



**ERC 2024 Advanced Grant Call Webinar** 

Session 1:

Overview of the ERC, eligibility and proposal development

10 June 2024

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Jonathan Brookes



# What will be covered in this webinar?



Introduction to UKRO & UK Participation in Horizon Europe



Overview of the ERC programme



Eligibility criteria



Proposal development



Questions and answers session





# **TESTIMONIAL**

**ERC-Grantee** 

Prof Lucy Carpenter University of York



# Housekeeping

- All participants will be muted for the duration of the webinar.
- We will be recording this session.
- Please use the Q&A function to submit questions.
- You can 'up vote' your favourite questions on Q&A.
- A chat function is available and will be monitored.
- Recording and slides will be available on <u>www.ukro.ac.uk</u> shortly after the live webinar





## **About UKRO**

We support UK organisations involved in EU R&I funding

UK National Contact Point for the <u>ERC</u> and Marie Skłodowska-Curie Actions

A Brussels-based team of advisors

Unique partnership between UKRI and more than 140 subscribing organisations

Part of UKRI's wider <u>International team</u>

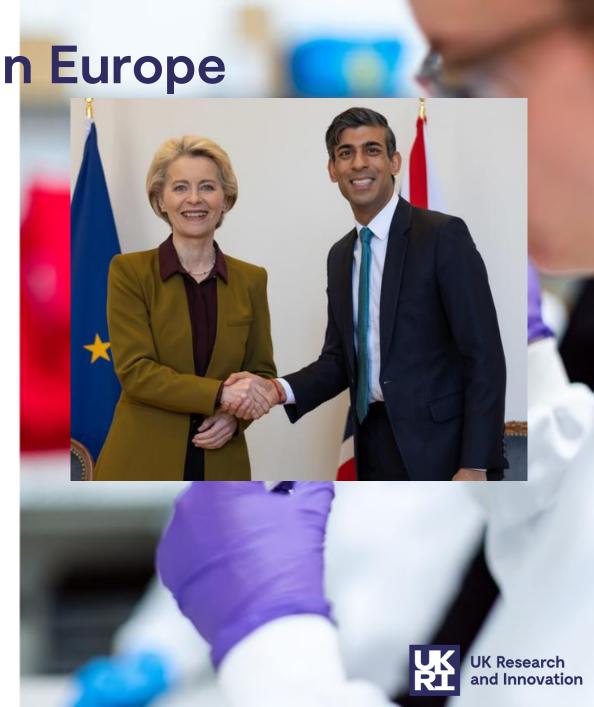




**UK Association to Horizon Europe** 

- On 7 Sept 2023 the European
   Commission and UK Government
   <u>reached an agreement</u> about the UK's
   association to Horizon Europe.
- From 1 Jan 2024 UK organisations can bid into Horizon\*, certain that all successful UK applicants will be covered through the UK's association for the remainder of the programme.





## What does this mean?

All successful UK applicants to Horizon will be covered through the UK's association (or through the existing UK funding guarantee) for the rest of the programme.

#### Work Programme 2024

- Calls with a 2024 call identifier will be covered by association.
- Successful applicants will receive funding from the EC for the lifetime of their grant.
- Even if the deadline is in 2023.

#### Work Programme 2023

- Calls with a 2023 call identifier will be covered by the Horizon Europe Guarantee.
- Successful UK applicants will receive funding from the UKRI Guarantee for the lifetime of their grant.
- Even if the deadline is in 2024.
- Applicants must be included as a **beneficiary** in order to receive funding through the Horizon Europe Guarantee.
- UK applicants call continue to apply to calls in Work Programme 2023.

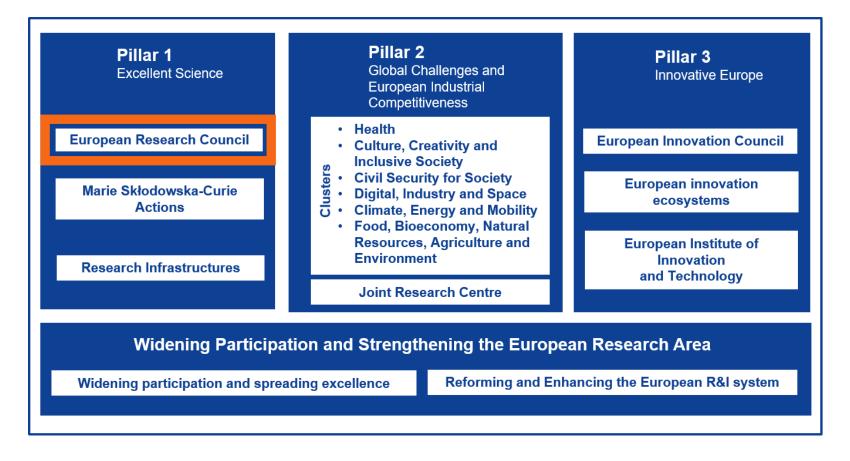
#### **Current/On going Grants**

- UK participants currently entering into, or going through, the grant agreement preparation phase will receive funding through the Horizon Europe Guarantee for the lifetime of their grant.
- Grants currently receiving guarantee funding, will continue to do so for the lifetime of their grant.





# Horizon Europe structure





# What is the European Research Council?



#### The ERC's mission:

- Support PI-driven frontier research across all fields
- Fund projects purely on the basis of scientific excellence
- Encourage the highest quality research in Europe

### What makes the ERC unique:

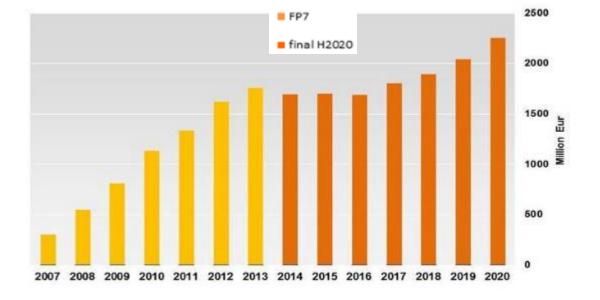
- · Excellence is the only criteria
- · Funding is distributed on researcher demand
- Freedom given to PIs to lead their project with anyone in the world in their team



# **ERC Budget in Horizon Europe**

26% increase in real terms compared to Horizon 2020.

Horizon Europe structure is represented below proportionate to budget allocation.



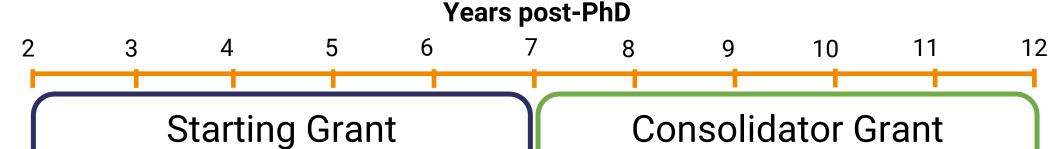


Pillar 3 Innovative Europe

Pillar 4

Pillar 1 Excellent science

Pillar 2 Global challenges



**€1.5M** (+ **€1M** additional) Lasts up to **5 years** 

**€2M** (+ **€1M** additional) Lasts up to **5 years** 

### **No PhD Requirements**

Advanced Grant

€2.5M (+ €1M additional)

Lasts up to 5 years

Synergy Grant €10M (+ €4M additional)

Lasts up to 6 years with 2-4 Pls

### **Proof Of Concept Grant**

€150k Lump Sum, Lasts for 1.5 years Top-up grants for current ERC grantees



# ERC 2024 Call Calendar

	Starting Grant	Consolidator Grant	Advanced Grant	Synergy Grant	Proof of Concept
Call Type	ERC-2024-StG	ERC-2024-CoG	ERC-2024-AdG	ERC-2024-SyG	ERC-2024-PoC
Call Opens	11/07/2023	12/09/2023	29/05/2024	12/07/2023	16/11/2023
Deadline	24/10/2023	12/12/2023	29/08/2024	08/11/2023	14/03/2024 17/09/2024





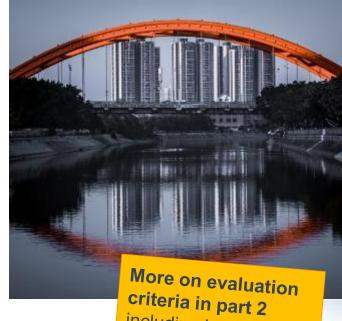
# Type of research

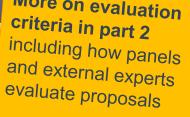
- Advanced Grant candidates do not require a PhD but they are assumed to have been involved in a research-related field or role.
- Can be in ANY field of research
- Must be very ambitious in risk and in scope
- Principal Investigator is central to the project, they can be supported by as many "team members" as they need
- Must be "frontier research", and should have potential for more than incremental advances

Judged on the scientific excellence of the project and PI

No need to aim for externally selected policies or research themes, it's up to the applicant!







# **ERC Panel Structure Open to any field of research**

<b>Physical Sciences &amp; Engineering</b>	Life Sciences*	Social Sciences & Humanities	
PE1 Mathematics	<b>LS1</b> Molecules of Life: Biological Mechanisms,	SH1 Individuals, Markets and Organisations	
<b>PE2</b> Fundamental Constituents of Matter	Structures & Functions	<b>SH2</b> Institutions, Governance and Legal Systems	
Particle	LS2 Integrative Biology: Integrative Biology: From	<b>SH3</b> The Social World and its Diversity	
<b>PE3</b> Condensed Matter Physics	Genes and Genomes to Systems	<b>SH4</b> The Human Mind and Its Complexity	
<b>PE4</b> Physical and Analytical Chemical Sciences	<b>LS3</b> Cellular, Developmental and Regenerative Biology	SH5 Cultures and Cultural Production	
<b>PE5</b> Synthetic Chemistry and Materials	<b>LS4</b> Physiology in Health, Disease and Ageing	<b>SH6</b> The Study of the Human Past	
<b>PE6</b> Computer Science and Informatics	<b>LS5</b> Neuroscience and Disorders of the Nervous	<b>SH7</b> Human Mobility, Environment, and Space*	
<b>PE7</b> Systems and Communication Engineering	System	SH8 Studies of Cultures and Arts*	
<b>PE3</b> Products and Processes Engineering	LS6 Immunity, Infection and Immunotherapy		
<b>PE9</b> Universe Sciences	<b>LS7</b> Prevention, Diagnosis and Treatment of		
<b>PE10</b> Earth System Science	Human Diseases		
PE11 Materials Engineering*	<b>LS8</b> Environmental Biology, Ecology and Evolution		
	<b>LS9</b> Biotechnology and Biosystems Engineering		



\*Since 2021 all domains have changed slightly, check again to find your proposal's best fit!

- **PE11** and **SH7** and **SH8** panels are newly added, split off from pre-existing panels
- Descriptors under Life Sciences reshuffled, changing the remit of existing panels

# Picking the right panel for you and your project

### Make the right choice/configuration

You must choose a **best fit primary panel – might not be perfect** 

Choose **Panel Descriptors** – this helps the Panel Chair to identify your proposal's main readers ahead of the panel meeting.

Choose **ERC-listed keywords from primary/secondary panel** in order of priority

Choose **Free keywords** to complement your selected ERC keywords.

**Keywords in your abstract** – The panel chair & ERC use this text at the very beginning as prompt for planning the evaluation process, including identifying remote expert reviewers.

You can choose a **secondary panel** – someone from another panel could help the primary panel to evaluate your proposal



Primary ERC Review Panel*	
SecondaryERC Review Panel	(if applicable)
ERC Keyword 1* As first keyword please	choose one which is linked to the Primary Review Panel.
Please select, if applicable, in	e ERC keyword(s) that dest characterize the subject of your proposal in order of priority.
ERC Keyword 2	
ERC Keyword 3	
ERC Keyword 4	
	e text keywords that you consider best characterise the scope of your proposal. The

**Take your time:** you can change your panel choice right up to the deadline.

# Inform yourself about past panellists and projects





A lot of information is openly available: in the call documents and databases on the ERC website.







Read a wide range of descriptors & keywords in the <u>ERC Work Programme</u> for a thorough understanding of your best-fit panel.

Then cross-refer:

Search for previously funded projects filtered by panel to compare yourself to a variety of predecessors

Look up past **panel members** to get an idea of what kind of audience your proposal will have.

# Am I a competitive candidate?

The track record & CV is the opportunity to 'sell' your achievements.

#### Benchmark yourself

- Measure yourself against the Advanced Grantee profile and the PI Evaluation Criteria in the Work Programme
- Your profile is evaluated in the context of your field of research
- Look at <u>previously funded Advanced Pls in your field</u>, but remember you can present yourself on your own terms
- Although a PHD is not mandatory, applicants are usually at a more 'advanced stage' of their career and have been involved in research.

#### What counts as a 'good' track record?

- There are no prescriptive markers for a ERC Advanced grantee: be bold and present the importance of your achievements in your field
- Context matters: use short narrative descriptions to explain your role and why your achievement was important
- Help generalist evaluators to make nuanced judgements about your unique track record

### Try to get lots of varied feedback as possible



## **2024 Call Resubmission Restrictions**

Call to which the Principal Investigator applied under previous ERC Work Programmes and proposal evaluation outcome		2024 ERC calls to which a Principal Investigator is <u>not</u> eligible	
2022 and 2023 Starting, Consolidator, Advanced Grant, or Synergy Grant	Rejected on the grounds of a breach of research integrity	Starting, Consolidator, Advanced, and Synergy Grant	
2022 Starting, Consolidator, or Advanced Grant	C at Step 1	Starting, Consolidator, and Advanced Grant	
2023 Starting, Consolidator,	A or B at Step 2	No restrictions	
or Advanced Grant	B or C at Step 1	Starting, Consolidator, and Advanced Grant	
	A or B at Step 3	No restrictions	
2022 and 2023 Synergy Grant	B at Step 1 or 2	No restrictions	
	C at Step 1	Synergy Grant	



# How are ERC proposals evaluated?

## Excellence is the sole evaluation criterion, applied to:

### **Research Project**

- Ground-breaking nature, ambition and feasibility
- Scientific approach

### **Principal Investigator**

Intellectual capacity and creativity



# Should I apply this year?

### Apply when you're ready

The calls are annual, if you're not ready, then apply next year

### Have you planned ahead?

It takes a long time and a lot of work to write an ERC proposal

### Have you looked at your current PI profile?

 If you have gaps, use the guidance profile to aim for achievements ahead of later calls

### Don't forget there are resubmission restrictions for ERC calls...

• Don't rush your proposal and risk being excluded for up to two years

### If you can resubmit, make the most of your prior evaluation

 Reapplicants' higher success rates are likely to be linked to benefits from evaluation comments





# **Principal Investigator Eligibility**

#### Who?

No restrictions based on age, nationality, current location or current employment/contract status.

#### Where?

Must have an institution based in an EU member state or associated country willing to host them.

Calculated as an average across entire project duration, can vary to a degree year on year

Grant Type	Minimum % of Working Time on Grant	Minimum % of time* in EU Member State or Associated Country	Years since PhD Award
Starting	50	50	2-7
Consolidator	40	50	7-12
Advanced	30	50	N/A
Synergy	30	50	N/A



# **Host Institution Eligibility**



Can be any type of legal entity (university, business, public body, NGO etc.)



Sign a 'Supplementary Agreement' with the PI



Must be based in the territory of an EU Member State or Associated Country



Has the infrastructure and capacity to allow the PI to independently direct the research and manage ERC funding



Must not constrain the PI to the institution's research strategy. PI has the right to transfer the grant to another institution.



Must 'engage' the PI for project duration, if grant is successful

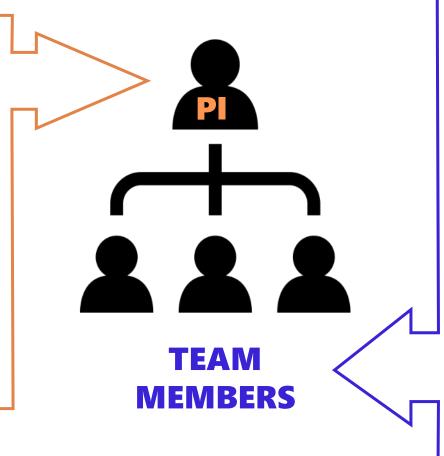




Not assessed as a separate criterion during peer review but must sign a letter of commitment as part of application

## Principal Investigators leading Team Members

- PI leads the research project, they are not collaborating as equals with their team
- PI has the freedom to choose how many team members are included in the project
- PI names individuals or roles that will be recruited in the proposal
- PI must justify the team and its composition and contribution
- Evaluators reject proposals where the PI is overshadowed by any team members



- Cannot be "co-investigators"
- Assigned to specific project outputs/tasks
- Do activities the PI can't do by themselves
- Should not have purely supervisory/mentor roles
- Can be research staff at any level (including technicians and project managers)
- Think about career path of employees
- Of any age, nationality or country of residence
- Can be based at the Host Institution or any other organisation in the world
- EU funded, even outside member states or associated countries



# Eligible costs for ERC projects

The ERC funds up to 100% of the total eligible costs with a 25% flat rate of indirect costs on top

- Same as most EU grants based on actual cost reporting
- The budget covers the full project duration
- It can be adjusted during the project with budget transfers from one category to another
- Overall grant amount cannot be increased after start date

#### The budget is subdivided into:













N.B. AdG 2024 projects will be delivered via a 'Lump Sum' approach –please see our second session for further information

# **Funding Levels**

Grant Type	Main Grant Amount up to:	"Additional Funding" up to:
Starting	€1.5 M	€1.0 M
Consolidator	€2.0 M	€1.0 M
Advanced	€2.5 M	€1.0 M
Synergy	€10 M	€4.0 M
		<b>▲</b>

### **ERC's Additional Funding:**

- eligible "start-up" costs for PIs moving from outside Europe
- the purchase of major equipment
- access to large facilities
- major experimental/fieldwork costs (excluding personnel)



Additional funding requests are **mixed into the main budget table** but **written separately** in the justification of resources text



# ERC Proposal Development

**Part B1 & B2** 

Part A is addressed in the next session



## 1-Step Submission

All parts submitted together by the call deadline.

Part A is filled in online.

B1, B2 & Annexes are uploaded as PDFs.

#### Part A

Administrative Forms and Abstract

- General Info
- Participating Institutions
- Budget & Description of Resources
- Ethics Check

#### Part B1

Proposal Overview and Pl Track Record

- Cover page and summary
- Extended Synopsis (5 pages)
- CV & Track Record (4 pages)

#### Part B2

Detailed Research
Proposal

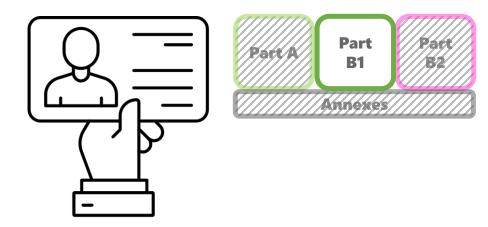
- State of the art
- Objectives
- Methodology
- Funding ID (does not count towards page limit)

(Total of 14 pages)

#### **Annexes**

Host Institution Letter, Ethics, Eligibility Documents

# Part B1 – Step 1 of the Evaluation



### **Strict formatting requirements:**

Page Format	Font Type	Font Size	Line Spacing	Margins
A4	Times New Roman, Arial or similar	At least 11	Single	2cm Side 1.5cm Bottom

#### Part B1 includes:

- Cover Page (info repeated from Part A)
- Extended Synopsis (5 pages)
- CV Track Record (4 pages)

# Writing the **Extended Synopsis**

# Part A Part B1 Part B2

#### **Self-contained**

- All the essential info about your idea in 5 pages.
- Describe where the novelty lies what is the state-of-the-art and how does this proposal go further?
- Your synopsis should be referenced, these won't count towards page limits – using end-notes is recommended.

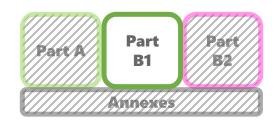
#### **Persuasive to generalists**

- A variety of experts decide collectively whether to pass the proposal to Step 2.
- Be clear and don't use specialist jargon because the panel are generalists as a whole, some will be less familiar with your field.
- Applicants need to persuade the whole panel – include just enough info and don't give any reasons to reject!

### **Entertaining!**

- Sell your idea and yourself the synopsis should grab the panellists' attention
- Your idea should be ambitious – be explicit about high risk and potentially high gain.
- The description of novelty and ambition should leave them curious to find out more detail in Part B2 and the interview at Step 2.

# Things to think about: Extended Synopsis



- Dual role: key text in stand-alone B1, then goes hand-in hand with the B2 full proposal.
   Make it work in both ways, not as a summary of the full proposal
- What excites you about your research? Convey that in your application
- Scientific Impact how can you change your field of research and make progress beyond the current state-of-the-art.
  - Does the research open new lines of research and/or enquiry
  - Will it lead to new scientific activity and further questions beyond the current frontier?
  - Be positive about achievements made by others thus far then demonstrate you have something new and different to offer.
- Timeliness and relevance of the work during the project, not just at the deadline but throughout the project's five years. Scientific impact can also be made at anytime of the project, not just at the end
- Research Aims, should clearly link to the research objectives, which should clearly link to research methodology(ies)



## Writing your CV and Track Record

- Curriculum Vitae and Track Record is now one single template of up to four pages. The applicant is expected to include their personal details, education, key qualifications, current position(s) and relevant previous positions, as well as a list of up to ten research outputs that demonstrate how the applicant has advanced knowledge in their field with an emphasis on more recent achievements and a list of selected examples of significant peer recognition (for example, prizes).
- A template for the CV part is provided but not mandatory.
- The applicant may include a short, factual explanation of the significance of the selected outputs, the applicant's role in producing each of them.
- The applicant may also include **relevant additional information on career breaks**, **diverse career paths**, **and life events**, as well as any particularly noteworthy contributions to the research community they have made other than research achievements and peer recognition and a short explanation of these contributions.



# **Quick note on your Funding ID Table**

- The Funding ID Table lists your current grants and on-going/submitted grant applications.
- It is mainly used to flag any existing or potential grant overlaps if your ERC proposal is successful. The ERCEA will help manage any risk of double funding if there are overlaps.
- Evaluators can see the table. Our understanding is they mainly look at it to judge whether you/your team have a feasible workload on the whole.
- This table will not count towards the page limits so include grants (not past grants that have ended, those go in the CV and/or track record).



## Part B2

- State of the art and objectives
  - Objectives here become grant agreement objectives

### Methodology

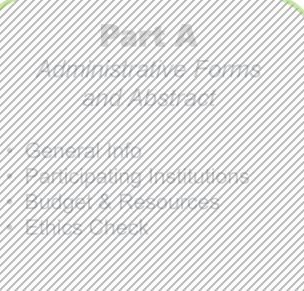
- Proposed methodology
- Milestones and alternatives
- Risk and mitigation
- Project Management
- Publication & Exploitation of results







#### Panellists and remote evaluators will have **both** parts at Step 2



#### Part B1

Proposal Overview and Pl Track Record

- Cover page and summary
- Extended Synopsis (5 pages)
- CV & Track Record (4 pages)

#### Part B2

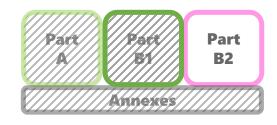
Detailed Research Proposal

- State of the art
- Objectives
- Methodology
- Funding ID

(Total of 14 pages)



## Writing your State of the Art and Objectives



### Coherence with Part B1

- Elaborate Part B1 coherently:
   Explain precisely how you plan to achieve what you promised
- A remote expert review will be provided to the generalist panel, add technical detail that someone much closer to your field would need to know.
- Don't copy & paste from Part B1.

  Both looked at together at Step 2, so make them complementary

#### State of the art

- It should be clear how and why the proposed work is important for the field
- What scientific impact will your project have if successful? What new horizons or opportunities for science, technology or scholarship?

#### **Objectives**

- Objectives should fit the context of the state of the art – they should match the ambition to go past the current frontier
- These objectives will become part of the Grant Agreement if successful – so the need to be feasible



## Writing your Methodology

## Part Part B1 Part B2

#### Methodology

- Should be extensive, include the essential detail that an expert in your field would need to know
- Don't leave any reasons for experts to raise doubts for the panel
- Work plan should also be clear and persuade evaluators that you can carry out the logistics of a long term project

### Risk Mitigation Strategy

- Where possible cover every risk with a mitigation strategy
- ERC accepts high risk to hopefully reach high gain – so don't shy away
- But evaluators and external experts can be risk averse
- Explicit but controlled risk

#### Your team

- Be sure to show how you will be the leader of the team and central figure for the project
- Explain what each team member will do – these can be named people or roles specified for recruitment

#### **Justify resources**

- Be **ambitious**, if you don't ask for something needed that can be a problem
- Justify: budget lines must have place in the project and be linked to objectives



## Things to think about: The Scientific Proposal



- Recap and expand on Part B1's introductory Extended Synopsis.
- Detail the **current state of the art** in your field: highlight the achievements, challenges and gaps. Timeliness should be shown throughout.
- Scientific impact and implications: explain how, and why, carrying out your project is important to the field and goes beyond state of the art.
- Discuss the challenges and unconventional aspects of your project.
- Coherence and clear linkages throughout proposal text: linking aims to budget via research methodologies. The better your proposal is organised the more feasible the project work plan will appear.
- Any preliminary data management plans or ethics approvals are not required\* but could add to the excellence of your scientific approach





\*If funded: full ethics screening required before start date, data management plan required by Month 6 if funded

## Other points to consider

Important aspects of proposal development that might not be immediately apparent



### Open Science

Under Horizon Europe, beneficiaries of ERC grants must ensure open access to all peer-reviewed scientific publications relating to their ERC project results.

- Open access means accessible on:
  - a trusted repository
  - under a CC BY (or equivalent) licence (either to the 'author accepted manuscript' or the published 'version of record').
- For long-text publications like monographs
  - a CC BY-NC / ND / NC-ND licence (or equivalent) is acceptable.
  - The ERC Scientific Council recommends the use of the OAPEN Open Books library (<a href="https://oapen.org">https://oapen.org</a>) as repository for monographs and other books as well as book chapters.

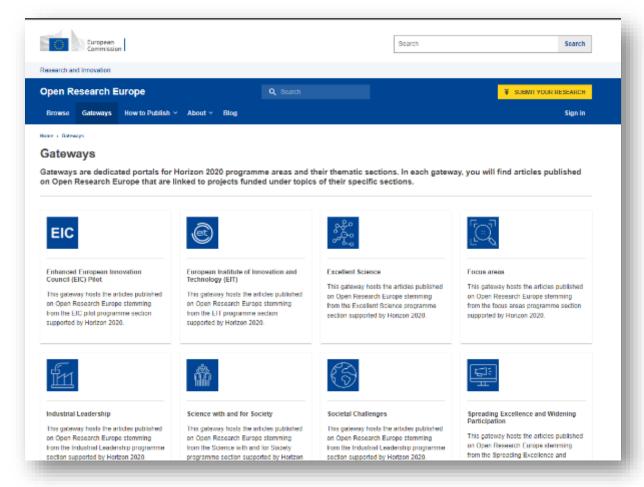
Publication costs: only eligible for funding from the grant if the publication venue is fully open access.



#### Resources to help

- Provisions for Open Science on pages 110 – 112 of the HEU Model Grant Agreement
- e-learning platform on open science
- Research Data Management in Horizon Europe Proposals
- FAIR Data Principles

### **Open Research Europe**



Scholarly publishing platform that will provide Horizon 2020 and Horizon Europe beneficiaries with a no-cost full open access peer-reviewed publishing service, across all fields of research

https://open-research-europe.ec.europa.eu/

### Why Gender?

Sex & Gender is not an extra criteria, but it could have a lot to do with your proposal's scientific excellence.

Make sure you think about it in your research design relative your field/discipline, evaluators might see this as a gap in your proposal.



#### Click here to watch an ERC workshop

ERC grantees talking about how the Sex and Gender Dimension is involved in each ERC domain

(Physical Sciences & Engineering, Life Sciences and Social Sciences & Humanities)

#### Some ideas to ponder:

- Integrating the gender dimension in R&I can be added value in terms of excellence and creativity
- S&G helps researchers question gender norms and stereotypes, to rethink standards and reference models **improve methodology**
- It can enhance the validity of results and the societal relevance of the knowledge, technologies and innovations produced.
- It also contributes to the **production of goods and services** better suited to potential markets not specifically important for winning an ERC but it could be a big deal further down the line.

#### **The Next Session**

• Register for the 2<sup>nd</sup> Information Webinar on Wednesday 12 June: <u>ukro.ac.uk/erc</u> and follow the links to events.

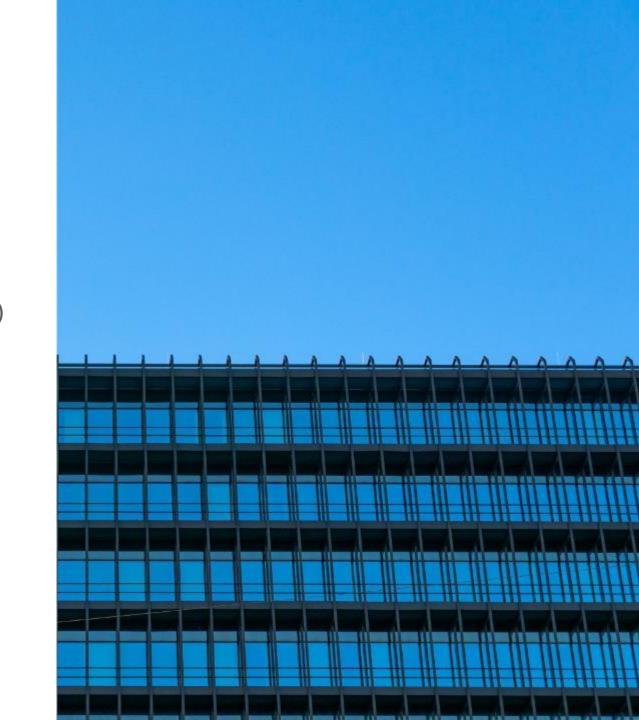
- Session 2 runs on Wednesday, from 10:00 12:00 UK time. We will cover:
  - Detailed explanation of how to submit the forms
  - How proposals are evaluated by the ERC
  - Guest presentation by the ERC on the 'lump sum' approach



#### **Useful links**

- ERC AdG 24 Call
- ERC work programme 2024
- Horizon Europe Model Grant Agreement
- Part B1/B2, Host Institution Support Template (pdf)
- <u>ERC Website</u>, including the easy to use <u>Project Database</u> and the more in depth <u>ERC Information System</u>
- Novelties in the Horizon Europe MGA Commission Stakeholder Workshop video







### **TESTIMONIAL**

**ERC-Grantee** 

# Prof Lucy Carpenter University of York



## ERC Advanced Grant Testimonial Prof Lucy Carpenter ERC Advanced Grant holder 2019-2025



- Introduction + my research activities
- How getting an ERC grant has affected my career
- Approach to the application process and top tips









### Research Career















PhD

Post Doc

Post Doc

Lecturer

Co-founded CVO

LETTERS

Co-founded WACL

geoscience

Professor (2009-)

#### Research highlights

Extensive halogen-mediated ozone destruction over the tropical Atlantic Ocean

Katie A. Read', Anoop S. Mahajan', Lucy J. Carpenter', Mathew J. Evans', Bruno V. E. Faria', Dwayne E. Heard', James R. Hopkins', James D. Lee', Sarah J. Moller', Alastair C. Lewis', Luis Mendes', James B. McQuaid',

LETTERS
PUBLISHED ONLINE: 13 JANUARY 2013 | DOI: 10.1038/NGE01687

Hilke Oetjen2, Alfonso Saiz-Lopez6, Michael J. Pilling2 & John M. C. Plane

nature geoscience

Atmospheric iodine levels influenced by sea surface emissions of inorganic iodine

Lucy J. Carpenter<sup>1</sup>\*, Samantha M. MacDonald<sup>2</sup>, Marvin D. Shaw<sup>1</sup>, Ravi Kumar<sup>2</sup>, Russell W. Saunders<sup>2</sup>, Rajendran Parthipan<sup>1</sup>†, Julie Wilson<sup>1,3</sup> and John M. C. Plane<sup>2</sup>\*

https://doi.org/10.5194/acp-16-12239-2016

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Research article | @① | 29 Sep 2016

Global impacts of tropospheric halogens (Cl, Br, I) on oxidants and composition in GEOS-Chem

Tomás Sherwen ⊠, Johan A. Schmidt, Mat J. Evans, Lucy J. Carpenter, Katja Großmann, Sebastian D. Eastham, Daniel J. Jacob, Barbara Dix, Theodore K. Koenig, Roman Sinreich, Ivan Ortega, Rainer Volkamer, Alfonso Saiz-Lopez, Cristina Prados-Roman, Anoop S. Mahajan, and Carlos Ordóñez

**PNAS** 

emissions

Alpine ice evidence of a three-fold increase in atmospheric iodine deposition since 1950 in Europe due to increasing oceanic

Michel Legrand D Joseph R. McConnet D Susanne Preunkert, ) and Lucy L. Carpenter Authors Info & Affiliations
Edited by Daviel J. Jucob, Harvard University, and accepted by Editorial Board Member A. R. Ravithankara October 16, 2018 (received for review)
June 7, 2018)

November 12, 2018 | 115 (48) 12136-12141 | https://doi.org/10.1073/pnas.1809867115

UBLISHED ONLINE: 13 JUNE 2016 | DOI: 10.1038.

Reversal of global atmospheric ethane and propane trends largely due to US oil and natural gas production

Detiev Heimigi\*, Samuel Rossabif, Jacques Hueber<sup>1</sup>, Pieter Tans<sup>2</sup>, Stephen A. Montzka<sup>2</sup>, Ken Masarie<sup>2</sup>, Kirk Thoning<sup>2</sup>, Christian Plass-Duelmer<sup>3</sup>, Anja Claude<sup>3</sup>, Lucy J. Carpenter<sup>4</sup>, Alastair C. Lewis<sup>4</sup>, Shalini Punjabi<sup>4</sup>, Stefan Reimann<sup>6</sup>, Martin K. Vollmer<sup>6</sup>, Rainer Steinbrecher<sup>7</sup>, James W. Hannigan<sup>8</sup>, Louisa K. Emmons<sup>8</sup>, Emmanuel Mahieu<sup>9</sup>, Bruno Franco<sup>9</sup>, Dan Smale<sup>10</sup>

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8 | RESEARCH ARTICLE | ATMOSPHERIC SCIEN

Extensive field evidence for the release of HONO from the photolysis of nitrate aerosols

HOME > SCIENCE ADVANCES > VOL. 9, NO. 3 > EXTENSIVE FIELD EVIDENCE FOR THE RELEASE OF HONO FROM THE PHOTOLYSIS OF.

BMONE T. ANGERSIN <sup>®</sup> . LUCY J. CARFENTER <sup>®</sup> . CHRIS REID <sup>®</sup> . JAMES D. LEE <sup>®</sup> . ROBE CHANCE <sup>®</sup> . TOMAS SHERWEN <sup>®</sup> .

ADMAL VAUGHAN <sup>®</sup> . JORDAN STEWART, ETT M. EDWARDS <sup>®</sup> . [1. AND SHANNEH WADRISH TOMAS <sup>®</sup> . 12 and one indo 8.

Additionals.

SCIENCE ADVANCES - 18 Jan 2023 - Vol 9, Issue 3 - DOI: 10.1126/sciadv.add6266



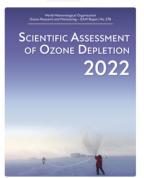


### Scientific community and leadership





















**Future Leaders Fellowships** 







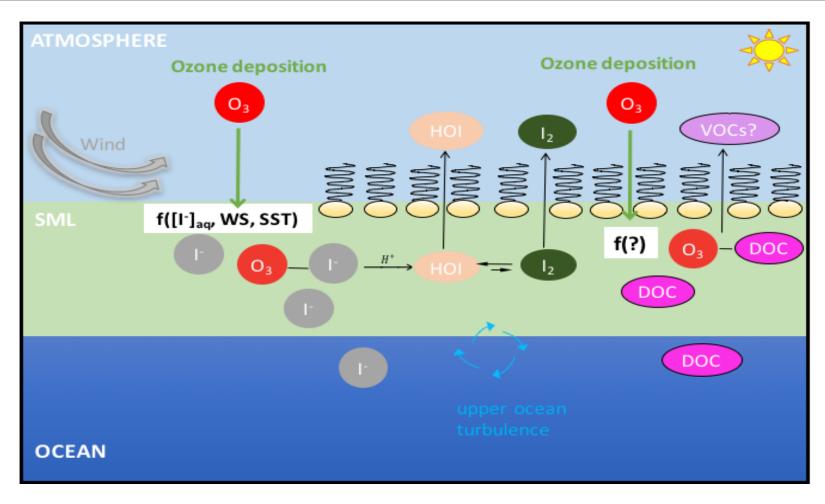




#### **ERC Advanced Grant Proposal**







Ozone dry deposition to the sea surface microlayer "O3-SML"

## How an ERC grant has affected my career





**2019 2020 2021 2022 2023 2024** 

### New/strengthened collaborations













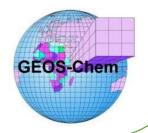




### Access to tools, facilities + new capabilities

- State of the art mass spectrometry
- Eddy covariance
- Kinetics
- Ocean/atmosphere modelling
- Biochemistry/ algal culturing
- Access to field work platforms







### New science opportunities





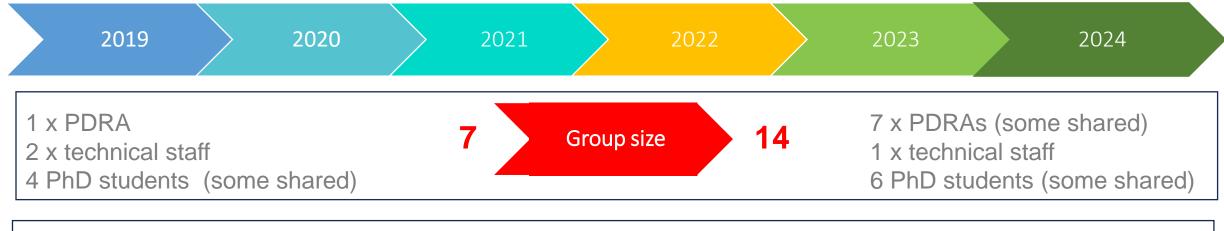


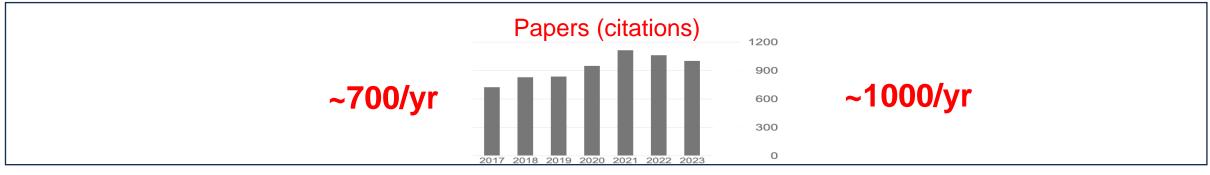


## How an ERC grant has affected my career – basic metrics









2 NERC grants;1 NERC contract

~£300k/yr

Grants

~£600k/yr

4 NERC grants; 1 NERC contract; 1 ERC; 1 EC; 1 EPSRC

## My approach to the application process













## My approach to the application process











2 months

### Top tips



- An exciting, ambitious ground-breaking vision
- High risk, high reward
- It goes beyond the state-of-the art
- Make it a pleasure to read
- Make sure they know that the topic is important (it doesn't have to be applied)
- Add urgency. Why has no-one else done this and why is now the right time?
- Paint a picture of your master plan and clearly outline how the grant will help you reach it
- Give yourself a lot of time (sabbatical?)
- Get feedback, refine, go again
- Make your expertise and innovation clear (but proposal matters more than the CV)

"must admit that initially the topic of this project sounded boring to me ("I thought all is known for this system") but reading this proposal convinced me of the importance of the suggested research."



Thank you, any questions?















