The European Research Council

All you need to know to apply for an ERC grant

EURAXESS India Webinar - 13/11/2024

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LS7 panel (Prevention, Diagnosis and Treatment of Human Diseases)



European Research Council

Established by the European Commission





1. ERC and ERC grant schemes

- 2. How to apply: prepare your proposal step-by-step
- 3. ERC opportunities for Indian researchers



ERC is Part of Horizon Europe (EU's key funding programme for research & innovation)

HORIZON EUROPE







EUR 16 billion ERC budget in Horizon Europe



17% of the entire Horizon Europe budget



ERC in figures



Over 14,000 top researchers funded since the ERC creation in 2007



Over **220,000** articles from ERC projects published in scientific journals



Over **90,000** researchers and other professionals employed in ERC research teams



Over **2,400** patents and other IPR applications generated by ERC funding



Over start-ups identified as founded or co-founded by ERC grantees



Over **900** research institutions hosting ERC grantees - universities, public or private research centres in the EU or Associated Countries



92 nationalities of grant holders



14 Nobel Prizes, 6 Fields Medals, 11 Wolf Prizes and other prizes awarded to ERC grantees



The Scientific Council establishes the work programme for the implementation of the ERC activities

Life Sciences





Liselotte

Geneviève ALMOUZNI (Molecular Cell Biology)



HØJGAARD KACZMARFK (Medicine) (Neurobiology)



Dirk IN7É (Plant Biology)



Leszek

Luke O'NEILL (Biochemistry & Immunology)



Jesper **SVEJSTRUP** Vice-President

(Biochemistry)

Eystein JANSEN Vice-President (Earth Science)



Maria LEPTIN **ERC** President (Cell Biology)



Gerd GIGERENZER (Psychology)



Harriet BULKELEY (Geography)

Mercedes GARCÍA-ARENAL (History)



Torsten PERSSON (Economics)



Social Sciences and Humanities



Giovanni SARTOR (Law)

Milena **ŽIC FUCHS** (Linguistics)

Physical Sciences and Engineering



(Organic

Chemistry)



Tom HENZINGER (Computer Science)



Sylvie KOUVELIOTOU LORENTE (High-Energy (Mechanical Astrophysics) Engineering)







Engineering)

Björn **OTTERSTEN** (Electric





Nicola SPALDIN (Materials Theory)

Alice VALKÁROVÁ



ERC grants are long-term grants...





... that go to the very best scientists ...



European Research Council Established by the European Commission

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The ERCEA

The ERC Executive Agency

- Implements the ERC strategy as set by the Scientific Council
- Manages ERC operations (e.g. organises peerreview evaluations, follows up on projects funded)
- ~ 500 staff, of which ~ 130 scientific





Why apply for an ERC grant?

ERC offers independence, recognition & visibility to:

- work on a **research topic of own choice**;
- gain **financial autonomy** for five years;
- negotiate the **best conditions of work** with the host institution;
- attract excellent team members and collaborators from anywhere in the world;
- **move** with the grant to any place in Europe if desired ("portability of grants")
- obtain additional funding.



ERC grants are substantial long-term grants





bridging gap between research - earliest stage of marketable innovation

lump sum €150,000 for ERC grant holders

Excellence is the sole evaluation criterion!

Excellence of the Research Project

- ✓ Ground-breaking nature
- ✓ Scientific Impact
- Scientific approach

Excellence of the Principal Investigator

- Intellectual Capacity
- Creativity
- Commitment

Panels will primarily evaluate the excellence of the project, while evaluating the ability of the PI to carry out the project



Who can apply?

Researchers (PIs)

- of any nationality
- of any age (>2 yrs from PhD)
- from any current working place in the world
- on any topic (bottom-up)
- requirement letter of support from a Host Institution (HI), which must be based in the EU or associated countries





Open to the world

Researchers of any nationality, also if (at the time of application) based outside Europe, can apply to the ERC – but the HI must be in the EU or an Associated Country



- Additional funding is available to cover 'start-up' costs for scientists moving to Europe
- Dual affiliation is possible: ERC grantees are required to spend 50% of their time in Europe/ERA (EU Member State or Associated Country)
- SyG as of 2019: possible for one PI to be based outside the EU or AC
- ~50 non-EU/Associated Country PI nationalities 8% of ERC grants to third country PIs
- ~17% of project team members from third countries can also be based outside ERA





1. What is the ERC

2. <u>How to apply: prepare your proposal step-by-step</u>

3. ERC opportunities for Indian researchers



Step 1: Get the information (early on)!

- Register early, get familiar with the European Commission's Funding and Tender portal and download the templates
 - <u>https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home</u>
- Read the call documents (*Information for Applicants, Work Programme, Frequently Asked Questions*) that explain how to prepare your proposal
- Talk to your Institution's grant office
- Talk to ERC grantees
- Contact the ERCEA to ask all your questions well ahead of the submission deadline e.g., <u>ERC-2025-STG-APPLICANTS@ec.europa.eu</u>, <u>ERC-2024-COG-APPLICANTS@ec.europa.eu</u>, <u>ERC-2025-ADG-APPLICANTS@ec.europa.eu</u>
- Get the written consent of your collaborators before the submission deadline (a simple email exchange is OK)

Step 1: Get the information (early on)!

Other useful links:

- ERC page for all grants: <u>https://erc.europa.eu/apply-grant</u>
- ERC 2025 Workprogramme: <u>https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2025/wp_horizon-erc-2025_en.pdf</u>
- Information for Applicants: <u>https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/information-for-applicants_he-erc-stg-cog_en.pdf</u>



Step 2: Choose Host Institution (HI)

- Your choice (in an EU Member State/Associated Country)
- You can change it during the project's life
- Negotiate with the HI (your position, equipment, administrative support, access to infrastructure, etc.)

Rumour: The quality/fame of the HI is increasing my chances/scores.

XNOT true: the HI is not an evaluation criterion!



Step 3: Choose your grant type & make sure you are eligible!

 Eligibility window is calculated according to the 1st of January of the year of the Call: StG 2025: 1 January 2018 to 31 December 2022 (inclusive) CoG 2025: 1 January 2013 to 31 December 2017 (inclusive)

The reference date is the certified date of the successful defence of the first PhD degree

- If you previously applied to an ERC call, check resubmission restrictions
- Minimum 50% of PI working time in an EU Member State or Associated Country
- Time commitment on the project: Min. 50% (StG), 40% (CoG), 30% (AdG/SyG)



Step 3: Choose your grant type & make sure you are eligible!

- Extensions of eligibility window possible for StG and CoG for documented cases of:
 - Maternity 18 months per child (before or after PhD)
 - Paternity actual time taken off
 - Long-term illness (for the Principal Investigator or a close family member (child, spouse, parent or sibling))
 - Military service
 - Clinical training
 - Natural disaster
 - Seeking asylum
 - Disability
- No limit to the total years of extension



Step 4: Choose your Panel! Evaluation Panel Structure 2024

Life Sciences

- LS1 Molecules of Life: Biological Mechanisms, Structures and Functions
- LS2 Integrative Biology: From Genes and Genomes to Systems
- LS3 Cell Biology, Development, Stem Cells and Regeneration
- LS4 Physiology in Health, Disease and Ageing
- LS5 Neuroscience and Disorders of the Nervous System
- LS6 Immunity, Infection and Immunotherapy
- LS7 Prevention, Diagnosis and Treatment of Human Diseases
- LS8 Environmental Biology, Ecology and Evolution
- LS9 Biotechnology and Biosystems Engineering

Physical Sciences & Engineering

- PE1 Mathematics
- PE2 Fundamental Constituents of Matter
- PE3 Condensed Matter Physics
- PE4 Physical and Analytical Chemical Sciences
- PE5 Synthetic Chemistry and Materials
- PE6 Computer Science and Informatics
- PE7 Systems and Communication Engineering
- PE8 Products and Process Engineering
- PE9 Universe Sciences
- PE10 Earth System Science
- PE11 Materials Engineering

Social Sciences and Humanities

- SH1 Individuals, Markets and Organisations
- SH2 Institutions, Governance and Legal Systems
- SH3 The Social World and Its Interactions
- SH4 The Human Mind and Its Complexity
- SH5 Texts and Concepts
- SH6 The Study of the Human Past
- SH7 Human Mobility, Environment, and Space
- SH8 Studies of Cultures and Arts



Choosing the right Panel is very important!

- Proposals are initially assigned to the Panel of the PI's choice.
- The PI can flag one "Secondary Review Panel" → the PI must explain the interdisciplinary nature of the proposal in Part B1.
- Transfer of proposals between panels may occur if:
 - there is a clear mistake on part of the applicant.
 - the necessary expertise is available in a different panel.

Rumour: Choose the panel "strategically" in order to increase chances of success

×NOT true: Choose the panel that best fits the proposal. The budget is distributed among the scientific panels as a function of demand → success rate is equal amongst panels!



Evaluation procedure and scoring system - individual grants





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The proposal is of sufficient quality to pass to Step 2 of the evaluation The proposal is of high quality but not sufficient to pass to Step 2 of the evaluation The proposal is not of sufficient quality to pass to Step 2 of the evaluation

Feedback to applicants

Step 5: Preparing your application





Part A: Carefully choose your descriptors and free keywords!

Descriptors and free keywords

- influence which Panel will evaluate your proposal
- are the basis of allocation to the panel members
- will determine whether a cross-panel evaluation is necessary

Rumour: The panel descriptors represent ERC scientific priorities

XNOT true: The panel descriptors are indicative so that Pls can see what expertise is in the Panel. It is the Pls that choose the subject of their proposal and the Panels use the excellence criterion to judge whether it should be funded.

Rumour: The more cross-panel descriptors I indicate, the higher the funding chances, since I emphasize like this the interdisciplinarity of my proposal.

XNOT true: even though these are used to allocate proposals to Panel Members, once the proposals are allocated, the Panel Members do not see the keywords and descriptors used.



Part B1: Research Project



Evaluation <u>primarily focused</u> on the ground-breaking nature, ambition, and feasibility of the <u>proposed research project</u>

- Streamlined evaluation questions
- No explicit reference to 'high-risk/high-gain'
 - Instead: 'ground-breaking, ambitious, and feasible'.
 - The ERC will always encourage risky research.
- No explicit reference to 'novel methodologies'
 - 'Novel methodologies' is an element that may be positive but is not strictly necessary for an excellent proposal.

<u>Questions for reviewers:</u> Ground-breaking nature, ambition, and feasibility

To what extent does the proposed research address important challenges?

To what extent are the objectives **ambitious and beyond the state of the art (e.g., novel concepts and approaches or development between or across disciplines)?**

To what extent is the outlined scientific approach **feasible** bearing in mind the groundbreaking nature and ambition of the proposed research (Step 1)?

To what extent are the proposed research **methodology and working arrangements** appropriate to achieve the goals of the project (Step 2)?

To what extent are the **proposed timescales**, **resources**, and **PI commitment** adequate and properly justified (Step 2)?



Part B1: Research project

Questions to ask yourself



- Is my project new, innovative, bringing in new solutions/theories?
- Does it promise to go substantially beyond the state of the art?
- Why is my project important? Answering a complete question (not only 'what' but also 'why') Think Big! Make sure that your idea needs an ERC to do it
- How can I prove/support my case? Do I have a hypothesis? Do I have supporting evidence? Have I proven the project's feasibility? Are my goals realistic?
- Is it timely? (Why wasn't it done in the past?)
- What's the risk? Is it justified by a substantial potential gain? Do I have a plan for managing the risk? Make sure that your risk is not too early on in the project. Have I proposed alternatives?
- Why am I the best/only person to carry it out? Know your competitors what is the state of play, and why is your idea and scientific approach outstanding compared to them?
- Have I given a realistic picture of my collaborations? Show that you can drive the collaborations but that it is *you* who will be leading the project.



Part B1: CV and Track Record



- No prescriptive Principal Investigator profiles. Instead, 3 sections:
- 1. PERSONAL DETAILS

PI's education and key qualifications, current position(s) and relevant previous positions they have held.

- 2. RESEARCH ACHIEVEMENTS (<=10) AND PEER RECOGNITION
 - demonstrating advancement in the field, with emphasis on more recent achievements
 - prizes, fellowships, academy membership, etc.

The applicant can provide a **short, factual narrative** on the significance of the listed achievements and recognitions in relation to the research field and the proposed project.

3. ADDITIONAL INFORMATION

Relevant additional information on their research career to <u>provide context</u> when assessing their research achievements and peer recognition.

- career breaks, diverse career paths, life events
- other noteworthy contributions to research community



Part B1: CV and Track Record

- Use the recommended template with the 3 sections as much as possible.
- Explain what has been your own contribution to your publications/how they have impacted the field
- Convince the panel that you are the forefront of your research field
- Explain publishing habits in your field and country if needed.
- Describe accurately any other activity that can indicate scientific maturity
- If you know that you have gaps or other issues in your CV, explain them in the Additional Information section



Rumour : One needs publications in Nature/Science/High IF journals to succeed.
 ×NOT true: however, publishing with senior scientists (former supervisors) may raise doubts about maturity/scientific independence.

No numerical scoring of the Principal Investigator, instead an overall assessment of PI's intellectual capacity and creativity, with a focus on the extent to which the PI has the required scientific expertise and capacity to successfully execute the project

Part B1: CV and Track Record

Questions to ask yourself

- Have I shown my scientific leadership?
- Am I able to work independently, and to manage a 5year project with a substantial budget? List prior research endeavours, explain your role and contribution.
- Am I internationally active? Speaker in international conferences, served in committees, have become an editor, given expert service, etc. Do I have any international collaborations?

<u>Questions for reviewers:</u> Intellectual capacity and creativity

To what extent has the PI demonstrated the **ability** to conduct ground-breaking research?

To what extent does the PI provide evidence of creative and original thinking?

To what extent does the PI have the **required scientific expertise and capacity** to successfully execute the project?





Part B1 is all about finding the right balance

Part B1 gives the first impression of your project/yourself and will determine if you pass to Step 2, therefore:

- avoid jargon
- no excessive highlighting
- do not oversell it
- make sure there are no typos
- make it as accessible as possible to a generalist (have it proof-read by many people)
- make sure that there are proper legends to the figures/tables as well as that the figure axes are clearly visible



Part B2 is for filling in the details

- Make sure that there is an obvious link between B1 and B2 no surprises
- Make the project easy to read and attractive
- Use full space available (14 p.)
- Make sure you give full references (these are excluded from page count so there is no excuse)
- You should add/describe some sort of timeline
- Do not repeat the synopsis, go into details on your methodology and work plan
- Explain your hypothesis or provide supporting evidence (if it exists)
- Make sure that the quantitative and qualitative differences to the state-of-the-art are clear and referenced show you did your homework!
- Provide alternative strategies to mitigate risks.
- Fill in your Funding ID fully.
- Think the project as a team explain involvement of team members and collaborators (be careful though: ERC proposals are NOT consortium proposals)

Part B2: Explain properly your resources and budget

- Budget analysis carried out in Step 2 evaluation
- Panels have responsibility to ensure that resources requested are reasonable and well justified
- Budget cuts need to be justified on a proposal-by-proposal basis (no across-the-board cuts).
- Costs can be cut when they have not been explained
- Panels do not "micro-manage" project finances
- Awards made on a "take-it-or-leave-it" basis: no negotiations.
- Ask for funding for Open Access this is obligatory in HorizonEurope

Rumour 1: If I do not ask for a large sum, I have no chances- only complex and expensive projects get funded. ***NOT true**: There are many areas where it may make little or no sense to ask for the maximal amount of funds. No grant was ever rejected for asking too few funds.

Rumour 2: Ask for funding beyond the max, the panel will anyhow cut it down.

***NOT true**: unexplained or non-motivated requests can be cut down, so if you artificially inflate your budget, the extra funding will be indeed cut.

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I have been invited for an interview – now what?

- Have clear and representative slides and focus on SCIENCE! Don't try to make a business presentation you are talking to scientists.
- Keep the time
- Try to anticipate questions. Prepare also for cases where you do not have an answer
- Give to the point answers- be mindful not to talk too much in an unfocussed way
- Know the details of your proposal and methods, as well as your research area who are your main competitors/collaborators?
- If you have new work on the topic present it!



Typical reasons for rejection

Research Project

- <u>Scope</u>: Too narrow $\leftarrow \rightarrow$ too broad/unfocussed
- Not clear groundbreaking aspects/Incremental research
- Collaborative project, <u>several PIs</u>
- Work plan not detailed enough/unclear
- Insufficient <u>risk</u> management
- Part B2 did not give sufficient information on the methodology- concerns on feasibility

Principle Investigator

- Insufficient <u>track-record</u>
- Not clear they can carry out the project (not independent, lack of relevant expertise)



If rejected, KEEP TRYING

Reapplications have a higher success rate Use the feedback from evaluation reports



- 1. What is the ERC
- 2. How to apply: prepare your proposal step-by-step
- 3. ERC opportunities for Indian researchers



Opportunities for researchers in Third Countries (non-EU, non-AC)

Main grants (Starting, Consolidator, Advanced):

- Additional "start-up" funding for scientists moving to Europe (EUR 1 Million irrespective of grant scheme)
- Grantee can keep affiliation with home institute outside Europe ("significant part" of work time in Europe, at least 50%)
- Team members can be based outside Europe, depending on project



ERC Synergy grants: open to the world

One Principal Investigator per Synergy Grant Group (except the Coordinator) can be based in a Third Country





ERC Synergy Grant features



Competitive track record (StG/CoG/AdG)

> ≥ 30% project time ≥ 50% in EU/AC

Unchanged PI composition during the whole duration of the grant

Corresponding PI is an administrative role, it is NOT the leading PI





1 - 4 Hls

HI in EU/AC 1 HI can be outside EU/AC

No other limitations on geographical settings



Max. 6 years



10 + 4 million

- The Implementing Arrangements are international initiatives promoting opportunities for researchers to visit and collaborate with ERC teams, partially supported by non-European agencies. The following Implementing Arrangements have been signed in India:
 - Signed in 2017 with the Science and Engineering Research Board (SERB)
 - Signed in 2020 with the Indian Council of Social Science Research (ICCSR)



How to apply?

Positions in ERC-funded projects are available following ERC <u>calls for Principal Investigators (PIs) to express an interest</u> in hosting scientists supported by non-European funding agencies. The ERC then sends each funding agency a listing of interested PIs or teams, with a description of their projects.

A Step by step PI

- Check for yourself whether you are eligible for funding under one of the Implementing Arrangements.
- Follow the instruction published by the relevant funding agencies and ask for the list of interested ERC PIs.
- If you are eligible, the agency will provide you with the list.
- You can then contact a participating ERC PI to express an interest in visiting their research team.
- When you and the ERC PI have agreed on the details of the visit, the Host Institution will provide you with a 'letter of intent' or 'support letter' on behalf of the PI to support your application for funding to the relevant agency.
- · Apply directly to the funding agency
- The funding agency will evaluate all the applications and fund the successful one.







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Арр	ly for a grant Manage your project Projects & statistics Support News & events About the ERC
Starting Grant	Additional opportunities
Consolidator Grant	
Advanced Grant	You can develop your career through public funding linked to ERC projects, even if you do not receive an ERC Grant.
Proof of Concept	There are 4 routes for this: • <u>Jobs in ERC teams</u> : Recipients of ERC grants can use their funding to recruit other researchers and team members for their project. On average, each team has 4-5 members. Since its inception, ERC funding has helped create jobs for thousands of researchers.
Synergy Grant	<u>Visiting Fellowships Programmes</u> : Several European countries fund research visits to established ERC projects develop researchers' potential before they apply for their first ERC grant.
Panel members	 Implementing Arrangements: International agreements with non-EU funding agencies and science ministries to support researchers to temporarily join ERC teams in Europe.
For non-EU researchers	• Mentoring Initiative : the mentoring initiative will boost existing support programmes for ERC applicants by helping to identify international experts to provide coaching and advice.



https://erc.europa.eu/apply-grant/additional-opportunities

ERC IA State-of-play: ERC PIs Participation 2012-2023

	Number	of ERC grar	ntees expre	essed inter	est to host	non-Euro	pean resea	rchers	·	·		
Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
USA	789	676	372	507	380	312	423	730	766	748	850	931
South Korea Pl		492	351	358	319	256	341	570	658	599	689	763
China				402	293	249	332	566	620	562	627	662
Japan JSPS				453	345	287	377	634	697	654	751	839
Argentina				378	296	245	322	542	617	577	674	732
South Africa				358	279	240	312	539	612	570	660	707
Brazil					303	249	329	545	616	575	665	758
Mexico					294	242	316	534	601	566	668	714
Canada					353	289	392	660	714	666	783	856
India SERB Early						224	301	514	569	531	626	666
Japan JST							370	625	698	645	732	825
Australia NHMRC							369	610	668	624	716	805
South Korea PhD							325	541	636	581	684	751
India SERB PhD							276	468	543	491	593	619
Australia ARC								647	705	667	768	845
Singapore								584	667	600	698	754
Japan AMED									648	579	675	750
India ICSSR									569	528	618	658
Thailand											600	645
Average	789	584	362	409	318	259	342	582	645	598	688	752



ERC IA State-of-play: visits to ERC projects 2012-2022

	Number of visiting researchers by year and by country											
Country	2012	2013	2014	2015	2016	2017	2018	2019†	2020†	2021*	2022**	Total
Japan AMED											4	4
India ICSSR												0
Singapore								3				3
Australia ARC								2	1			3
Japan JST							6	2			3	11
Australia NHMRC												0
India SERB						5						5
Canada					3	3	1					7
Mexico					5	4						9
Brazil					12	22	37		30	25		126
Argentina				5	5					5		15
China				11	12	7	8	22		20	20	100
Japan JSPS				3	13	2	11	13	3	15		60
South Africa				5	2	1	2			1	3	14
Republic of Korea		31	28	30	30	35	32					186
USA	12	23		11			3	18	15	32	26	140
Total	12	54	28	65	82	79	100	60	49	98	56	683

+ For 2019-2020 ERC calls for EoI, many countries did not launch or postponed internal calls, because of pandemics mobility limitations. * Many visits for 2021 ERC call for EoI started on 2022 because of pandemics mobility limitations. ** Preliminary data for 2022 ERC call for Eol.



ERC Indian grantees

Total (2007-2024)

PI nationality	Starting	Consolidator	Advanced	Total
USA	202	88	142	432
Canada	69	40	20	129
China	65	23	1	89
India	51	27	3	81
Australia	34	26	17	77
Russia	46	19	12	77
Japan	21	13	10	44
Argentina	18	7	2	27
New Zealand	13	7	6	26
Brazil	13	6	1	20
Mexico	12		1	13
Iran	11	1		12
Korea	7	4	1	12
Chile	9	2		11
Singapore	6	5		11
Other	59	21	11	91
Total	636	289	227	1152

Horizon Europe only (2021-2024)

India	
CoG	5
StG	21
Total	26

Source: CORDA



ERC Indian team members Horizon 2020

In ~2,000 H2020 grants, over 18% team members were from:





Thank You!

More information: erc.europa.eu



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