Application summary
Application title
Application title
Proposed duration of funding (months)
Proposed start date
Name of administering organisation
Lead applicant's address at administering organisation
Department/Division
Organisation
Street
City/Town
Postcode/Zipcode
Country
Research funding area Please select from the drop-down list the funding area that you consider your research falls under
Lead applicant
Lead applicant details
Full Name
Department
Division
Organisation
Address Line 1
City/Town

Postcod	е							
Country								
Telepho	ne No.							
Email Ad	ddress							
ORCID il					I			
ORCID il	D							
Career h	istory (c	urrent	/most recent f	iret)				
From	To	4110111	Position			Organisation		
110						g		
Education	n/trainin	ıg						
From	То	Qual	ification	Sı	ıbject		Organis	sation
Source(s	s) of pers	sonal	salary support	for the p	ropose	ed duration of a	award	
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Clinical								
Do you h	ave a me	edical/\	eterinary degre	ee?				
Please s	necify							
1 icase s	ocony							
Are you	clinically a	active?)					
								I
What is y	our spec	ialty?						
Please s	pecify							
Career b	roaks							
	ı had any			iods of par	t-time	work, for examp	ole	
-								
Please p	rovide de	tails						

Do you wish to undertake this award part time?	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Career contributions What are your most important research-related contributions to date? These may contributions to health policy or practice, or to technology or product discovery a (350 words max.)	
Peer-reviewed publications and other research outputs	
List up to ten of your most significant peer-reviewed publications, preprints, or ot scholarly research outputs, e.g. patents. You may provide a summary of your co your role in, the work associated with each (e.g. intellectually conceiving or cond research, supervising staff, writing the paper.)	ntribution to, or
For original research publications indicate those arising from Trust-funded grants provide the PubMed Central ID (PMCID) reference for each of these. Please refenotes.	
Publications should be in chronological order with the most recent first. Please g including title of paper and all authors*. Citations to preprints should state "Prepr name and the articles persistent identifier (e.g DOI).	
(*All authors, unless more than 10, in which case please use 'et al', ensuring tha author remains clear.)	t your position as
Total number of peer-reviewed publications which you have authored/co- authored. Please exclude abstracts and literature reviews.	
Current and recent research funding (including Wellcome Trust grants)	

Please list all held in the last five years and any key prior grants (list the most recent first). State the name of the awarding body, name(s) of grantholder(s), title of project, amounts awarded, your role in the project, and start and end dates of support. For all active grants, indicate the number of hours per week that are spent on each project.

Organisational support	(l l (l
Please provide details of any support (space, facilities, equipment, infrastructure	, technical or other
assistance) that will be available to you at your organisation (200 words max.)	
(200 Words max.)	
Collaborators	
Will you require any key collaborators for this proposal?	
will you require any key conductation for time proposal.	
Please list any key collaborators* (name and organisation) and provide a very br	ief outline of their
role in the proposed research.	
*The collaborators named may be replaced with suitable alternatives should it be	e necessary or
appropriate to do so.	
I confirm that the collaborators named above have agreed to be involved, as des	scribed, in the
proposed research and are willing for their details to be included as part of this a	
g v v v v v v v v v v v v v v v v v v v	1-1
Related applications	
Is this or a similar application for funding currently under consideration	
elsewhere?	
CISCWITCIC:	
Please provide name(s) of funding organisation(s) and decision date(s)	

Is this a resubmission of an application submitted to the Trust within the last 24 months?	
Project summary	
Please provide a summary of your proposal, including key goals. (200 words max.)	
Details of proposal	
Details of proposal Please detail the following information: (a) aims of the project; (b) the work to be carried ou expected outcomes; and (d) how this will lead to a larger study (1,400 words maximum).	ut; (c) the
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Please detail the following information: (a) aims of the project; (b) the work to be carried outexpected outcomes; and (d) how this will lead to a larger study (1,400 words maximum). (1400 words max.) Does your proposal involve a clinical trial?	rs?

Please describe the study design, including planned interventions (experimental and control), duration of treatment, and any potential significant risks to participants. Details of any investigational product should be provided with particular regard to manufacture, quality and consistency. (300 words max.)
Describe the inclusion/exclusion criteria. What are the proposed methods for protecting against sources of bias? What are the proposed arrangements for allocating participants to trial groups? (200 words max.)
What are the envisaged primary and secondary outcome measures, and how will these be assessed at follow up? Describe the proposed frequency and duration of follow up and any anticipated problems with non-compliance and/or loss to follow up. (200 words max.)
Detail and justify the sample size and proposed statistical analysis, including any interim analyses and/or subgroup analyses. Outline and justify the strategy for recruitment.
(200 words max.)

How have patients, patient advocacy groups or communities been involved in developing the

clinical aspects of this proposal? (300 words max.)		
	annuariala and the mesosand an	
Describe anticipated regulatory and governance management. What is the proposed membership Monitoring and Ethics Committees? (200 words max.)		
You may submit additional information of up to t	broo figures in support of the pro	nnocal
You may submit additional information of up to the	nree ligures in support of the pro	pposai.
References You should give the citation in full, including title	of paper and all authors.	
Are there any papers listed in your 'References' you wish to submit to us?	section as being "in press" that	
Lipland papers "in press"		
Upload papers "in press"		
Location of activity		
Will the funded activity take place at more than of	one location?	
		(
For each location, select the country and, where the administering organisation).	applicable, state the organisation	on (please include
Country	Organisation	
Will the funds awarded be allocated to more that	n one location?	

For each location, please select the country, state the organisation and enter the value and currency of funds to be allocated. Please include the administering organisation.				
Country	Organisation	Value of funds	Currency	
			-	
Costs requested	and justification			
Please select the currer	ncy in which you wish to appl	y.		
Is the selected currency	your local currency?			
What is your local curre	ncy?			
Please state clearly the (100 words max.)	reasons for requesting costs	s in the selected curre	ency	
Synchrotron radiation	COURCO			
	arch require access to a sync	hrotron source?		
Which source(s) will voi	u be applying to? (Please sel	ect all that apply)		
	117 5	11 77		
Diagram are sife.				
Please specify:				
Are you requesting cost	ts from the Trust?			
	earch management costs und s from low- and middle-incom		s costs	
	rom the Finance Director of t anagement costs is a true rep			
Justification for resource Please provide a brief ju (300 words max.)	rces requested ustification for the resources	requested.		

Full economic costing	
Is your organisation based in the UK?	
le vous experiention extends the full economic and of this preparation	
Is your organisation calculating the full economic cost of this proposal?	
What is the total full economic cost (£)?	
Research involving human participants, human biological n	naterial and
identifiable data	natorial aria
identinable data	
	7
Does your project involve human participants, human biological material, or	
identifiable/potentially identifiable data?	
	_
Please confirm that you have read the Trust's guidance on the feedback of health-	-related findings
in research and that you are in the process of considering your approach to this.	
3 1 03 11	
Please state by whom and when the ethics of the project has been, or will be, revi	iewed and specify
any other regulatory approvals that have been obtained, or will be sought.	
We reserve the right to see relevant approval documents at any point during the li	
grant, in accordance with our policy position on research involving human participation	ants.
Is the proposed clinical trial covered by The Medicines for Human Use (Clinical	
Trials) Regulations in the UK?	
Please confirm that the trial will be registered on the International Standard Rando	omised Controlled
Trial Number Register (ISRCTN), ClinicalTrials.gov, or on another register listed of	
International Clinical Trials Registry Platform (ICTRP).	AT LIC VVIIO
mornadorial official region y Fidulotti (1011).	
In the course of your project, do you propose to use facilities within the National	
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Health Service (NHS) or to involve patients being cared for by the NHS?	
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?	
Please indicate which organisation(s) has/have agreed to fulfil this role. Please r Wellcome Trust cannot act as sponsor.	note that the
If any potentially commercially exploitable results may be based upon tissues or from human participants, please confirm that there has been appropriate informe use.	
Proposals involving animals	
Please indicate which of the following apply: (Proposal involves the use of animals, Proposal involves the use of animal tissue above)	e, Neither of the
Do your proposals include procedures to be carried out on animals in the UK	
which require a Home Office licence? If yes, refer to notes.	
Do your proposals involve the use of animals or animal tissue outside the UK? If yes, refer to notes.	
If your proposals do involve the use of animals, what would be the soverity of the	nroceduros?
If your proposals do involve the use of animals, what would be the severity of the	procedures!
Please provide details of any procedures of substantial or moderate soverity	
Please provide details of any procedures of substantial or moderate severity (250 words max.)	

Why is animal use necessary: are there any other possible approaches?
(250 words max.)
Indicate which of the following species will be used
(Primate, Cat, Dog, Equidae, Genetically Altered Animals, Other animals)
Why is the species to be used the most appropriate?
(250 words max.)
(200 Words Max.)
Justification for animals (number and species) to be used
Please include evidence or calculations for experimental group sizes, and describe any plans to
reduce bias (e.g. blinding, randomisation).
(500 words max.)
Primates
Do you expect facilities and practices, and the proposed research will 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'?
Please explain why not

	I
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 minim	nise the potential
stress during transport.	
Please provide details of the housing for the animals, e.g. enclosure size, enviro enrichment.	nmental
Will single housing of the non-human primates be necessary at any time?	
Will single housing of the non-human primates be necessary at any time?	
	, and what
Will single housing of the non-human primates be necessary at any time? Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on an	
Please provide details in terms of the justification for single housing, its duration,	
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Please provide details in terms of the justification for single housing, its duration,	
Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on ar Describe the experimental procedures involved and how any pain, suffering, dist	nimal welfare.
Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources.	tress and/or lasting
Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on an open control of the experimental procedures involved and how any pain, suffering, dist harm will be minimised. Have the procedures been recently reviewed by the Nar Surgeon (NVS), Named Animal Care and Welfare Officer (NACWO) and ethical	tress and/or lasting
Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources will be provided to the animals to minimise the impact on an additional resources.	tress and/or lasting
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Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on ar Describe the experimental procedures involved and how any pain, suffering, dist	nimal welfare.
Please provide details in terms of the justification for single housing, its duration, additional resources will be provided to the animals to minimise the impact on an open control of the experimental procedures involved and how any pain, suffering, dist harm will be minimised. Have the procedures been recently reviewed by the Nar Surgeon (NVS), Named Animal Care and Welfare Officer (NACWO) and ethical	tress and/or lasting

Will any of the experimental procedures involve food and/or water restriction?		
Justify why this is necessary and outline what alternatives have been considered	l.	
[New 1871 - 1871		
Will any of the experimental procedures involve restraint?		
What alternatives have been special and Q Describe the nature of the naturalist.	. downstine and	
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, agree and welfare	have the stoff	
What prior experience and training in non-human primate use, care and welfare have the staff named in the application had? What provision is made for continuing professional development in these areas?		
Will any of the staff involved require specific training for any of the procedures concerned?		
concerned:		
Please provide details of the training needed and where it will be undertaken.		
r lease provide details of the training fleeded and where it will be undertaken.		
Cats and Dogs		

Will it be necessary to transport the animals?		
Indicate approximate journey times and the measures that will be taken to mining	nice the netential	
Indicate approximate journey times and the measures that will be taken to minim stress during transport.	lise the potential	
Sites during transport.		
Are animals to be imported?		
Are ariinals to be imported:		
Where animals are to be imported, what journey times have been agreed with the		
Describe the conditions for the animals at the breeding establishment and how t	he potential stress	
during transport will be minimised.		
Discourse in a details of the benefit for the primals of a problem of the sprimals		
Please provide details of the housing for the animals, e.g. enclosure size, environmental		
enrichment.		
Will single housing of the enimals he necessary at any time?		
Will single housing of the animals be necessary at any time?		
Please provide details in terms of the justification for single housing, its duration, and what		
additional resources will be provided to the animals to minimise the impact of the	e single housing.	

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 ethical review process (ERP)?		
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 be required of the staff named in the application? What provision is made for continuing professional development in these areas?		
Will any of the staff involved require specific training for any of the procedures concerned?		
Please provide details of the training needed and where it will be undertaken.		
Risks of research misuse		
Please confirm that you have considered whether your proposed research could generate outcomes that could be misused for harmful purposes.		

Have you identified any tangible risks of this type?		
Please briefly describe these risks and the steps that you and your organisation will take to manage them (250 words max.)		
Freedom to operate/conflicts of interest		
Treedom to operate/commets of interest		
Describe any freedom to operate issues or potential conflicts of interest that		
identified or that might arise and how these will be or have been addressed	l.	
In particular, please consider the following:		
 Do any of the individuals involved in the project hold any consultancies or 	requities in, or	
directorships of, companies or other organisations that might have an inte	erest in the results	
of the proposed research?		
Will the proposed research use technology, materials or other inventions	that are subject to	
any patents or other form of intellectual property protection?	,	
 Will any element of the research be subject to agreements with commerc 	ial, academic or	
other organisations, including arrangements with collaborators named in		
application, that might lead to intellectual property issues or restrictions?		
(350 words max.)		
Wollcome Trust supported facilities		
Wellcome Trust supported facilities		
	7	
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?		
- the Francis Orion monate:		
Please specify		