or commercial organisations based anywhere in the world but subject to eligibility checks. Contact [grantenquiries@wellcome.ac.uk](mailto:grantenquiries@wellcome.ac.uk) if you are unsure whether your organisation is eligible.*

### Name of administering organisation

If your application is successful, this is the organisation that will be responsible for administering the award (including receiving the funds).

### Lead applicant's address at administering organisation

If your application is successful, we will use this address in your award letter.

Department/Division

Organisation

Street

City/Town

Postcode/Zipcode

Country

## Lead applicant

### Lead applicant details

<b>Full Name</b>	
<b>Department</b>	
<b>Division</b>	
<b>Organisation</b>	
<b>Address Line 1</b>	
<b>City/Town</b>	
<b>Postcode</b>	
<b>Country</b>	
<b>Telephone No.</b>	
<b>Email Address</b>	

*There must be one Lead Applicant who will have a significant role in the project, including responsibility for its management and delivery. This individual is responsible for submitting the application form. We will contact this individual if we have any questions or updates.*

<b>ORCID iD</b>	
<b>ORCID iD</b>	

<b>Career history (current/most recent first)</b>				
<b>From</b>	<b>To</b>	<b>Position</b>	<b>Organisation</b>	

<b>Education/training</b>				
<b>From</b>	<b>To</b>	<b>Qualification</b>	<b>Subject</b>	<b>Organisation</b>

<b>Previous applications</b>	
Have you ever applied to Innovations at Wellcome for funding before?	
<i>Select 'Yes' if you have applied for Wellcome Innovations (or previously Technology Transfer) funding before.</i>	

Have you ever applied for other Wellcome Trust funding before?	
<i>Select 'Yes' if you have previously applied for Wellcome Trust funding other than via Innovations/Technology Transfer.</i>	

<b>Source(s) of personal salary support</b>
State all your sources of salary funding (for example, through your organisation's block grant from a higher education funding body), and the percentage of your salary they contribute. Answer 'not applicable' if you are not currently employed.
<i>Your source of salary may affect your eligibility - please check the scheme webpage.</i>
<i>If your source of salary places any restrictions on intellectual property rights or publications arising from your research, contact us as this may also affect your eligibility.</i>

<b>Are you requesting your salary as part of this application?</b>	
--	--

Current basic salary (per annum)

Currency

Is your current salary provided by a Wellcome Trust grant?	
--	--

Provide the Wellcome Trust grant reference.

<b>Clinical status</b> Are you a healthcare professional?	
--	--

Indicate your healthcare profession

Are you clinically active?	
----------------------------	--

<b>What is your specialty?</b> If your specialty is not on the list, select 'Other' and specify.

Specify

<b>Career breaks</b> Have you taken any career breaks or periods of part-time work, for example parental, long-term sick leave, carer responsibilities?	
--	--

*We encourage applications from researchers who have taken career breaks. We want to ensure that any such breaks are taken into account when we consider your track record. State when and for what period you took a break, or were working part-time. We are not asking for the reasons for this break so please do not provide these here, including sharing any sensitive personal health information.*

Provide details

Do you wish to undertake this award part-time?	
--	--

*We provide flexible research career opportunities. If you're applying for funding, you can request flexible and part-time working. This could be to help you manage family commitments or if you have individual needs which make undertaking an award full time challenging.*

*We always try to accommodate requests, as long as your employing organisation agrees to the working arrangement. Your Grants Adviser will contact you to acknowledge receipt of your application after the scheme application deadline; you should discuss any flexible working plans with them as early as possible. If you have any questions before you apply, please contact our Grants Information Desk.*

### **Key achievements**

Provide references or examples of five key achievements related to this application, which may include any of the following:

- i) inventions protected by intellectual property rights that have been developed commercially and/or adopted;
- ii) patents that have been issued;
- iii) peer-reviewed publications;
- iv) development of any open-access resources (for example, biorepositories or publicly-accessible databases).

You may also provide a statement describing the significance of each achievement (up to 50 words per achievement).

*Achievements must be related to this application. They can include examples from the following areas: inventions protected by intellectual property rights, patents that have been issued, peer-reviewed publications or open-access resources. The examples you choose can be taken from any stage of your career. In each case, state what the achievement was, when it was achieved, why you think it is important, what impact it has had and how it relates to this proposal.*

*We encourage you to include articles published on open research publishing platforms, such as Wellcome Open Research, providing they have passed peer review.*

*For original research publications arising from Wellcome funded grants, provide the PubMed Central ID (PMCID) reference. The PubMed Central ID (PMCID) is the unique identifier assigned to every full text paper in PubMed Central (PMC) and Europe PMC.*

*Our open access policy requires all original peer-reviewed research papers, supported in whole or in part by our funding, to be made available through PubMed Central (PMC) and Europe PMC as soon as possible and in any event within six months of the journal publisher's official date of final publication.*

*We actively monitor compliance with our open access policy and we ask successful applicants to provide a full list of all their Wellcome-funded research papers, and confirm compliance by providing the PMCID identifier for these, before the award letter can be issued. You can find further guidance in our open access policy statement and authors' information.*

### **Current and recent funding plus related activities (including Wellcome funding)**

List all funding you have held over the last three years, including grants, partnerships or collaborations. List the most recent first.

For grants, state the name of the funder, name(s) of grantholder(s), title of the project or enterprise, total amount awarded (and how much of this you received), your role in the project, and the start and end dates. State the percentage of your time spent on the research; if the grant is active state the number of hours per week that you spend on the research.

Identify with an asterisk(\*) the sources of support that have contributed to the background of this proposal.

*Include Wellcome grants and any recurrent or core funding you have held. Explain your role in obtaining the funding. For example, whether you held them in your own right as lead applicant, coapplicant, or as part of a consortium.*

*For applicants from companies, outline the funding that has been allocated to the development of your healthcare innovation to date, specifying if it was provided by the company and/or external sources.*

Describe how the currently active grants listed above relate to this application. If you hold grants related to the topic of this application, explain how these differ and confirm there is no overlap in

funding.  
(200 words max.)

*This helps us understand how your application is distinct and does not overlap with research activities already supported by other awards.*

## Applicants

1

Applicant	
Full Name	
Department	
Division	
Organisation	
Address Line 1	
City/Town	
Postcode	
Country	
Telephone No.	
Email Address	

Career history (current/most recent first)				
From	To	Position	Organisation	
Education/training				
From	To	Qualification	Subject	Organisation

Previous applications	
Have you ever applied to Innovations at Wellcome for funding before?	
<i>Select 'Yes' if you have applied for Wellcome Innovations (or previously Technology Transfer) funding before.</i>	

Have you ever applied for other Wellcome Trust funding before?	
<i>Select 'Yes' if you have previously applied for Wellcome Trust funding other than via Innovations/Technology Transfer.</i>	

Source(s) of personal salary support
State all your sources of salary funding (for example, through your organisation's block grant from a higher education funding body), and the percentage of your salary they contribute. Answer 'not applicable' if you are not currently employed.
<i>Your source of salary may affect your eligibility - please check the scheme webpage.</i>

If your source of salary places any restrictions on intellectual property rights or publications arising from your research, contact us as this may also affect your eligibility.

Are you requesting your salary as part of this application?

Current basic salary (per annum)

Currency

Is your current salary provided by a Wellcome Trust grant?

Provide the Wellcome Trust grant reference.

### Key achievements

Provide references or examples of five key achievements related to this application, which may include any of the following:

- i) inventions protected by intellectual property rights that have been developed commercially and/or adopted;
- ii) patents that have been issued;
- iii) peer-reviewed publications;
- iv) development of any open-access resources (for example, biorepositories or publicly-accessible databases).

You may also provide a statement describing the significance of each achievement (up to 50 words per achievement).

*Achievements must be related to this application. They can include examples from the following areas: inventions protected by intellectual property rights, patents that have been issued, peer-reviewed publications or open-access resources. The examples you choose can be taken from any stage of your career. In each case, state what the achievement was, when it was achieved, why you think it is important, what impact it has had and how it relates to this proposal.*

*We encourage you to include articles published on open research publishing platforms, such as Wellcome Open Research, providing they have passed peer review.*

*For original research publications arising from Wellcome funded grants, provide the PubMed Central ID (PMCID) reference. The PubMed Central ID (PMCID) is the unique identifier assigned to every full text paper in PubMed Central (PMC) and Europe PMC.*

*Our open access policy requires all original peer-reviewed research papers, supported in whole or in part by our funding, to be made available through PubMed Central (PMC) and Europe PMC as soon as possible and in any event within six months of the journal publisher's official date of final publication.*

*We actively monitor compliance with our open access policy and we ask successful applicants to provide a full list of all their Wellcome-funded research papers, and confirm compliance by providing the PMCID identifier for these, before the award letter can be issued. You can find further guidance in our open access policy statement and authors' information.*

### Current and recent funding plus related activities (including Wellcome funding)

List all funding you have held over the last three years, including grants, partnerships or collaborations. List the most recent first.

For grants, state the name of the funder, name(s) of grantholder(s), title of the project or enterprise, total amount awarded (and how much of this you received), your role in the project, and the start and end dates. State the percentage of your time spent on the research; if the grant is active state the number of hours per week that you spend on the research.

Identify with an asterisk(\*) the sources of support that have contributed to the background of this proposal.

*Include Wellcome grants and any recurrent or core funding you have held. Explain your role in obtaining the funding. For example, whether you held them in your own right as lead applicant, coapplicant, or as part of a consortium.*

*For applicants from companies, outline the funding that has been allocated to the development of your healthcare innovation to date, specifying if it was provided by the company and/or external sources.*

Describe how the currently active grants listed above relate to this application. If you hold grants related to the topic of this application, explain how these differ and confirm there is no overlap in funding.  
(200 words max.)

*This helps us understand how your application is distinct and does not overlap with research activities already supported by other awards.*

## Technology Transfer Officer

The questions in this section apply to applications from universities only.

**Title**

**Forename(s)**

**Surname**

**Employing organisation**

**Contact address**

**Email address**

Telephone number 1

Telephone number 2

## Collaborators

Are any collaborations essential for this proposal? This could be through sharing facilities, providing access to resources (essential reagents, samples, data) or sharing subject-specific knowledge and guidance.

*If the answer is 'Yes', you will be asked to provide information about these collaborators and to confirm their willingness to participate in the proposed research.*

List any key collaborators (name and organisation) and provide a very brief outline of their role in the proposed research.

*You can replace the collaborators named here with suitable alternatives if it is necessary or appropriate to do so.*

I confirm that the collaborators named above have agreed to be involved, as described, in the proposed research and are willing for their details to be included as part of this application.

## Company information

The questions in this section apply to applications from companies and not-for-profit organisations only.

Is the company publicly listed?

Company number

Date and place of incorporation

Share capital

Authorised

Issued

Registered holders (name, number and type)

Registered office

Directors

Secretary

Accounting reference date

Previous source of funding and amount

Cash in bank and other investments

Average monthly expenditure

Board of directors

Scientific advisory board

Number of employees

Summarise the company's R&D strategy with respect to the project. Describe how the project would integrate with the company's portfolio and competencies. Do not include any proprietary information. (200 words max.)

Confirm that the company has sufficient working capital and capacity to provide in-kind contributions (if specified) for the duration of the project.

## Related applications

**Is this or a similar application for funding currently under consideration elsewhere?**

*We'll consider your application even if you have a similar application being considered by another funder. If the other funder offers you funding, please tell us immediately. We will usually ask you to decide on that offer within one month.*

*If you decide to apply to another funder with a similar application after you have applied to us, please also let us know.*

Provide the name(s) of the funder(s) and the expected decision date(s).

**Is this a resubmission of an application submitted to Wellcome within the last 24 months?**

Contact us before resubmitting an application.

How is this application different?  
(200 words max.)

## Project summary

### Lay summary

Provide a summary of your proposed research for a non-specialist audience. You don't need to oversimplify your research, but try to explain it as clearly as possible. Write in the first person ("I" and "we") and structure your summary in this order: background to the research problem; your approach; advantages of your innovation; expected impact of your work.

*We may use this summary to describe your research on our website and elsewhere (we publish summary details of all our awards).*

#### **Example of a lay summary**

*Brain-based disorders, including psychiatric and neurological illnesses, represent 10.4% of global disease. At present, objective tools for detecting and monitoring brain disorders are not available. Deep learning is an area of artificial intelligence which allows detection of complex and distributed patterns in data that are difficult to capture using existing approaches. We will assemble a very large dataset of neuroimaging data from more than 12,000 disease-free people and more than 2,000 patients with psychosis. Using deep learning technology we will develop a model of the disease-free brain across different ages and genders and illustrate how this model can be used to detect neuroanatomical alterations and inform clinical assessment in individual patients. This will lead to the development of a flexible web-based tool for measuring neuroanatomical alterations in any brain-based disorders. This could help clinicians assess the presence of a disease, monitor its progression and optimise treatment in individual patients.*

### Vision statement

What will you achieve with the funding requested? What do you want to achieve in the longer term? (200 words max.)

*Provide a concise summary that describes what you aim to do with this funding. Explain how this fits into your wider vision for the technology you are developing.*

### Potential impact summary

Explain the potential impact to patients, addressing **all** of the following points:

- (a) What is the global burden of the disease/condition and what proportion of this patient population does your healthcare innovation have the potential to benefit?
  - (b) How will your healthcare innovation impact on the health of the target population?
  - (c) How are your team uniquely positioned to achieve this?
  - (d) Why will funding and support from Wellcome make a difference?
- (500 words max.)

- a) Describe the potential impact of the healthcare innovation being developed, including the global burden of disease, using metrics such as disability-adjusted life years (DALYs) where relevant. Specify what proportion of those affected by the disease or condition could benefit from your solution taking into consideration market accessibility and affordability;*
- b) When considering the impact on the health of the target population you should consider whether your solution will need to displace another technology or require a complementary technology in order to achieve impact, for example a companion diagnostic;*
- c) State how your team is uniquely positioned to achieve the impact stated (with regard to the complementary skills that they bring and resources that can be accessed);*
- d) Specify what the added value of Wellcome funding will be over and above funds that could be obtained elsewhere.*

*Include your references to support the disease burden statements in the 'Details of project' section of the form. Refer to them in this section where appropriate.*

## Project classification

### Classification codes

List the relevant specific disease classification codes and regional procedural codes.

*For disease-specific classification codes, refer to the World Health Organisation Classification of Diseases (ICD).*

*e.g. J10.0: Influenza with pneumonia, seasonal influenza virus identified*

*In the absence of an internationally recognised procedural code, provide a relevant regional code. An example is the OPCS Classification of Interventions and Procedures version 4 or "OPCS-4", which is the procedural classification used by clinical coders within the United Kingdom's National Health Service.*

*If you are unable to provide this information explain why.*

**Technology Readiness Level** Using the guidance notes, select from the drop down list the project's starting Technology Readiness Level (TRL) and the level intended to be reached by the end of your Innovator Award.

*An example TRL metric can be found here:*

[https://ncal.nih.gov/ncal/resources/docs/Technology\\_Readiness\\_Guidelines%20\(May2016\).xlsx](https://ncal.nih.gov/ncal/resources/docs/Technology_Readiness_Guidelines%20(May2016).xlsx)

If your technology does not fit into the NIH descriptions, use a relevant adaptation.

Where possible you should pick the most closely related TRL category, but if you think that your technology doesn't fit within a TRL then explain why.

### At the start of your project

If there is no TRL, explain why.  
(50 words max.)

### Intended level at the end of the Innovator Award

If there is no TRL, explain why.  
(50 words max.)

## Details of project

### Current status

Describe the scientific background to the project including, where appropriate, the validation of the therapeutic approach, target or technology solution (700 words maximum).

Describe:

- (a) the current stage of development of your IP/technology/approach
- (b) the evidence that provides validation of your proposal to date and the data that supports your technology, such as prototype design, biological data or chemical structures
- (c) the key assays, data sets and/or any other tools available to enable development of your proposal
- (d) the key risk-reducing steps to be addressed and overcome.

Read the guidance notes for this question for more details on what must be included.

*The word count must not exceed 700 words in total, excluding graphs, figures, references. You may provide your answer to this question in text entry format or as a PDF attachment. If you are uploading your answer, the uploaded document must be in 11 point Arial font and portrait format. If you upload a PDF it will not count as part of your five pages of optional additional information.*

*We will not be able to progress applications that do not address all parts of the question in full.*

*Describe the work that has already been conducted and the current stage of development of your technology. Describe any proof-of-concept studies that have been conducted to support the validity of the proposed programme.*

*Describe the data sets, available assays (and stage of development) or tools currently available to take the programme forward. This section should also describe the technical challenges to be addressed and overcome. Any claims related to the validation of the scientific approach should be supported by data which you can include in the additional information and/or references to publications.*

*For drug discovery proposals, the chemical matter, and its characterisation, is crucial to our review of your proposal. You must provide chemical structures, if available.*

(700 words max.)

### **Project plan**

Define the primary objective of the proposal and briefly summarise the proposed project work plan (1000 words maximum).

Include:

- (a) the specific aims and objectives
- (b) a summary of expected deliverables of the project
- (c) a description of who will be involved in the project execution (including collaborators)
- (d) milestone criteria to be achieved by the end of the project
- (e) details of other resources to be leveraged against this application.

*The word count must not exceed 1,000 words in total, excluding graphs, figures, references. You may provide your answer to this question in text entry format or as a PDF attachment. If you are uploading your project plan, the uploaded document must be in 11 point Arial font and portrait format. If you upload a PDF it will not count as part of your five pages of optional additional information.*

*Provide all relevant information within the application form; do not refer to additional unpublished information on personal websites.*

*You should clearly state the specific aims and objectives of the proposed project. You should also provide a summary of expected deliverables in this section. Describe who will be involved in the project execution and who will be doing key tasks. Include clear milestone criteria to be achieved by the end of the project. Outline any other resources that will be leveraged against this application, this can include both cash and in-kind contributions. Where possible, provide a monetary value of the contribution.*

#### **Approach and methods to be used**

*For projects involving artificial intelligence (AI), provide details of the AI approach used and the degree of transparency it affords. You should also describe the potential biases associated with data sets and the plan for mitigating these.*

*Details of experimental design for animal studies should be provided as part of the justification for animals in the 'Proposals involving animals' section of the form.*

*For epidemiological, demographic, case control, cohort and related studies, give a full and detailed analysis of the study design, including details of any validation already undertaken or rationale for using standard protocols. Particular attention should be given to power calculations, sample size justification and, where appropriate, case definition and inclusion/exclusion criteria.*

(1000 words max.)

### **Competitive advantage**

Describe the competitive advantage of this technology over other research in the field.

(500 words max.)

Include:

- an assessment of the advantages and disadvantages of competing technologies, both on the market and in development; and
- details of any previous attempts (either by yourself or others) against the same target or approach.

*State the projected time to patient impact and how you will define this.*

### **Downstream strategy**

What are the development or implementation steps following this award?

Consider the following:

- (a) who the downstream partner could be
  - (b) what are the regulatory risks?
  - (c) what is the likely clinical pathway?
  - (d) what is your Target Product Profile (TPP)?
- (600 words max.)

Outline the downstream strategy taking the following into account, where appropriate:

- Who the downstream partner could be (which may include the technology being further developed by the applicant).
- What are the subsequent development steps that would need to take place before the technology could be taken to the market?
- What would the implementation strategy be, including delivery and market penetration?
- Are there any clinical, manufacturing, regulatory or marketing issues known that may affect the ability to deliver the product to market?
- If you have outlined any regulatory considerations or risks above, please show evidence that regulatory requirements are being accounted for in the product development.
- For projects that do not include a clinical trial you should still outline the likely clinical pathway.
- Please include the target product profile or key desired attributes of your healthcare innovation.

### **Multidisciplinary collaborations**

If you are requesting support for a multidisciplinary collaboration, describe how your project brings together scientists from distinct scientific disciplines. Specify the individual contributions (including the key skills from each party). State the unique outcomes from the collaboration that you would not be able to achieve otherwise.

(300 words max.)

Does your proposal involve human participants?

Does your proposal involve a clinical trial?

*The World Health Organization defines a clinical trial as: “any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes. Interventions include, but are not restricted to, drugs, cells and other biological products, surgical procedures, devices, behavioural treatments, process-of-care changes, preventive care, etc.”*

*For further information, refer to the Wellcome Trust’s clinical trials policy statement.*

*If your proposal involves a clinical trial, you should provide details of it within this application form. If your proposal involves more than one clinical trial, please contact the Wellcome Trust for guidance.*

### **Details of studies involving human participants including clinical trials**

Describe the study design. This should include, as applicable:

- number of participants in each group;
- type, frequency and duration of interventions and/or health outcome measures;
- frequency and duration of planned follow up;
- any other activity with potential significant risks to participants;
- details of any investigational product, focusing on manufacture, quality and consistency.

(300 words max.)

*Types of health outcomes or interventions can include but are not restricted to:*

- screening procedures

- *collection of biological samples*
- *biometric and clinical data*
- *experimental challenges*
- *behavioural treatments*
- *process-of-care-changes*

What are the primary and secondary outcome measures, and how will you assess these?  
(200 words max.)

Outline the strategy for recruitment and describe the inclusion/exclusion criteria for study participants (if applicable). What are the proposed arrangements for allocating participants to study groups?  
(200 words max.)

Detail and justify the power calculation, sample size and proposed statistical analysis, including any interim analyses and/or subgroup analyses. What are the proposed methods for protecting against sources of bias?  
(200 words max.)

Describe the supporting personnel and infrastructure that will be used to deliver the proposed research (for example key support staff, roles of team members, participating centre(s) or facilities). Detail any activity a third party is undertaking, and explain what agreements or formal contracts will be in place.  
(200 words max.)

How have you involved patients, participants, patient advocacy groups or communities in developing this proposal?  
(200 words max.)

### **Additional information**

You may submit up to five A4 pages of additional information (such as graphs, figures, tables and essential unpublished data).

*You may provide up to five A4 pages of additional information, such as figures, graphs or additional unpublished data. Embed it within the text of your upload for your proposal or upload it separately under 'Additional information'. If you choose to embed this information, any text present (such as legends, labels, or captions) can be excluded from the word count. If the embedded information exceeds the equivalent of five pages of A4 we will return your application to you to reduce the amount of information.*

### **Gantt chart**

Attach a Gantt chart or similar graphical overview of the tasks to be undertaken and their sequence and duration for the entire project. Mark which tasks our funding will be contributing to.

*Include those tasks (marked separately) that will be undertaken in parallel but without our funding (if applicable) and key development steps after our funding. What other external funds (if any) are contributing to related project tasks in the Gantt chart.*

## References

Give the citation in full, including title of paper and all authors.

*You may provide up to the equivalent of two A4 pages of references. Ensure that your references are pertinent to your research proposal and are cited in full, including all authors, the full title of each publication, journal title, year, volume and pages. For citations to preprints, state Preprint, the repository name and the article persistent identifier (e.g. DOI).*

*You can shorten references with more than 10 authors to et al, but you must ensure that your position as author (if applicable) remains clear.*

Are there any papers listed in your 'References' section as being "in press" that you wish to submit to us?

Upload papers "in press" as a single PDF.

## Intellectual property information

### Intellectual property information

Provide details of all intellectual property protection filed before the date of this application that relate directly to the project.

*State the funding sources that have contributed to the development of the protected technology (for example, company collaboration, research council and/or charity funding). For this section, intellectual property includes patents, designs, trademarks, and trade names (whether registered or unregistered), copyright and related rights, database rights, know-how and confidential information. If not relevant at this stage, enter N/A.*

### Is the proposed research, in whole or in part, subject to any legal agreements with commercial, academic or other organisations that could present a freedom to operate problem in the future?

With reference to the intellectual property information provided, as appropriate:

- summarise the inventive step and key claims of patents, patent applications or other protections relating to the technology that have already been filed
- consider whether there are any freedom to operate issues in the area of the proposed technology and consider how these will be addressed during the project
- explain how the proposed experiments will add value to or strengthen an existing intellectual property position.

Please note that the Outputs management and sharing section asks you to outline any likely new intellectual property that may arise from this project. Therefore please include any details of potential rising intellectual property in that section.

## Outputs management and sharing

Will the proposed research generate outputs of data, software, materials or intellectual property that hold significant value as a resource for the wider research community?

*Our Data, Software and Materials Management and Sharing Policy states that all Wellcome-funded researchers must*

manage their research outputs in a way that will achieve the greatest health benefit, maximising the availability of research data, software and materials with as few restrictions as possible. If your proposed research is likely to generate significant outputs - data, software, materials and/or intellectual property - that will hold clear value as a resource for others in academia or industry, you are required to provide an outputs management plan.

Select the approach you will use to maximise the impact of your significant research outputs to improve health and benefit the wider research community.

### Provide an outputs management plan

Our guidance on developing an outputs management plan sets out where such a plan is required and gives an overview of what you must consider.  
(700 words max.)

Your plan must be clear, concise, proportionate and focus specifically on how you will identify outputs, manage these and then use them to advance potential health benefits. Set out and address clearly the following:

- 1) For significant data, software and materials outputs
  - (i) What significant outputs will your research generate?
  - (ii) When do you intend to share these outputs?
  - (iii) Where will you make these outputs available?
  - (iv) How will they be discovered and accessed by others?
  - (v) Are limits on sharing required?
  - (vi) How will these outputs be preserved?
- 2) For intellectual property outputs
  - (i) What IP will your research generate?
  - (ii) How will you protect this IP?
  - (iii) How will the IP be used to achieve health benefits?
  - (iv) Provide the name and contact details for the person in your organisation (e.g. Technology Transfer Officer or Business Development executive) who can act as a point of contact for Wellcome in connection with the protection and commercialisation of this IP.
- 3) Describe any resources that you will need to deliver your outputs management plan.

Regardless of whether or not a plan is required, you must ensure that data and original software underlying published research findings are accessible at the point of publication.

## Public engagement

How could members of the public and non-academic communities, inform, use, or find value in your research?  
(250 words max.)

We want to foster a culture that values, recognises and better supports public engagement with research. Successful applicants are encouraged to apply for additional funds to support their engagement plans through our Research Enrichment scheme. Further information on the scheme and on Wellcome's approach to public engagement is available on our website.

Engagement that is essential for the ethical conduct of your research, such as patient information leaflets or community advisory boards, should be part of your research methodology. You should include costs for this within your main research costs.

Have you discussed your ideas and plan with your institutional Public Engagement Officer (if you have one?)

Answers to this question are for monitoring purposes only. You will not be penalised for answering 'no'. However, we strongly recommend you utilise any institutional public engagement support available in planning your approach.

## Location of activity

### Will the funded activity take place at more than one location?

List any locations outside of your administering organisation where you will be conducting research or redirecting funds. This includes, but is not limited to, anywhere in receipt of indirect funding, fieldwork sites, and time spent working in another organisation/laboratory. This does not include conference attendance.

### For each location, select the country and, where applicable, state the organisation. You must include the administering organisation.

Enter the approximate percentage of the total funds that will be spent in each location. Enter zero for locations where activity will take place but no significant funds will be spent. If you are requesting salary costs, attribute them to the employing organisation.

Country	Organisation	Percentage of funds

## Costs requested and justification

### Select the currency in which you want to apply

Submit costs in the currency you think will best enable you to undertake the activity. This will probably be your local currency; if not, explain why not.

*If you think that the currency may not be readily available, email [grantpayments@wellcome.ac.uk](mailto:grantpayments@wellcome.ac.uk). For more information see our website.*

*If we cannot award in the currency requested, we will talk to your administering organisation about using another.*

Is this your local currency?

What is your local currency?

Explain why you are requesting costs in the selected currency and what exchange rate you have used.

(100 words max.)

### Salaries

Are you requesting salaries?

For details of what staff costs you can request, check the Innovator Award scheme page and the guidance notes for this question.

*Detail the full employment costs for all staff to be funded on the grant.*

*Provide the names of individuals for posts involving the handling of, and research on, non-human primates. Whilst your application is being considered, you must notify us of any change to the individual(s) named in the application.*

**Definition of terms**

**Staff category:** For example: "Postgraduate research assistant", "Postdoctoral research assistant", "Technician", "Fieldworker". Specify level of seniority of the post where relevant, e.g. "Junior postdoctoral research assistant", "Senior postdoctoral research assistant".

**Salary grade/scale:** The national or local salary grade/scale on which the individual will be employed.

**Basic starting salary:** Annual salary to be paid to the individual upon their appointment to the post, exclusive of any allowances for which the individual is eligible. If the post is part time, the annual salary must be quoted on a pro rata basis.

**Total cost on grant:** Total cost of the post, inclusive of any locally-recognised allowances (for example, London allowance), employer's contributions and increments, over the period of the grant. Employer's contributions should include any statutory obligations (e.g. for the UK, National Insurance contributions) and contributions towards an organisational pension scheme.

**Salaries / Stipends**

Staff category	Name (if known)	Basic starting salary (p.a.)	Salary grade / scale	Period on project (months)	% time	Total

**Justification for personnel**

Specify the role and responsibilities for the staff requested. Justify the type and seniority, including the level of salary requested, of each post.

You must also provide this information for any requests for replacement lecturers' and applicants' salaries.

(300 words max.)

*If any staff requested will be working in different locations, indicate where they will be working. If you are requesting funds to be awarded directly to more than one location, you must indicate in the cost breakdown where the funds are to be allocated.*

Are you requesting salary recovery?

You can request salary recovery for applicants if:

- they are spending at least 10% of their working time on the project and
- they hold an established position and
- they are required to seek partial or full salary support from external grant funding.

If you answer yes, we will ask you to upload a letter from a senior member of **each organisation confirming these points.**

Upload a letter from a senior member of **each organisation** requesting salary recovery. If there is more than one letter, upload these as a single PDF.

Check the guidance notes for this question for details of what the letter must contain.

*The letter must confirm that:*

- the applicant will be spending at least 10% of their working time on the project;
- the amount of salary requested is proportionate to the amount of working time spent on the grant;
- the reason why they are required to seek partial or full salary support from external grant funding. Either that:
  - the employment contracts of the applicants stipulate that their salaries must come from external grant funding, and the host organisation will not guarantee these salaries if applicants are not successful in getting it from external sources;
  - or
  - it is the policy of the organisation that salary recovery costs must be included in all grant applications for staff who

hold a permanent, open-ended or long-term rolling contract.

### Materials and consumables

Are you requesting materials and consumables?

Provide a high-level breakdown of materials and consumables costs. These typically include:

- laboratory chemicals and materials (eg reagents, isotopes, peptides, enzymes, antibodies, gases, proteins, cell/tissue/bacterial culture, gloves, plasticware and glassware)
- associated charges for shipping, delivery and freight
- archival photocopying
- printing associated with fieldwork

In the justification for materials and consumables, provide an estimate of the cost per staff member per year.

### Materials and consumables

Description	Total

Justification for materials and consumables.  
(300 words max.)

### Animals

Are you requesting animals?

In order to ensure animal experimentation costs are accurate, you must complete this section after consultation with your animal house or biological services manager. We require your organisation to apply a consistent costing methodology when presenting cost details.

If appropriate, costings can be clarified under 'Justification for resources requested'.

We may ask for more detailed costing information where a large number of animals and/or substantial costs are involved.

### Animals

Animal species	Total no. to be purchased	Total purchase cost	Total maintenance and procedures cost	Total

Justification for animal costs.  
(300 words max.)

Do not include a justification of the animal numbers you require; you can explain this in the 'Proposals involving animals' section.

### Associated Costs

These costs cover specific and relevant training and environmental enrichment, including training for animal husbandry, welfare and associated training for animal technicians, and the cost of animal licences.

### Associated animals costs

Description	Total

<p><b>Equipment</b> Are you requesting equipment or equipment maintenance?</p>	
<p><i>The organisation's Director of Procurement/Head of Purchasing (or equivalent) must be aware of all potential capital purchases and we require organisations to use best procurement practice when purchasing equipment with Wellcome Trust funds.</i></p> <p><b>Equipment to be purchased</b> <i>We expect you to consider the cost-effectiveness of the proposed purchase of equipment. The estimated price of the equipment must cover all aspects including delivery, installation, maintenance and training, where appropriate. We expect discounts to be negotiated and included in quoted prices.</i></p> <p><i>If there is a preferred manufacturer for certain items of equipment, you can explain this in the 'Type of equipment' field.</i></p> <p><i>We expect a contribution from the host organisation, or other source, where the application includes a substantial equipment request.</i></p> <p><i>We expect that the equipment you request will be covered by the manufacturer's warranty for the first year after it is purchased. We will fund reasonable maintenance costs for four years after the initial period of warranty on all equipment (irrespective of the length of award made), where this is negotiated as part of the capital purchase cost. We will also consider costs for the maintenance of equipment over five years old if you can demonstrate that it is cost-effective.</i></p> <p><b>Value Added Tax (VAT)</b> <i>For grants to be held in the UK, the costs of all equipment to be used for medical and veterinary research must be quoted exclusive of VAT. For equipment that does not fall within this definition, VAT costs should be shown.</i></p>	

### Equipment

Type of equipment	No. of items	Cost per item	Cost of maintenance contract	Contribution from other sources	Total

### Equipment maintenance

We consider requests for maintenance of existing equipment if the grant that funded its purchase has ended. We only provide maintenance costs for equipment more than five years old if it is cost-effective to keep maintaining it.

### Maintenance for existing equipment

Details of equipment/facility	Wellcome Trust grant number	Date of purchase	End date of current contract	Total cost of contract	% time on project	Total

<p>Justification for equipment and equipment maintenance. (300 words max.)</p>
<p><i>If you are requesting a piece of equipment which costs more than £100,000, provide details of:</i></p> <ul style="list-style-type: none"> <li>• <i>similar equipment in the applicant's department and adjacent departments;</i></li> <li>• <i>why it cannot be used for this particular project; and</i></li> <li>• <i>any other individuals likely to use the equipment.</i></li> </ul>

Are you requesting a piece of equipment with a list price of £100,000 or more?	
<i>We require a copy of at least one formal quote for each piece of equipment with a list price of £100,000 or more. The discount that has been negotiated must be stated in the quote. We expect a contribution from the host organisation, or other source, if your application includes a substantial equipment request.</i>	

Upload a copy of at least one formal quote; if you have more upload these as a single PDF.

<b>Synchrotron radiation sources</b> Will you need access to a synchrotron source?	
<i>We collect data on access to synchrotron sources for information purposes.</i>	
<i>Apply directly to the synchrotron facility you want to use.</i>	

Which source(s) will you be applying to? (Select all that apply)

Specify:

Are you requesting costs from us relating to synchrotron radiation sources?	
<i>These facilities are normally free for researchers who are prepared to publish their results in the public domain. If this is not the case, you can request access costs in the 'Access charges' section. You can also request related costs for travel and subsistence in the 'Travel and subsistence' costs section.</i>	

<b>Access charges</b> Are you requesting access charges?	
<i>Refer to the Innovator Awards page for information on allowable access charges.</i>	

**Access charges**

Details of equipment/facility	Original source of funding	Wellcome Trust grant number, if applicable	Standard access charge per unit	Specify unit	No. of units to be used for this project	Total

Justification for access charges.  
(300 words max.)

<b>Travel and subsistence</b> Are you requesting travel and subsistence?	
<i>Include conference attendance, collaborative visits and other travel related to this grant separately. Where necessary, state the host organisation. Find out more about our carbon offset for travel policy here.</i>	
<b>Conference attendance</b>	

The lead applicant and any research staff to be employed on the grant can request costs to attend academic/scientific conferences, including conference registration fees and carbon offsetting the travel, up to the maximum annual amount specified on the scheme page. Specify the amount being requested per person and tell us how you calculated any carbon offset costs.

**Collaborative visits**

If you are requesting costs for collaborative visits, state the host organisation and provide a detailed breakdown of the travel and subsistence costs. You can include the cost of carbon offsetting the travel involved. Justify the need for each visit, its duration and your mode of transport separately, and tell us how you calculated any carbon offset costs.

**Other travel related to this grant**

You can request costs for other essential visits, for example for sample collection and trips to facilities. You can include the cost of carbon offsetting the travel involved. Justify the need for the visit, its duration and your mode of transport separately, and tell us how you calculated any carbon offset costs.

**Travel and subsistence**

Description	Total

Justification for travel and subsistence costs.  
(300 words max.)

<p><b>Contract research organisation costs</b> Are you requesting contract research organisation costs?</p>	
---	--

If you need to outsource elements of the work to contract research organisations, provide a breakdown of these costs.

Where possible, include quotes with the application.

The applicants, through their Technology Transfer Officer (or equivalent), will be responsible for the arrangements made with outsource suppliers. Such arrangements must be on a value for money, fee-for-service basis, and should not involve intellectual property sharing or joint-ownership unless such arrangements have been specifically agreed with us. Both background and arising intellectual property must be free of encumbrance for translation.

**CRO costs**

Description	Total

Upload any quote(s) for contract research organisation costs as a single PDF.

<p><b>Miscellaneous costs</b> Are you requesting miscellaneous costs?</p>	
---	--

Provide a detailed breakdown of the miscellaneous costs requested. Enter costs that do not fall under any other category in this section. These may fall under specific subheadings (such as 'Overseas allowances'); where they do not, select 'Other' and type a description of the item.

**Overheads**

Where overhead costs are allowed and are being requested, you will need to provide a letter from the Finance Director of each organisation requesting these costs. The letter should provide a breakdown of the costs requested and confirm that the request is a true representation of the costs incurred.

**Working abroad**

If costs are requested for the applicant(s) and/or research staff to be employed on the grant to carry out part of the proposed

research abroad, state the overseas host organisation, and detail the travel costs and other overseas allowances. Further guidance can be found on the scheme webpage.

### Miscellaneous other

Type	Description	Total

Justification for miscellaneous costs.  
(300 words max.)

Are you requesting overheads under the miscellaneous costs heading?

Upload a letter from the Finance Director of each organisation. If there is more than one letter, upload these as a single PDF.

Each letter must include:

- a full breakdown of costs requested (you can't ask for a percentage of the project costs)
- an explanation of why these costs are necessary for the project
- confirmation that the breakdown is a true representation of the costs incurred

Are you based at a UK university and requesting overheads on subcontracted costs?

Confirm that the university will not include these subcontracted costs in its annual return for the UK Charity Research Support Fund.

Summary of financial support requested	
	<b>Total</b>
<b>Total</b>	

### Full economic costing

Is your organisation based in the UK?

Is your organisation calculating the full economic cost of this proposal?

What is the total full economic cost of your research proposal (£)?  
Include inflation in your costs at the percentage rate currently used by your administering organisation.

## Research involving human participants, human biological material and identifiable data

Does your project involve human participants, human biological material, or identifiable/potentially identifiable data?	
---	--

*The following notes relating to 'Research involving human participants, human biological material and identifiable data' are intended to provide guidance and advice in completing the form, rather than a comprehensive review of the legal and regulatory environment in which the application is made.*

*The World Health Organization defines research with human subjects as "any social science, biomedical, behavioural, or epidemiological activity that entails systematic collection or analysis of data with the intent to generate new knowledge, in which human beings i) are exposed to manipulation, intervention, observation, or other interaction with investigators either directly or through alteration of their environment, or ii) become individually identifiable through investigator's collection, preparation, or use of biological material or medical or other records."*

*Our policy position on research involving human participants can be found on our website.*

*We require ethical approval (usually from the appropriate National Health Service (NHS) research ethics committees) for all research we fund involving human participants, biological samples or personal data. Personal data (as defined in the Data Protection Act 2018) is any information relating to an identified or identifiable living person i.e. a person who can be identified either directly from that information or indirectly by combining it with other available information. Any use of personal data or biological samples, relating to living or dead persons, should conform to MRC guidelines available at: [http://www.highlights.rsc.mrc.ac.uk/PIHR/index.html#/?\\_k=opxohv](http://www.highlights.rsc.mrc.ac.uk/PIHR/index.html#/?_k=opxohv) and <https://mrc.ukri.org/publications/browse/human-tissue-and-biological-samples-for-use-in-research/>.*

*You should seek approval from other regulatory bodies such as the Human Fertilisation and Embryology Authority (HFEA) or the Gene Therapy Advisory Committee in the UK where necessary, e.g. research involving human embryos may require a licence from the HFEA (please refer to [www.hfea.gov.uk](http://www.hfea.gov.uk) for more information). If your proposal involves research on gene therapy which requires regulatory approval, you should seek this from your Local Research Ethics Committee, the University's Genetic Manipulation Committee, the Gene Therapy Advisory Committee and the Medicines and Healthcare products Regulatory Authority (MHRA).*

*The organisation must ensure that ethical approval is in place at all relevant times during the project. For research carried out at multiple sites, ethics committee approval must cover each site.*

*Where the research, or part of the research, is to be performed outside the UK, independent ethics review must be obtained. For research involving people living in low and middle income countries, see the Wellcome Trust's website.*

Confirm that you have read our guidance on the feedback of health-related findings in research (available on our website) and that you are in the process of considering your approach to this.

Who has, or will, review the ethics of the project and when? Detail any other regulatory approvals you have obtained, or will seek. We reserve the right to see relevant approval documents at any point during the lifetime of the grant, in accordance with our policy position on research involving human participants.

Do you propose to use facilities, staff or patients within the National Health Service (NHS) in the UK?	
---	--

*By agreeing to fund work which requires NHS support, the Wellcome Trust is agreeing to abide by the Statement of Partnership on Non-commercial R&D in the NHS in England (and the corresponding statements in Northern Ireland, Scotland, and Wales). Researchers must therefore meet the obligations of the Partnership and may not carry out any research until the NHS has given its consent.*

*The Research Governance Framework for Health & Social Care, published by the Department of Health in England can be*

downloaded from the Department of Health website <http://www.dh.gov.uk/health/category/research>. The Wellcome Trust cannot act as sponsor.

Have you completed a Schedule of Events Cost Attribution Tool?  
This must be signed off by an AcoRD specialist. Download a template SoECAT here. See our webpage on Clinical research using NHS facilities for more information.

Explain why you have been unable to complete a Schedule of Cost Attribution Tool.  
You can submit your SoECAT whilst we are reviewing your application but Wellcome cannot make a funding decision without it. If you do not have a signed off SoECAT form your research will not receive HRA approval (or equivalent).  
(100 words max.)

Is a formal sponsor required for the project, for example under the Medicines for Human Use (Clinical Trials) Regulations or the Research Governance Framework for Health and Social Care and equivalent guidance?

Which organisation(s) have agreed to fulfil this role? The Wellcome Trust cannot act as sponsor.

Confirm you have in place or you will seek appropriate informed consent to use any potentially commercially exploitable results from tissues or samples derived from human participants.

*Please answer 'not applicable' if no potentially commercially exploitable results (based on human tissues or samples) will be produced during the course of the proposed research.*

Confirm that the trial will be registered on the International Standard Randomised Controlled Trial Number Register (ISRCTN), ClinicalTrials.gov, or on another register listed on the WHO International Clinical Trials Registry Platform (ICTRP).

Is the proposed clinical trial covered by The Medicines for Human Use (Clinical Trials) Regulations in the UK?

*Under the Medicines for Human Use (Clinical Trials) Regulations 2004, applicants must identify a sponsor (which will normally be either a university or NHS Trust) who fully understands the responsibilities and costs associated with assuming this role. The Wellcome Trust cannot act as sponsor.*

Describe the oversight arrangements for the clinical trial (e.g. membership of Trial Steering Committee, Data Monitoring Board etc.)

## Proposals involving animals

Select any of the following that apply to your proposed work:  
*(Proposal involves the use of animals, Proposal involves the use of animal tissue, Neither of the above)*

*The following notes relating to 'Proposals involving animals' are intended to provide guidance and advice in completing the form, rather than a comprehensive review of the legal and regulatory environment in which the application is made.*

*Applicants must refer to the Wellcome Trust's policy on the use of animals in medical and veterinary research on our website.*

*In all animal experiments we support, the principles of reduction, replacement and refinement will apply. In all experimental studies, applicants must actively consider:*

- *the complete replacement of live animals with tissues derived from either animals or humans;*
- *the possibilities of reducing the numbers of animals that need to be used;*
- *refining the experimental design in order to obtain the maximum amount of information from the minimum number of animals.*

*Refined methods in animal research are those which alleviate or minimise any adverse effects for the animals involved, and/or enhance animal welfare. Refinements may be applied at any stage in the life of an animal. Thus, refinement encompasses all aspects of a procedure, including:*

- *the source, transport, husbandry and environment of the animals involved;*
- *the experimental design (for example, the choice of species and the group size employed);*
- *the techniques applied;*
- *the end points of the procedures; and*
- *care of the animals before, during and after a procedure.*

*For further information about the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), see [www.nc3rs.org.uk](http://www.nc3rs.org.uk)*

**Monoclonal antibodies**

*The use of ascitic animals for monoclonal antibodies (mAb) production in vivo may only be proposed when in vitro attempts at mAb production have failed or the use of animals is considered justified for specific diagnostic or therapeutic products. You must give a full explanation if in vitro production methods are not considered to be suitable.*

Select any of the following species you will use:  
*(Primate, Cat, Dog, Equidae, Pig, Genetically Altered Animals, Other animals)*

*The NC3Rs will review all applications involving the use of primates, cats, dogs and equidae animals, or their tissue/data.*

*All proposed research projects involving genetically altered mice are expected to consider the principles of welfare assessment set out on the NC3Rs website.*

Select 'Add...' to enter the animal species and total numbers required (this may differ from the number to be purchased, maintained).

Animal species	Strain (if appropriate)	Total number required to carry out proposed work
-		

**Justification for animal numbers requested**

Provide a justification of the proposed sample size alongside details of the planned statistical analyses. Describe experimental design, including any plans to reduce bias such as blinding or randomisation if appropriate. You must include power calculations if appropriate. (1,000 words max.)

*You may provide your answer to this question in the field provided (text entry format) or as a PDF attachment (upload format). If you are uploading your answer, the uploaded document must be in 11 point Arial font and portrait format.*

For each species, you must ensure that adequate experimental detail is provided to justify both the use and number of animals. This should include:

- definition of unit of analysis (i.e. N referring to animal or sample number);
- means of avoidance of bias (e.g. blinding or randomisation);
- statistical analysis to be used and explanation of how sample and/or group size was derived;
- where repeated measures are used, the number of time points;
- an indication of number of replications of each experiment to mitigate spurious non-replicable results.

You may include tables and figures in this section to help justify animal numbers. You can find additional guidance on designing animal experiments through the NC3Rs Experimental Design Assistant.

(1000 words max.)

Why are the species to be used the most appropriate?  
(250 words max.)

*It is particularly important to justify the species when an animal is being used as a model for a human physiological or pathological condition.*

Does your proposal include procedures to be carried out on animals in the UK which require a Home Office licence?  
Your organisation must ensure that research involving the use of animals complies at all times with UK laws and regulations.

Is there a current Home Office Personal Project Licence (PPL) that authorizes the proposed procedures to be carried out in the UK?

Provide the name of the licence holder and the PPL number.

Detail your plans and timelines for acquiring the appropriate licence.

If your proposal involves the use of animals, what would be the severity of the procedures?  
You can find guidance on assessing the severity of a procedure on the Home Office website.

Provide details of any moderate, severe or non-recovery procedures.  
(250 words max.)

Does your proposal involve the use of animals or animal tissue outside the UK?

Confirm that the proposed animal work outside of the UK will comply with the principles of UK law. Animal research conducted outside the UK must, as a minimum standard, be carried out in

accordance with the principles of UK law and regulation.  
(1000 words max.)

*Law and regulatory standards often vary from country to country. If experiments are to be carried out on animals outside the UK, the experiments proposed must be performed to standards which accord with the principles of UK legislation. Furthermore, the housing and care of animals must similarly accord with the standards and principles of UK legislation.*

*You should refer to NC3Rs guidance on carrying out work abroad and choosing contractors.*

Why is animal use necessary: are there any procedures of less severity that could be used?  
(250 words max.)

**Non-human primates** If you are exclusively using already generated tissue or data in the proposed experiments answer all relevant questions as thoroughly as possible, in particular the questions relating to housing and procedures. If a question is not relevant you can answer 'N/A', but we may request additional information if necessary for assessment.

Do the facilities and practices, and the proposed research comply with the principles set out in the 'National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) Guidelines: Primate accommodation, care and use' ?

Explain why not.

Will it be necessary to transport the non-human primates (i.e. from breeding facility and within the host organisation environment)?

Indicate approximate journey times and the measures that will be taken to minimise the potential stress during transport.

Provide details of the housing for the animals, e.g. enclosure size, environmental enrichment.

*See the NC3Rs guidance on animal housing and husbandry for further details.*

Will single housing of the non-human primates be necessary at any time?

Provide a justification for single housing, its duration, and explain what additional resources you will provide to the animals to minimise the impact on animal welfare.

Describe the experimental procedures involved and how any pain, suffering, distress and/or lasting harm will be minimised. Have the procedures been recently reviewed by the Named Veterinary Surgeon (NVS), Named Animal Care and Welfare Officer (NACWO) and Animal Welfare and Ethical Review Body (AWERB)?

--

Will any of the experimental procedures involve food and/or water restriction?	
--	--

Justify why this is necessary and outline what alternatives have been considered.

Will any of the experimental procedures involve restraint?	
--	--

What alternatives have been considered? Describe the nature of the restraint, its duration and frequency, and what will be done to avoid distress.

What prior experience and training in non-human primate use, care and welfare will you require of the staff named in the application? What provision are you making for continuing professional development in these areas?

Will any of the staff involved require specific training for any of the procedures concerned?	
---	--

Provide details of the training needed and where it will be undertaken.

**Cats, Dogs, Equidae and Pigs** If you are exclusively using already generated tissue or data in the proposed experiments answer all relevant questions as thoroughly as possible, in particular the questions relating to housing and procedures. If a question is not relevant you can answer 'N/A', but we may request additional information if necessary for assessment.

From where will the animals be sourced?

Will it be necessary to transport the animals?	
--	--

Indicate approximate journey times and the measures that will be taken to minimise the potential stress during transport.

Are animals to be imported?	
-----------------------------	--

Where animals are to be imported, what journey times have been agreed with the Home Office? Describe the conditions for the animals at the breeding establishment and how the potential stress during transport will be minimised.

Provide details of the housing for the animals, e.g. enclosure size, environmental enrichment.

See the NC3Rs guidance on animal housing and husbandry for further details: <https://www.nc3rs.org.uk/3rs-resources/housing-and-husbandry>

Will single housing of the animals be necessary at any time?

Provide a justification for single housing, its duration, and explain what additional resources you will provide to the animals to minimise the impact on animal welfare.

Describe the experimental procedures involved and how you will minimise any pain, suffering, distress and/or lasting harm. Have the procedures been recently reviewed by the Named Veterinary Surgeon (NVS), Named Animal Care and Welfare Officer (NACWO) and Animal Welfare and Ethical Review Body (AWERB)?

What adverse effects might the animals experience? List the clinical and other signs that will be monitored, the frequency of monitoring and, where relevant, the humane endpoint criteria established for the study.  
(1000 words max.)

Will any of the experimental procedures involve restraint?

What alternatives have been considered? Describe the nature of the restraint, its duration and frequency, and what will be done to avoid distress.

What prior experience and training in animal use, care and welfare will you require of the staff named in the application? What provision are you making for continuing professional development in these areas?

Will any of the staff involved require specific training for any of the procedures concerned?

Provide details of the training needed and where it will be undertaken.

## Risks of research misuse

It is the responsibility of organisations that receive Wellcome Trust funding to ensure that any risks that research could be misused for harmful purposes are managed appropriately.

Confirm that you have considered whether your proposed research could generate outcomes that could be misused for harmful purposes.

Wellcome encourages applicants and their host organisations to consider carefully any risks that the potential outcomes (information, products or technologies) of the research could be misused for harmful purposes. These include actions that pose a significant threat to humans, animals, plants or the environment - including terrorist misuse.

Examples of possible research areas that are associated with dual-use risks of this type, include (but are not restricted to) research that aims to:

- demonstrate how to render a vaccine ineffective
- confer resistance to a therapeutically useful antibiotic or antiviral agent
- enhance the virulence of a pathogen or renders a non-pathogen virulent
- increase the transmissibility or alter the host range of a pathogen
- enable the evasion of diagnostic and detection methods
- enable the weaponisation of a biological agent or toxin
- generate or reconstitute an eradicated or extinct agent or toxin

Have you identified any tangible risks of this type?

Briefly describe these risks and explain how you and your organisation will manage them. (250 words max.)

Where you judge there are **tangible** (real and non-hypothetical) risks that the proposed research **will itself** generate outcomes that could be misused to cause harm, you (and your fellow researchers and host organisations) must take appropriate steps to monitor the research as it proceeds and minimise these risks. Risk mitigation could include establishing a process to review dual use risks on an on-going basis through the project and to gain independent expert advice as appropriate. You must also ensure that all members of your team are aware of these risks in progressing their research, and receive appropriate education and training on these issues.

The identification of tangible risks in a research project should be clearly balanced against the benefits and value that is to be gained for health, science and society. We recognise that most research could conceivably generate results that might hypothetically be misused at some point in the future, and we are not asking applicants to appraise these kinds of remote and hypothetical risks.

Refer to the joint BBSRC, MRC and Wellcome policy and position statement on managing risks of research misuse, and our guidelines on good research practice.

## Carbon offset for travel

Are you requesting costs to offset the carbon emissions involved in your travel?

How much are you requesting for carbon offset costs (£)?

How much carbon will this offset (in tonnes)?

Are you requesting costs for alternatives to travel, so you can travel less?

How much carbon will you save by using alternatives to travel (in tonnes)?

How much are you requesting for these alternatives (£)?

## Wellcome Trust supported facilities

Will the project be based in one of the following Wellcome Trust supported facilities:

- the Wellcome Trust Sanger Institute
- a Wellcome Trust Centre
- an Africa and Asia Programme
- the Francis Crick Institute?

Specify