Application summary		
Application title This is the title of your proposed project.		
Proposed duration of funding (months)		
Proposed start data		
Proposed start date This date must be at least six months after the full application deadline.		
You can change your start date if your application is successful. All grant expenditure and activitie grant start and end dates.	es must be within	the
Name of administering organisation If your application is successful, this is the organisation that will be responsible for award.	or administerir	g the
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		
Research area Select the most relevant area, based on the key aims of the research. This alloc application to the relevant Grants team. We may reallocate your application to all consider it appropriate.	•	we
	I	
Are you applying for a resource Wellcome has previously funded?		

Lead applicant

Lead applic	cant de	etails							
Full Name									
Departmen	t								
Division									
Organisation	on								
Address Li	ne 1								
City/Town									
Postcode									
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			lications, you can li ection, with an expl					ce, technolo	gy
ODOID ID									
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ORCID iD									
Career hist	ory (cı	urrent	/most recent fi	rst)					
From	То		Position			Organisation			
						I			l
Education/		-			1		T		
From T	0	Quali	fication		Subject		Organi	sation	
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.									
Your source of	f salary ı	may aff	ect your eligibility -	please c	heck the s	cheme webpage.			
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.									
Oliminatia	4								
Clinical sta Are you a h		re pro	fessional?						
Indicate you	ır healt	hcare	profession						

Are you clinically active?	
What is your specialty? If your specialty is not on the list, select 'Other' and specify.	
in your opposition for the men, conservation and opposity.	
Specify	
Career breaks	

We take breaks from research 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?

work because of the COVID-19 pandemic.

If you wish to undertake this award part-time, either from the start or part way through the grant, your host organisation must employ you on a part-time basis during that time.

Have you taken a break from research or any periods of part-time work? This could include periods of parental or long-term sick leave, or if you had caring responsibilities. You can also include any periods where you were unable to

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.

What experience do you have managing a resource, a technology or equipment? (350 words max.)

#### **Career contributions**

What are your most important research-related contributions? These may be from any stage of your research career. State what each contribution was, when it came about, why you think it is important and what impact it has had. Examples include publications, patents and impacts on policy.

(350 words max.)

#### Research outputs

List up to 20 of your most significant research outputs; at least five of these must be from the last five years. For 10 of these outputs, provide a statement describing their significance and your

contribution (up to 50 words maximum per output).

Research outputs may include (but are not limited to):

- Peer-reviewed publications and preprints;
- Datasets, software and research materials;
- Inventions, patents and commercial activity.

For original research publications, indicate those arising from Wellcome funded grants in bold, and provide the PubMed Central ID (PMCID) reference for each of these. You can find more information on this in the guidance to this question.

Give the citation in full, including the title of paper and all authors (unless more than 10, in which case you may use 'et al', ensuring that your position as author remains clear). Citations to preprints must state "Preprint", the repository name and the articles persistent identifier (e.g. DOI).

Include here systematic reviews (e.g. Cochrane Reviews) and meta analyses, but exclude abstracts and literature reviews. We encourage you to include articles published via open research publishing platforms, such as Wellcome Open Research, providing they have passed peer review.

Only include preprints, complete manuscripts that have been submitted to a preprint repository or service (for example, bioRxiv, PeerJ Preprints, arXiv, SocArXiv or PsyArXiv), if they have a permanent identifier such as a DOI or arXiv identifier. 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.

The PubMed Central ID (PMCID) is the unique identifier assigned to every full text paper in PubMed Central (PMC) and Europe PMC.

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.

How many peer-reviewed publications have you authored/co-authored? Include systematic reviews and meta analyses but exclude abstracts and literature reviews.

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

#### **Current research funding (including Wellcome grants)**

List all research funding you have held in the last five years and any key funding before then.

List the most recent first. State the name of the funder, name(s) of grantholder(s), title of the project, 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.

Include details of 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.

We look at your success in getting research funding when we assess your track record. We also want to understand how this proposal is distinct from other funding you hold.

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 by other awa		and how yo	our application is o	distinct a	nd does	not overl	ap with rese	earch activities already supported
Time sper How many			do you spend	on res	earch?			
How many	hours p	er week	will you spend	d on thi	s proje	ct?		
Applica	ınts							
An applicant applicant plu				into the	project.	We allow	up to a max	ximum of ten applicants (lead
1								
Applicant								
Full Name	)							
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Address L	ine 1							
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Caroor bis	story (c)	urront/m	ost recent fire	c.f.\				
From	To	all Cildii	Position	si)			Organis	ation
Education		α	1 ooition				Organio	ution
From	То	<del>-</del>	fication		Subje	ct		Organisation
State all you	our sour	ces of sa unding b		percent	mple, th	rough y		nisation's block grant from a contribute. Answer 'not
Your source	of salary i	may affect	your eligibility - p	lease ch	eck the s	scheme w	vebpage.	

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.

What experience do you have managing a resource, a technology or equipment? (350 words max.)

#### Career contributions

What are your most important research-related contributions? These may be from any stage of your research career. State what each contribution was, when it came about, why you think it is important and what impact it has had. Examples include publications, patents and impacts on policy.

(350 words max.)

#### Research outputs

List up to 20 of your most significant research outputs; at least five of these must be from the last five years. For 10 of these outputs, provide a statement describing their significance and your contribution (up to 50 words maximum per output).

Research outputs may include (but are not limited to):

- Peer-reviewed publications and preprints;
- Datasets, software and research materials;
- Inventions, patents and commercial activity.

For original research publications, indicate those arising from Wellcome funded grants in **bold**, and provide the PubMed Central ID (PMCID) reference for each of these. You can find more information on this in the guidance to this question.

Give the citation in full, including the title of paper and all authors (unless more than 10, in which case you may use 'et al', ensuring that your position as author remains clear). Citations to preprints must state "Preprint", the repository name and the articles persistent identifier (e.g. DOI).

Include here systematic reviews (e.g. Cochrane Reviews) and meta analyses, but exclude abstracts and literature reviews. We encourage you to include articles published via open research publishing platforms, such as Wellcome Open Research, providing they have passed peer review.

Only include preprints, complete manuscripts that have been submitted to a preprint repository or service (for example, bioRxiv, PeerJ Preprints, arXiv, SocArXiv or PsyArXiv), if they have a permanent identifier such as a DOI or arXiv identifier. 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.

The PubMed Central ID (PMCID) is the unique identifier assigned to every full text paper in PubMed Central (PMC) and Europe PMC.

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.

How many peer-reviewed publications have you authored/co-authored? Include systematic reviews and meta analyses but exclude abstracts and literature reviews.

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

#### **Current research funding (including Wellcome grants)**

List all research funding you have held in the last five years and any key funding before then.

List the most recent first. State the name of the funder, name(s) of grantholder(s), title of the project, 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.

Include details of 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.

We look at your success in getting research funding when we assess your track record. We also want to understand how this proposal is distinct from other funding you hold.

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.

#### Time spent on research

How many hours per week do you spend on research?

How many hours per week will you spend on this project?

### Applicant details summary

Complete brief summary details for the lead applicant and each applicant listed above.

Name	Organisation	Role in project

This is to provide Wellcome with an overview of the applicants and their involvement in the programme.

#### **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.

What is the difference between a co-applicant and a collaborator?  Co-applicants will have intellectual input into, and part ownership of, the research. Collaborators are the body of the application who may, for example, assist with specific elements of the research or presources, reagents or samples, but who would not normally be involved in the day-to-day running or	rovide access to
List any key collaborators (name and organisation) and provide a very brief outline the proposed research.	e of their role in
and proposed research.	
You can replace the collaborators named here with suitable alternatives if it is necessary or appropri	iate to do so.
I confirm that the collaborators named above have agreed to be involved, as descriproposed research and are willing for their details to be included as part of this appropriate the collaborators of	
Deleted applications	
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 offers you funding, please tell us immediately. We will usually ask you to decide on that offer	
If you decide to apply to another funder with a similar application after you have applied to us, please	e 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.)	
Summary of proposal	
Proposal summary Provide a summary of your proposed research, including key goals, for an expert a (200 words max.)	audience.

The summary should be as complete as possible within the word limit. Include key words that best describe the proposal to enable text searching.

We will use this as a short abstract and to classify your proposal by subject. We may use it to describe your research on our website and elsewhere (we publish summary details of all our awards).

#### 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; expected impact of your work. If your application is successful, this summary will be automatically uploaded, without editing, to our website. Take care not to include anything confidential or commercially sensitive.

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

An example of a lay summary:

In response to stress and environmental changes, bacteria generate hundreds of small RNA molecules that have key roles in regulating gene expression. This process of riboregulation involves chaperone proteins that facilitate the actions of regulatory RNAs, and enzymes that affect RNA transcript lifetimes. I aim to understand the molecular basis of riboregulation by taking a multidisciplinary approach. I will use biochemical and structural analyses, including cryoEM and cryoET, to visualise how RNA transcripts are captured and channelled to active sites, either for degradation or processing. I will also identify the RNA targets of chaperone proteins and the degradative machinery, and explore whether the patterns change with physiological state or during the cell cycle, and why. These studies will help to explain how small RNAs enhance the speed and accuracy of bacterial genetic regulation, enriching the capacity of the simplest organisms to exhibit complex behaviour.

## Resources previously funded by Wellcome

The following question applies only to LPS applicants who are applying for a resource Wellcome has previously funded:

What progress and achievements have been made with your previous grant? (500 words max.)

## Details of resource, technology development or equipment

For Biomedical Resource and Technology Development applicants only:

#### Describe:

- (i) the resource or technology development requested;
- (ii) the added value it will bring;
- (iii) the community need for the resource or technology development (upload letters of support and make reference to the availability of similar resources/technology, if appropriate);
- (iv) how the resource or technology development will enhance the scientific programmes of the applicants and/or the research community:
- (v) the approach and methods to create the resource or to develop the technology, including timetable and milestones (indicating any relevant information from your business plan for developing long-term financial sustainability, if appropriate);
- (vi) plans for promoting and/or disseminating the resource or technology development;
- (vii) the regional, national (and international, if appropriate), context of the application, including any joint funding arrangements;

#### (viii) any relevant background information.

Provide all relevant information within the application form; do not refer to additional unpublished information on personal websites. If you do not understand any part of this guidance, contact us for advice.

The word count must not exceed 3,000 words in total, excluding graphs, figures. You may provide your answer to this question in text entry format or as a PDF attachment. If you are uploading your research vision, the uploaded document must be in 11 point Arial font and portrait format.

Describe the potential added value and impact of the resource or technology development for your research and, if relevant, the wider scientific community. Will the gains be in increased efficiency or in new research capabilities? How important is the research that will benefit? Ensure that letters of support provided by user communities detail specifically how the resource or technology will be used by the group to enhance their research outputs.

Include evidence of demand for the resource or technology, together with details of consultations with user (or potential user) communities. You may upload supporting statements from any user communities (including potential users) as a single PDF file under the 'Letters of support' section.'

Provide details of how the resource or technology will be established and/or maintained, including plans for promotion and/or dissemination.

#### Additional information

Figures and additional information cannot exceed 2 A4 pages. Embed it in your upload for your research vision or upload it 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 it exceeds two pages of A4 we will return your application to you to reduce the amount of information.

		`
(3000	words	max )

#### For Multi-user Equipment applicants only:

#### Describe:

- (i) the equipment requested including a scientific justification for the type and model;
- (ii) details of the research projects that will benefit from the equipment, how they are funded, and how the equipment will enhance the scientific outputs of the projects:
- (iii) details of similar equipment in the applicants' departments and adjacent departments and the reasons why it cannot be used for the purposes described;
- (iv) details of others who may benefit from the requested equipment;
- (v) the regional, national (and international, if appropriate), context of the application, including any joint funding arrangements;
- (vi) any relevant background information.

Provide all relevant information within the application form; do not refer to additional unpublished information on personal websites. If you do not understand any part of this guidance, contact us for advice.

The word count must not exceed 3,000 words in total, excluding graphs, figures. You may provide your answer to this question in text entry format or as a PDF attachment. If you are uploading your research vision, the uploaded document must be in 11 point Arial font and portrait format.

Describe the potential added value and impact of the equipment for your research and, if relevant, the wider scientific community. Will the gains be in increased efficiency or in new research capabilities? How important is the research that will benefit? Ensure that letters of support provided by user communities detail specifically how the equipment will be used by the group to enhance their research outputs.

Include an indication as to the amount of time each user group anticipate will be spent with the equipment requested. (i) You may provide pilot data to support the type and model of equipment requested, if available. These may be embedded in the text of the proposal, or attached separately as supporting material.

- (ii) State whether funding for the research projects described has been obtained and, if so, include the name of the funding organisation, the amount, duration and nature of the funding. Research that has not yet been funded through a peer review process is unlikely to be competititive for funding of major items of equipment.
- (iii) You should provide vrief curricula vitae (maximum two pages) of any additional individuals who will make use of the

equipment, and are mentioned in the application. This information may be attached as an appendix.

(3000 words max.)

For Longitudinal Population Study applicants only:

#### Outline the community need and value of the resource

If you are applying for core support for an LPS, describe how it meets the quality criteria. Refer to the guidance for this question.

If you are applying for enhancing value for LPS, describe how it maximises the value of LPS and/or their data. Make sure you fully outline the methods and/or approaches you will be using. (3000 words max.)

The quality criteria for LPS **core support**, along with associated metrics, are detailed below. Existing core resources should report on how well the LPS meets the metrics associated with each criteria. New core resources should describe how they will meet these criteria.

Criterion 1: A clear vision with unique scientific impact and potential - relating broadly to human health

- Describe the evidence that the LPS is, or will be, a valuable resource for the wider community, and outline how
  it is or will become a robust, cost-effective, and innovative way of answering a range of important research
  questions
- A clear strategy outlining potential pathways to future impact
- For existing resources: describe the main impacts of the resource, which may be unique scientific findings, impact on policy and practice, or developing new scientific techniques.

Criterion 2: Robust leadership, management, training and governance structures

- Operational management with clear decision making structures and an appropriate balance of skills/responsibilities (e.g. project management, data management and access, sample maintenance, fieldwork, etc.)
- Scientific leadership with vision, credibility, and succession planning, within clear decision making structures
- An engaged external advisory mechanism with a clear purpose, which is actively used for scientific advice and horizon scanning, with membership of the advisory mechanism justified

Criterion 3: Effective recruitment, and rigorous data and sample quality

- Robust ethical oversight should be in place with ongoing engagement and appropriately phrased consent that is not too complicated
- Participants should be representative as appropriate to the scientific purpose of study, and attrition rates closely monitored to ensure that the resource remains scientifically useful
- Collection of samples should be well justified and, where possible, all sample and assay handling should be
  performed in accredited facilities according to ISO standards. Where this is not possible, LPS should seek to
  achieve standards equivalent to those of accredited units.
- All data should be obtained/linked using defined ethical, clinical and industry standards where available, and should be stored in accredited facilities with appropriate backup procedures. Where relevant, measures to ensure the security of shared data should also be in place.
- A clear, transparent and justifiable policy with regard to return (or not) of findings to individual participants, and this should be clearly articulated to participants.

#### Criterion 4: Organised data accessibility and sharing

- Information about available data should be clearly described and freely available (e.g. directory, website, platform)
- · A data access management process should be in place, which should be proportionate and transparent
- Optimum use of data and/or samples within the framework of an access management plan (e.g. % of approved application with narrative and turnaround time)
- Breadth and scope of 'Declaration on Research Assessment (DORA)' outputs

Criterion 5: Maximised value through linkage with other data sources relevant to the scientific vision of the LPS

• (Plans for) successful linkage to the range of data sources needed to achieve scientific vision

- (Plans for) the collection of appropriate consents to link to relevant data sources
- (Plans for) the collection of relevant data items to enable linkage with range of data sources
- Networks only: (Plans to) bring together data from member LPS to allow for standardised cross-LPS comparisons
- Networks only: (Plans to) share best practice through network

Criterion 6: Meaningful engagement with external stakeholders (including participants, wider public, industry, policy makers and practitioners) in the research process

- Effective two-way engagement between the study team and participants
- Where relevant, describe effective models of two-way engagement between the study team, the wider public, policy makers, practitioners, industry, and other LPS to maximise the impact of the resource

Does your	proposal	involve	human	partici	pants?

#### 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 more information, read Wellcome's clinical trials policy.

If your proposal involves more than one clinical trial, contact Wellcome for advice.

#### 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 limited 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 your strategy for recruitment and describe the inclusion/exclusion criteria for study participants (if applicable). How will you allocate participants to study groups? If your research includes a clinical trial you must also tell us:

- how you will comply with our policy on ensuring the inclusion of under-served groups and
- how your recruitment and retention methods will engage with under-served groups.

  250 words may

(350 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 you'll use to deliver the proposed research (for example key support staff, roles of team members, participating centre(s) or facilities). Detail any activities a third party will undertake, 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.)

Figures and additional information cannot exceed 2 A4 pages.

You can upload additional information here or embed it in your upload for your proposal. If you choose to embed this information, any text present (such as legends, labels, or captions) can be excluded from the word count. If it exceeds two pages of A4 we will return your application to you to reduce the amount of information.

For Biomedical Resource and Longitudinal Population Study applicants only:

#### Supporting statement from host organisation

Upload a letter from your host organisation outlining their commitment to the longer-term sustainability of the resource.

For Multi-user Equipment applicants only:

#### Supporting statement from host organisation

Upload the supporting statement from your host organisation, signed by an appropriate senior authority. This must explain how the request for equipment fits with the overall strategic context of the organisation (referring to any other current multi-user equipment applications the organisation has submitted to Wellcome), taking into consideration regional and national contexts if appropriate.

#### **Letters of support**

Upload a maximum of 10 key letters of support from user communities as a single PDF.

#### **Kev references**

You should give the citation in full, including title of paper and all authors.

You may provide up to the equivalent of one A4 page of references. Please ensure that all references included 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. Citations to preprints should state "Preprint", the repository name and the article persistent identifier (e.g DOI).

References with more than 10 authors may be shortened to et al, but please ensure that your position as author (if

applicable) remains clear.

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

Upload papers "in press"

Please submit papers "in press" as a single PDF.

## Scientific and technical management

Provide details of: (a) the sharing and management of the equipment, resource or technology development, including how access will be managed and prioritised (if appropriate); (b) any specialist expertise or technical support required and who will provide this; (c) proposed plans for the long-term sustainability of the equipment, resource or technology development. (1500 words max.)

Include details of how any conflicting demand for access will be managed, if appropriate. Explain how the sustainability or replacement of the resource, technology or equipment will be addressed at the end of the proposed grant period (e.g. access charges, funded as a departmental resource).

LPS core support applicants only:

Provide details of: (a) the leadership, management, training, and governance structures; (b) any specialist expertise or technical support required and who will provide this; (c) proposed plans for the long-term sustainability of the LPS. (1000 words max.)

You may attach supporting information demonstrating future sustainability, e.g. extracts from business plans. Details of any proposed management or advisory committees may also be uploaded. Upload any supporting information in a single PDF file.

## **Outputs management and sharing**

### Provide an outputs management plan

All Wellcome-funded researchers are expected to 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. Our guidance on developing an outputs management plan, which includes a link to some good examples, is available here.

If an outputs management plan is not required, please briefly explain why below. (700 words max.)

Your plan should be clear, concise, proportionate and focus specifically on how outputs will be identified, managed and used to advance potential health benefits.

You should use the following questions as a template for your answer.

- 1) For data, software and materials outputs
- I. What outputs will your research generate?
- II. What metadata and documentation (e.g. the methodology of data collection and way of organising data) will accompany the outputs?
- III. When will these outputs be made available?
- IV. Where will you make these outputs available?
- V. How will they be discovered and accessed by the research community? (e.g. via presentations/press releases)
- VI. Are there possible restrictions to data sharing or embargo reasons?
- VII. How will data and metadata be stored, backed up and preserved?
- VIII. What resources (e.g. financial and time) will be dedicated to outputs management and ensuring all data is findable, accessible, interoperable and reproducible?

If your study involves a clinical trial, please see the clinical trial specific guidance on the webpage. This includes additional points you must specify when your outputs include participant data.

- 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.

Select the approach you will use to maximise the impact of your significant research outputs to improve health and benefit the wider research community. If an outputs management plan is not required, select 'Not applicable'.

#### **Contributions**

List all financial, or equivalent, contributions provided by the host organisation or other sources. This includes confirmed or potential co-funding. Refer to the guidance notes for this question.

Contributor	Details of contribution	Confirmed or expected	Value	Currency
				-

For multi-user equipment grants, we expect you to include a contribution from the host organisation, or other source. If a complete piece of equipment costs £100,000 or more, we expect a contribution of at least 25%. Contributions can include benefits in kind, such as refurbishment or the underwriting of a key support post.

We expect any equipment will be used primarily (but not exclusively) by researchers we fund. Where a significant proportion of users of the equipment are not funded by Wellcome, we would expect an appropriate financial contribution from alternative sources, including other funding bodies.

## Public engagement

Will you engage with the non-academic public about your work?

We want to foster a culture that values, recognises and better supports public engagement. We encourage researchers we fund to inform, consult and collaborate with the non-academic public. Further information on public engagement is available on our website.

Provide a brief outline of your plan to engage with the non-academic public (beyond press and media activity).

Do not include engagement that is essential for the ethical conduct of your research, such as patient information leaflets or community advisory boards. This should be part of your research methodology and you can include costs for this within your main research costs. (250 words max.)

We may provide additional support during the lifetime of the research grant, with a focus on developing the researcher's practice in Public Engagement, Diversity & Inclusion, or Open Research through our Research Enrichment scheme. Further details on the scheme, including how to apply, are available on our website.

#### LPS applicants only:

Describe your plans for engagement with external stakeholders, the communities they are drawn from, wider public audiences, industry, policy makers, practitioners, and others as relevant. This should include involvement in the research planning process as appropriate. In addition for participants, describe your policy for return of the health-related findings. (1500 words max.)

Describe how you will engage each of these stakeholders, including:

- (i) the vision for the programme(s), including aims, specific target audiences, activities and desired outcomes;
- (ii) experience of staff and external collaborators in engaging these stakeholders;
- (iii) how you will monitor and evaluate the activities, including success indicators;
- (iv) how the host organisation will support your work;
- (v) a high-level budget breakdown.

You must include the total public engagement figure under the 'Miscellaneous costs' heading in the 'Costs requested and justification' section of the form. Include any VAT that is irrecoverable into the total figure within the 'Miscellaneous Costs' category of the 'Costs requested' section. If you exclude VAT at the outset we may not be able to increase our funding retroactively.

## 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 organisation and then select 'Edit' to add the country and percentage of funds. 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.

## 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.org. 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, refer to the relevant scheme page and check the guidance notes for this question.

Include the full employment costs for all staff requested. Biomedical resource and equipment grant applicants can only apply for funding of staff needed to run/manage the central resource or apparatus (i.e. not experimental research personnel). We will only consider support for experimental research personnel for technology development grants.

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 the 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**

Staff	<sup>-</sup> 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 guestion 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: - 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 photocopving printing associated with fieldwork In the justification for materials and consumables, provide an estimate of the cost per staff member per year.

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. Your organisation must 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 from the organisation where a large number of animals and/or substantial costs are involved.

#### **Animals**

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

#### Associated animals costs

Description	Total

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.

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.

#### **Equipment**

Are you requesting equipment or equipment maintenance?

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.

#### Equipment to be purchased

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. If there is a preferred manufacturer for certain items of equipment, you can explain this in the 'Type of equipment' field.

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 5 years old if you can demonstrate that it is cost-effective.

Value Added Tax (VAT)

For grants to be held in the UK, the costs of all equipment to be used for medical and veterinary research should be quoted exclusive of VAT. For equipment that does not fall within this definition, VAT costs should be shown.

**Equipment** 

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

Maintenance for existing equipment

Details of	Wellcome Trust grant number	Date of	CUTENT	% time on project	Total

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.

If you are based in a low or middle income country you may apply for maintenance costs for equipment originally funded by us or other sources.

Justification for equipment and equipment maintenance. (500 words max.)

If you are requesting a piece of equipment which costs more than £100,000, provide details of:

- similar equipment in the applicant's department and adjacent departments;
- why it cannot be used for this particular project; and
- any other individuals likely to use the equipment.

Are you requesting a piece of equipment with a list price of £100,000 or more?

Provide a statement from the Director of Procurement/Head of Purchasing (or equivalent), outlining the rationale for selection of preferred manufacturer/suppliers for each piece of equipment with a list price of £100,000 or more. Include a brief summary of quotes received and the level of discount negotiated (no more than 400 words).

Access charges	
Are you requesting access charges?	

**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.)	

#### Travel and subsistence

Are you requesting travel and subsistence?

Include here items such as conference attendance, collaborative visits and, for resource/technology applicants, attending scientific meetings to publicise the resource/technology. Include all travel items separately. Enter the total carbon offset costs requested as a single line under travel and subsistence. Find out more about our carbon offset for travel policy here.

#### Conference attendance

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 a maximum of £2,000 a year for the lead applicant and £1,000 a year for research staff. 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.)	

#### Miscellaneous costs

Are you requesting miscellaneous costs?

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 Overheads); where they do not, select 'Other' and type a description of the item.

#### Overheads

Where overhead costs are allowed and you are including these in your application, provide a letter from the Finance Director of each organisation requesting these costs. The letter must provide a breakdown of the costs requested and confirm that the request is a true representation of the costs incurred.

#### Miscellaneous - other

Туре	Description	Total

Justification for miscellaneous costs. (300 words max.)	

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	
	Total
Total	

## **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?

This information is intended to provide advice on how to complete these questions. It is not a comprehensive review of the legal and regulatory environment in which your application is made.

We use the World Health Organization definition of research with human beings: "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:

- are exposed to manipulation, intervention, observation, or other interaction with investigators either directly or through alteration of their environment or
- become individually identifiable through investigator's collection, preparation, or use of biological material or medical or other records."

Read our Research involving human participants policy for information on what we expect from the researchers and organisations we fund.

You must have ethical approval for any research Wellcome funds that involves:

- human participants
- human biological samples
- personal data.

The Data Protection Act 2018 defines personal data as any information relating to an identified or identifiable living person. For example, a person who can be identified either:

- directly from that information
- indirectly by combining it with other available information.

Any use of personal data or biological samples, relating to living or dead persons, must comply with all relevant legislation where you are working.

You must get 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. Foe example, research involving human embryos may require a licence from the HFEA (see the HFEA website for more information).

If your proposal involves research on gene therapy which requires regulatory approval, you should apply for this from:

- your Local Research Ethics Committee
- your University's Genetic Manipulation Committee
- the Gene Therapy Advisory Committee
- the Medicines and Healthcare products Regulatory Agency (MHRA).

You must get ethical review in all countries where any part of the research is to take place. Read our guidance for research involving people living in low- and middle-income countries.

You must have all the necessary relevant regulatory and ethical approval in place at all relevant times during the project. These must be in place for every site where research will be carried out.

Confirm that you have read our guidance on the feedback of health-related findings in research 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 grant and after it has ended. This is in accordance with our research involving human participants policy.

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, Wellcome agrees 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). You 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. Wellcome cannot act as sponsor.

Do you need a formal sponsor 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) has/have agreed to fulfil this role? Wellcome 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.

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 who fully understands the responsibilities and costs associated with assuming this role. This will usually be a university or NHS Trust. Wellcome cannot act as sponsor.

Confirm that the trial will be registered on one of the following:

- the International Standard Randomised Controlled Trial Number Register (ISRCTN)
- ClinicalTrials.gov
- another register listed on the WHO International Clinical Trials Registry Platform (ICTRP).

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

## Proposals involving animals

Will the funds on this grant be used directly for animal research?

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

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:https://www.nc3rs.org.uk/generation-and-breeding-genetically-altered-mice.

Select 'Add' to 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
-		

Please provide details on any animal species which are to be used in the proposed project. Please provide the total number to be used (this may differ from the number to be purchased, maintained etc.)

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 is 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.	
The organisation must ensure that research involving the use of animals complies at all times with regulations.	n UK laws and
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 p You can find guidance on assessing the severity of a procedure on the Home O	
Guidance on assessing the severity of a procedure is available from the Home Office website: http://www.homeoffice.gov.uk/science-research/animal-research/	
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 practice of the UK must, as a minimum standard, be called 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

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, we may request additional information if necessary for assessment.

Do the facilities and practices, and the proposed 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, environmenta	l 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?		
Lightify why this is proceed and suffice what alternatives have been considered	<u>.</u>	
Justify why this is necessary and outline what alternatives have been considered	1.	
NACH CHI CHI CHI CHI CHI CHI CHI CHI CHI C		
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 exp relevant questions as thoroughly as possible, in particular the questions relating t procedures. If a question is not relevant you can answer N/A, but we may reques information if necessary for assessment.	o housing and
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 minim stress during transport.	nise the potential
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, environmenta	l enrichment.
Please see the NC3Rs guidance on animal housing and husbandry for further details: https://www.resources/housing-and-husbandry	v.nc3rs.org.uk/3rs-
Will single housing of the animals be necessary at any time?	
will single flousing of the armitals be flecessary at any time?	
Provide a justification for single housing, its duration, and explain what additional provide to the animals to minimise the impact on animal welfare.	l resources you will
I and the second se	

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 s monitored, the frequency of monitoring and, where relevant, the humane endpoi established for the study. (1000 words max.)	•
	I
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

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?	
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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.

## Freedom to operate/conflicts of interest

Describe any freedom to operate or other intellectual property related issues that might affect your ability to carry out the proposed research and/or to use, share or commercialise the research outputs. Explain how you will address these.

In particular, consider the following:

- Will your research use technology, software, databases, materials or patented inventions
  that are owned or controlled by others and which you do **not** already have written
  permission to use?
- Will the ownership, use, commercialisation and/or sharing of research outputs with the wider research community, be subject to agreements with commercial, academic or other organisations? This includes arrangements with collaborators named in this application.

(250 words max.)

Refer to Clause 8 of our Grant Conditions at www.wellcome.org/funding/managing-grant/grant-conditions.

Disclose all relevant information pertinent to your grant proposal, including proprietary information where appropriate, to provide the most comprehensive picture of how any commercial/IP matters may affect the delivery of your proposed research and the subsequent use, commercialisation and/or sharing of your research outputs.

If you are satisfied that there are no issues, enter N/A. If you have fully addressed such issues in your outputs management plan under the question on "Outputs management and sharing", then you may refer to that answer.

Describe any conflicts of interest which might affect your ability to carry out the proposed research and/or to share or commercialise the research outputs. Explain how you and your organisation will manage these and how you will comply with your organisation's requirements in relation to conflicts of interest.

In particular, consider the following: Does anyone involved in your project hold any consultancies, advisory roles, or equities in, or directorships of, companies or other organisations that might have an interest in the results of your proposed research?

Confirm in each case whether the conflict has been disclosed to your organisation. (250 words max.)

Refer to our policy on conflicts of interest related to Wellcome-funded researchers and commercial organisations: www.wellcome.org/funding/managing-grant/policy-relationships-between-trust-funded-researchers-and-commercial-

organisations.	
If you are satisfied that there are no issues, enter N/A.	
Carbon offset for travel	
Are you requesting costs to offset the carbon emissions involved in your travel?	
	T
How much are you requesting for carbon offset costs ()? You must also enter this amount under travel and subsistence in the 'Costs requested' section.	
How much carbon will this offset (in tonnes)?	
Are you requesting costs for alternatives to travel, so you can travel less?	
	<u> </u>
How much carbon will you save by using alternatives to travel (in tonnes)?	
	T
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