



EURAXESS is a European Commission's Directorate-General for Research and Innovation initiative

# Horizon Europe – Pillar I

Horizon Europe Info Day New Zealand

27 September 2021

**Nishant Shandilya**

**Regional Coordinator**

**EURAXESS Australia and New Zealand**

# Outline

## Marie Skłodowska-Curie Actions (MSCA)



## European Research Council (ERC)



**European Research Council**

Established by the European Commission

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## Marie Skłodowska-Curie Actions (MSCA)



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## A. Marie Skłodowska-Curie Actions (MSCA)

- **Support the mobility, training and career development** of researchers from **all over the world** through excellent doctorates, postdoctoral fellowships and collaborative projects
- Stimulating **international, inter-sectoral and interdisciplinary** cooperation
- For researchers at **every stage** of their career
- Promotion of **attractive working and employment** conditions (financing rate of up to 100%, Charter and Code)
- Support excellent research in all domains (**bottom-up**)
- Open to all organisations. Participation of **non-academic sector** strongly encouraged, especially industry and SMEs
- Impacting **researcher careers, organisations, structures**



## Aa. MSCA – Figures in Horizon 2020

**+65,000**

Researchers,  
including  
25,000 PhD  
candidates

**50 %** of all third  
countries'  
participations in  
H2020

37% of researchers  
from outside of the  
EU

**6.2 billion €**

Under Horizon  
2020

**+1,000**

Doctoral  
programmes

**+4,500**

Companies  
supported

**42%**

Female  
researchers

## Ab. MSCA – Under Horizon Europe



1. MSCA Doctoral Networks
2. MSCA Postdoctoral Fellowships
3. MSCA Staff Exchanges
4. MSCA COFUND

→ *networks training PhD candidates*  
→ *postdoctoral researchers*  
→ *any type of research(-related) staff*  
→ *co-funding for training programmes*



## Ac. MSCA – Doctoral Networks

- **Multi-beneficiary action** to set up innovative **doctoral programmes**, including:
  - **Industrial Doctorates**
    - ✓ Training in academia and industry
    - ✓ Joint supervision
  - **Joint Doctorates**
    - ✓ Joint collaborations leading to a joint/double/multiple doctoral degree
    - ✓ Joint selection, supervision and governance structure
    - ✓ Pre-agreement for joint degrees required
- **Target group**
  - **doctoral candidates**, i.e. researchers without a doctoral degree at the date of the recruitment; mandatory enrolment in a doctoral programme in at least 1 EU MS/AC (at least 2 for Joint Doctorates)
- **Focus** on **career development plan, supervision, training**: research and transferable skills
- **Who applies?**
  - **consortia** of universities, research institutions and research infrastructures, businesses including SMEs, and other socio-economic actors; each beneficiary to recruit at least 1 researcher
  - at least **three independent legal entities**, each established in a different MS or AC; minimum of 1 beneficiary from a MS (on top of this minimum, any entity from any third country can join)



## Ad. MSCA – Postdoctoral Fellowships

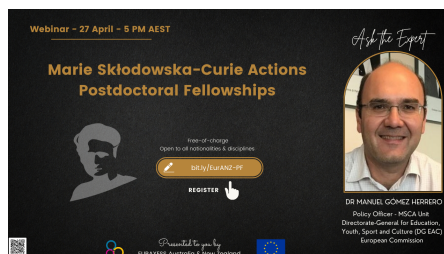
- **Mono-beneficiary action** to support **postdoctoral research** and careers
- Architecture simplification - **Two types of Fellowships:**
  - **European Fellowships:** researchers of any nationality moving within or coming to Europe
  - **Global Fellowships:** European nationals or long-term residents in Europe to do research abroad
  - **Discontinuation of panels** (Career Restart, Reintegration, Society and Enterprise) – mainstreaming- replacement with **incentives**
- Continue funding **all research domains** including areas covered by **EURATOM**
- Improved guidance towards **career development** (plan & supervision)
- **Recruited researchers – Target groups**
  - **Mobility rule!!!:** must not have resided or carried out their main activity (work, studies, etc.) in the country of the beneficiary (for EF), or the host organisation for the outgoing phase (for GF) for more than 12 months in the 36 months immediately before the call deadline.
  - In possession of **PhD** degree at the call deadline
  - **Up to 8 years** of research experience after PhD at the call deadline, with **exceptions:**
    - Years **outside research, career breaks, work outside Europe** (for those reintegrating to Europe) will not be counted





# Ad. MSCA – Postdoctoral Fellowships

- **Who applies?**
  - **Single legal entity** established in an EU Member State or HE Associated country (specific conditions for EURATOM areas), **jointly** with the researcher
- **Duration**
  - **European Fellowships: 12-24 months**
  - **Global Fellowships: 24-36 months** (12-24 outgoing + 12 months mandatory return phase in Europe)
  - **Secondments worldwide up to 1/3 of the fellowship duration** (outgoing phase for Global Fellowships)
  - Optional **additional placement of up to 6 months in a non-academic** European organization, at the end of the fellowship (EF/GF) to build bridges between sectors
- **Seal of Excellence** continues



Webinar - 27 April - 5 PM AEST

*Ask the Expert*

**Marie Skłodowska-Curie Actions  
Postdoctoral Fellowships**

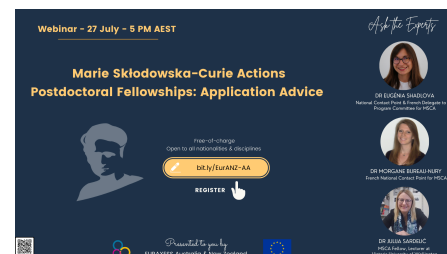
Free-of-charge  
Open to all nationalities & disciplines

[bit.ly/EurANZ-19](https://bit.ly/EurANZ-19)

REGISTER

DR MANUEL GÓMEZ HERRERO  
Policy Officer - MSCA Unit  
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European Commission

Presented to you by  
EURAXESS Australia & New Zealand



Webinar - 27 July - 5 PM AEST

*Ask the Experts*

**Marie Skłodowska-Curie Actions  
Postdoctoral Fellowships: Application Advice**

Free-of-charge  
Open to all nationalities & disciplines

[bit.ly/EurANZ-AA](https://bit.ly/EurANZ-AA)

REGISTER

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Presented to you by  
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## Ae. MSCA – Staff Exchanges

- **Multi-beneficiary action** to support **collaborative R&I activities through staff exchanges**
- **Target group:** any type of staff at any stage of career contributing to research activities (researchers, administrative & managerial staff, technicians, infrastructure operators...)
- **Focus** on international, inter-sectoral, interdisciplinary secondments leading to knowledge transfer between participating organisations and strengthening long-term collaborations. Emphasis on the added-value of the collaboration.
- **Who applies?**
  - **consortia** of universities, research institutions and research infrastructures, businesses including SMEs, and other socio-economic actors
  - **at least three independent legal entities in three different countries**, two of which established in a different EU Member State or Horizon Europe Associated Country.
  - If all participating organisations are from the same sector (i.e. either only academic or only non-academic), there must be at least one organisation from a non-associated Third Country



## Af. MSCA – COFUND

- **Mono-beneficiary action to co-fund** new or existing national, regional, institutional schemes for **doctoral** training and **postdoctoral** fellowships
- **Target groups**
  - **Doctoral candidates**, i.e. researchers without a doctoral degree at the deadline of the co-funded programme's call; mandatory enrolment in a doctoral programme
  - **Postdoctoral researchers**, i.e. researchers with a doctoral degree at the deadline of the co-funded programme's call
- **Focus**
  - Spread **best practices** of the MSCA by promoting **high standards** in the recruitment process and **excellent working conditions**
  - Introduce **sustainable structuring effects**, by promoting excellent and sustainable research training
  - Encourage **synergies** with Cohesion policy funds as well as the Recovery and Resilience Facility. Programmes could focus on specific disciplines, notably when based on RIS<sup>3</sup>.
- **Who applies?**
  - **Single legal entity** established in an EU Member State or HE Associated country
  - A minimum of three researchers must be recruited.

## Ag. MSCA – WP 2021 - 2022 Calls

	CALL	2021		CALL	2022	
		opening closing	budget (M€)		opening closing	budget (M€)
Open	Doctoral Networks	22/06/21 16/11/21	402,95	Doctoral Networks	03/05/22 15/11/22	427,28
Open	Postdoctoral Fellowships	22/06/21 12/10/21	242	Postdoctoral Fellowships	13/04/22 14/09/22	257
	Staff Exchanges	07/10/21 09/03/22	72,50	Staff Exchanges	06/10/22 08/03/23	77,50
	COFUND	12/10/21 10/02/22	89	COFUND	11/10/22 09/02/23	95

## Ah. MSCA – New Zealand Participation (2014 -2020)

### H2020 Key facts and figures (2014-2020)

Number of NZ researchers funded by MSCA:	<b>68</b>
EU budget awarded to NZ organisations (EUR million):	<b>N/A</b>
Number of NZ organisations in MSCA:	<b>12</b>

Action	Number of Participations of NZ organisations*		EU contribution (in EUR million) to NZ organisations	Number Of Projects	NZ researchers involved	Researchers going to NZ organisations
COFUND	N/A	(-)	N/A	N/A	13	0
IF	15	(15)	N/A	15	27	15
ITN	5	(5)	N/A	5	13	0
RISE	26	(26)	N/A	23	15	80
<b>Total:</b>	<b>46</b>	<b>(46)**</b>	<b>N/A</b>	<b>43</b>	<b>68</b>	<b>95</b>

\* Number of Participations is the number of participations by organisations i.e. the total number of times that organisations in this country have participated in each action.

\*\*In brackets - partner organisations (included in the total number).

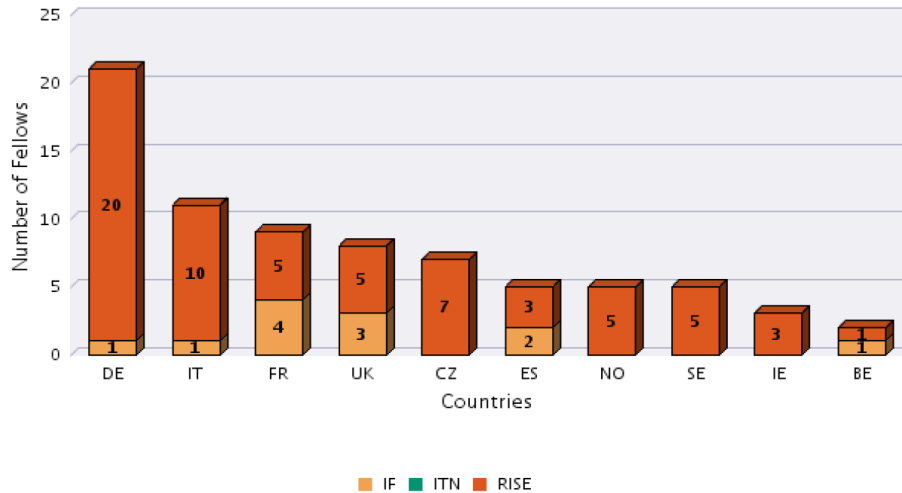
## Ah. MSCA – New Zealand Participation (2014 -2020)

### Top NZ participating organisations in terms of number of participations

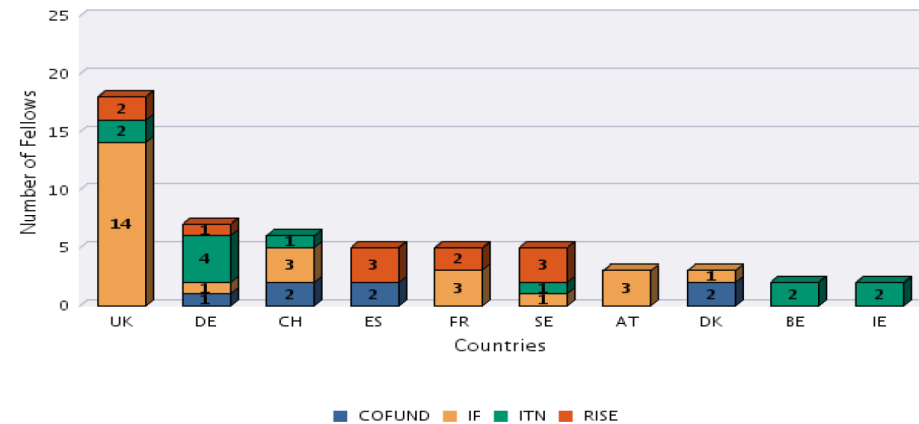
Name	Number of participations
THE UNIVERSITY OF AUCKLAND	20
UNIVERSITY OF OTAGO	6
UNIVERSITY OF CANTERBURY	3
NATIONAL INSTITUTE OF WATER AND ATMOSPHERIC RESEARCH	3
Massey University	3

# Ah. MSCA – New Zealand Participation (2014 -2020)

Fellows going to NZ, grouped by their nationality (top 10 nationalities)

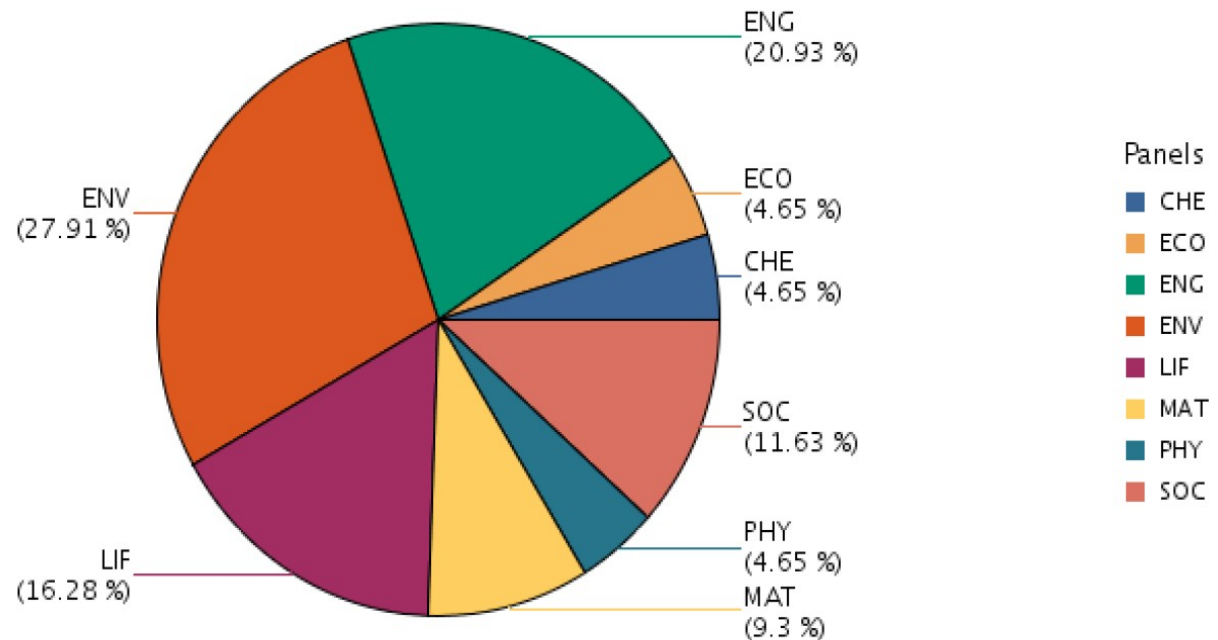


NZ fellows (nationals) grouped by country of destination (top 10 countries)



# Ah. MSCA – New Zealand Participation (2014 -2020)

Project distribution by scientific panel (NZ)





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## B. European Research Council (ERC)



EUR 16 billion  
ERC budget in Horizon Europe



17%  
of the entire  
Horizon Europe budget



European Research Council  
Established by the European Commission

INDIVIDUAL RESEARCHERS  
FROM ALL OVER THE WORLD  
**LONG TERM  
GRANTS**

TO HIGH-RISK/HIGH-GAIN PIONEERING PROJECTS  
IN ANY FIELD OF FRONTIER RESEARCH



Life Sciences



Physical Sciences and Engineering



Social Sciences and Humanities

## Ba. ERC – In Figures



**>12,000**  
Total projects funded by  
ERC since 2007



**85**  
Nationalities  
(ERC grantees)



**35**  
EU and Associated  
Countries hosting ERC  
projects



**>150,000**  
publications reported  
by ERC projects



**>1,300**  
prestigious prizes  
awarded to  
ERC grantees



**>80,000**  
researchers and other  
professionals  
hired in ERC teams

## Bb. ERC – Grant Schemes

### Starting Grants

- 2-7 years after PhD
- up to € 1.5 Mio
- for 5 years
- success rate: ~13.1%

### Consolidator Grants

- 7-12 years after PhD
- up to € 2 Mio
- for 5 years
- success rate: ~12.3%

### Advanced Grants

- track-record of significant research achievements in the last 10 years
- up to € 2.5 Mio
- for 5 years
- success rate: ~9.8%

### Proof-of-Concept

- bridging gap between research - earliest stage of marketable innovation
- lump sum €150,000 for ERC grantees, for 18 months

### Synergy Grants

- 2 – 4 Principal Investigators
- up to € 10.0 Mio, for 6 years
- 1 PI can be based outside EU/AC

## Bc. ERC – 2021-2022 Call Calendar

	Starting Grant	Consolidator Grant	Advanced Grant	Synergy Grant
WP	2022	2022	2022	2022
Open	23-09-2021	19-10-2021	20-01-2022	15-07-2021
Closure	13-01-2022	17-03-2022	28-04-2022	10-11-2021
Budget	749M	776M	555M	297M
Estimated no. of grants	502	388	223	33

## Bd. ERC – Minimum Time Commitment

Minimum percentage of the working time of a Principal Investigator that must be spent	Starting Grant	Consolidator Grant	Advanced Grant
On the ERC project	50%	40%	30%
In an EU Member State or Associated Country	50%	50%	50%

## Be. ERC – Panel Structure

### Life Sciences (LS)

- LS1 Molecules of Life: Biological Mechanisms, Structures and Functions
  - LS2 Integrative Biology: from Genes and Genomes to Systems
  - LS3 Cellular, Developmental and Regenerative Biology
  - LS4 Physiology in Health, Disease and Aging
  - 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
- 
- 3 Domains / 27 Panels
  - Operated by the Scientific Department B

### Social Sciences and Humanities (SSH)

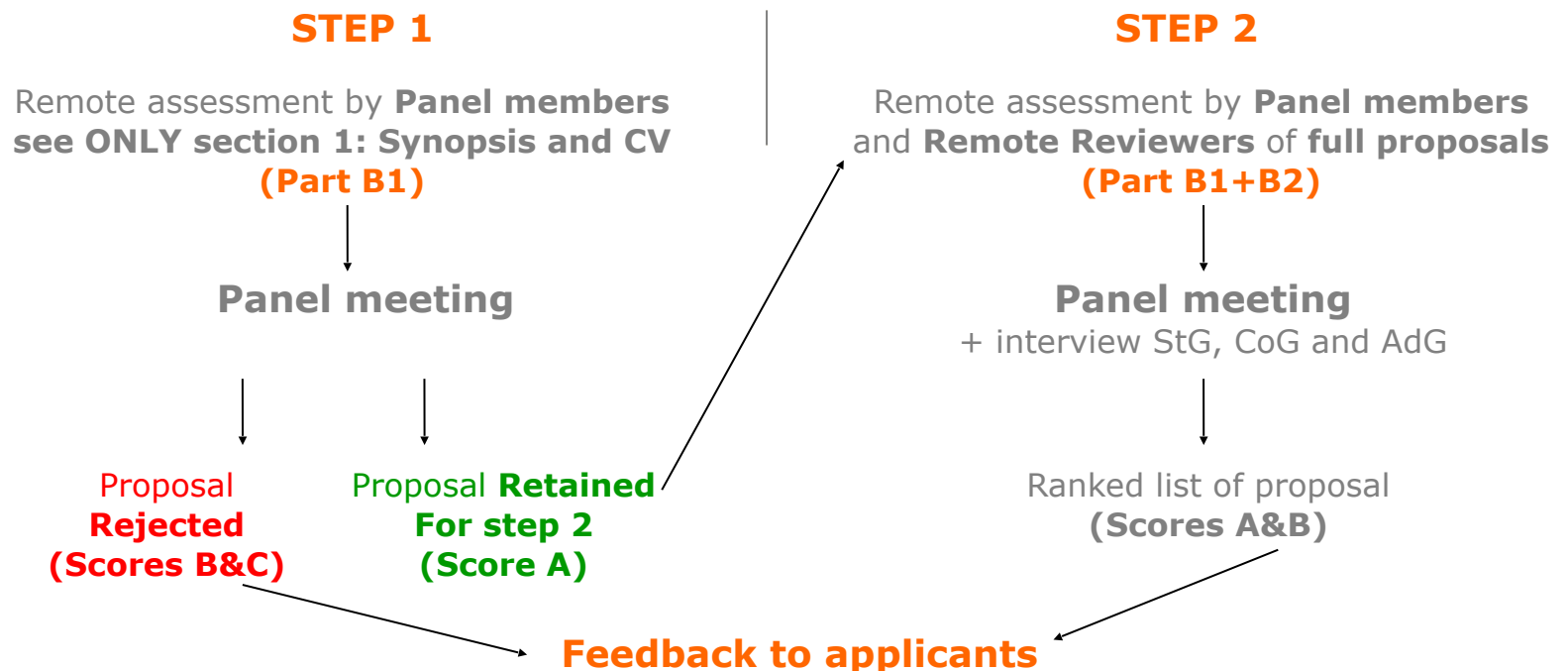
- SH1 Individuals, Markets and Organisations
- SH2 Institutions, Governance and Legal Systems
- SH3 The Social World and Its Diversity
- SH4 The Human Mind and Its Complexity
- SH5 Cultures and Cultural Production
- SH6 The Study of the Human Past
- SH7 Human Mobility, Environment, and Space

### Physical Sciences & Engineering (PSE)

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

## Bf. ERC – How are the ERC proposal evaluated

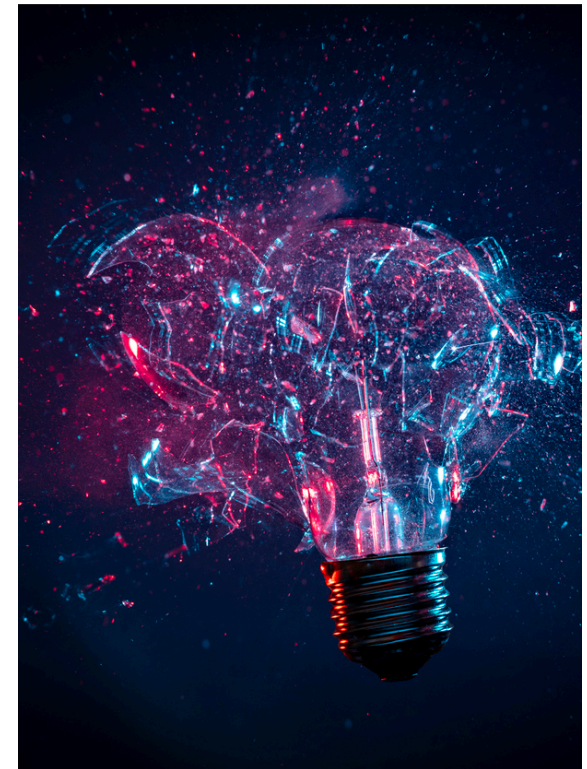
For individuals calls: a single submission but a two-step evaluation





## Bg. ERC – Contrary to what you may think

- ERC funds "frontier research", including applied research.
- The budget is distributed among the scientific panels as a function of demand.
- The panel descriptors do not represent ERC scientific priorities.
- Publication record is not decisive in selection decisions.
- The Host Institution is not an evaluation criterion.



## Bh. ERC – Evaluation Process



# Excellence

is the sole evaluation criterion

### Excellence of the Research Project

- Ground breaking nature
- Potential impact
- Scientific Approach

### Excellence of the Principal Investigator

- Intellectual capacity
- Creativity
- Commitment

## Bi. ERC – Some Rumors

**Rumour 1:** You can only apply for an ERC grant if you are a highly accomplished scientist.

**✗ NOT true:** Accomplishments are appreciated in relation to your stage/seniority as giving some evidence of your capacity to conduct the research you propose and of creativity within the past 10-12 years of your career.

**Rumour 2:** To be successful, you need to continue on an established research line, to prove continuity and credibility

**✗ NOT true:** Generally, the opposite is true.

**Rumour 3:** If you have already obtained an ERC grant you are less/more likely to get another one.

**✗ NOT true:** Panels look at each proposal on its own merit and in comparison with the other applications, irrespectively of whether you have or have not obtained an ERC grant in the past. (Of course this does not apply for applications to a Proof of Concept grant.)

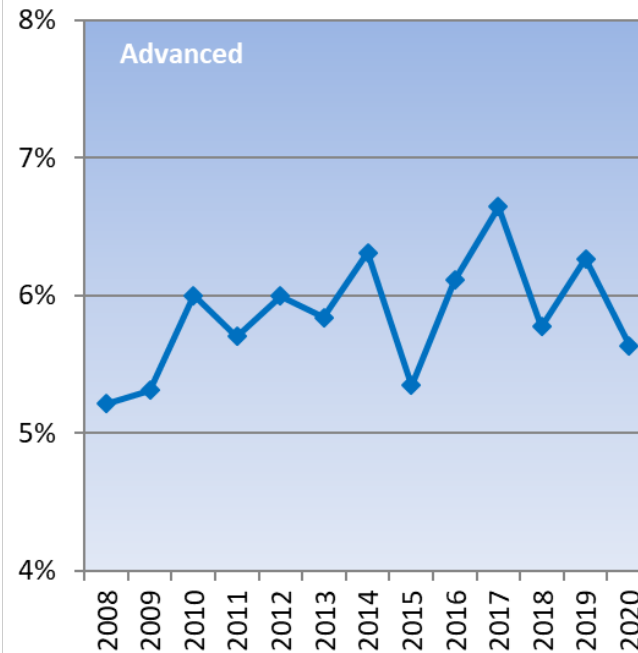
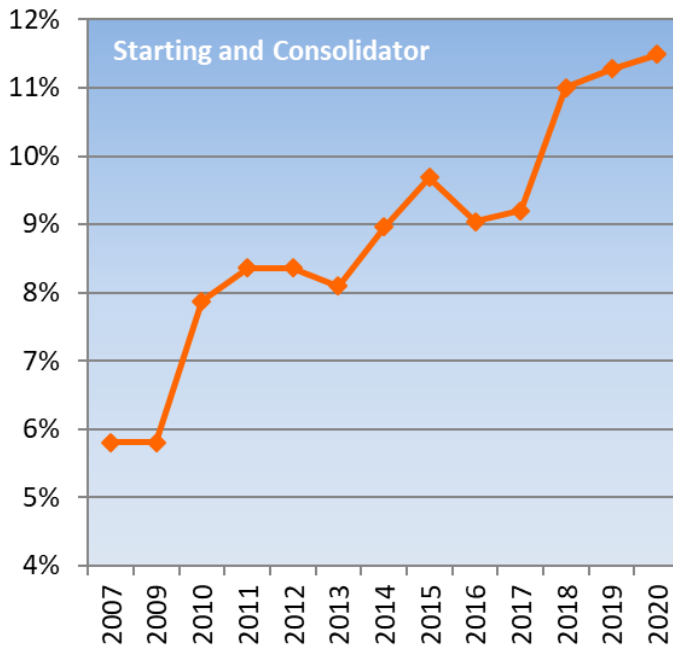
**Rumour 4:** The more socially or medically relevant a grant proposal is, the higher the chances of it getting funded.

**✗ NOT true:** ERC funds frontier research, not research that promises to be only an incremental advancement of knowledge. This is irrespectively of the field and whether it has societal, medical or clinical applications.

## Bj. ERC – Non-EU/AC Nationalities

Non-EU/AC Principal Investigators	Starting and Consolidator grants	Advanced grants	Total grants
USA	236	128	364
Canada	87	16	103
India	59	3	62
Russia	53	9	62
Australia	49	11	60
China	52	1	53
Japan	29	8	37
<b>New Zealand</b>	17	6	23
Argentina	19	1	20
Other	111	13	124
<b>Total</b>	<b>712</b>	<b>196</b>	<b>908</b>

## Bk. ERC – Trend



Proportion of evaluated proposals from non-EU/AC nationals by call year

## BI. ERC – Upcoming Webinar



Register: [bit.ly/ERC-ANZ21](https://bit.ly/ERC-ANZ21)



## Contact:

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