

# The European Research Council



European Research Council

Established by the European Commission

## Frontier Research in Europe with an ERC grant

Dr Susanne Rentzow-Vasu  
Euraxess ASEAN

UM, 11 April 2018

| 1



European Research Council

Established by the European Commission

*"....to reinforce the excellence,  
dynamism and creativity of European  
research"*

FP7 & H2020 Legal Basis

# ERC in the H2020 Structure

## ➤ The HORIZON 2020 main components:

- Excellent Science
  - ➔ *World class science is foundation of technologies, jobs, well-being*
  - ➔ *Europe needs to develop, attract, retain research talent*
  - ➔ *Researchers need access to the best infrastructures*
- Industrial leadership
- Societal challenges

## ➤ Excellent Science:

- **European Research Council** (budget under H2020: € 13 billion)
- Future and Emerging Technologies
- Marie Skłodowska Curie Actions
- Research Infrastructures

# What is the ERC?



European Research Council

Established by the European Commission

The ERC supports excellence in frontier research through a bottom-up, individual-based, pan-European competition

## Strategy

- Support for the **individual scientists** – no networks!
- **Global peer-review**
- No predetermined subjects (**bottom-up**)
- Support of **frontier research** in **all fields of science and humanities**

## Legislation

- Scientific governance: **independent Scientific Council** with 22 members including the ERC President; **full authority over funding strategy and evaluation**
- Support by the **ERC Executive Agency** (autonomous)
- Scientific quality as the only criterion aiming for excellence

# Scientists in the Driver's Seat

ERC President



BOURGUIGNON  
Jean-Pierre

Vice-President



BOCK Klaus

Vice-President



KONDOROSI Eva

Vice-President



STOKHOF Martin



BOVOLENTA  
Paola



BUCKINGHAM  
Margaret



CLARK  
Christopher



CRONE Eveline



DONALD Athene



JAJSZCZYK  
Andrzej



JUNGWIRTH  
Tomas



KRAMER Michael



MEHLHORN Kurt



ROMANOWICZ  
Barbara



STENSETH Nils  
Chr.



SUPERTI-FURGA  
Giulio



TAVERNARAKIS  
Nektarios



THORNTON  
Janet



VERNOS Isabelle



VEUGELERS  
Reinhilde



WIEVIORKA  
Michel



ZWIRNER Fabio

# ERC Grant Schemes



European Research Council

Established by the European Commission

## Starting Grants

starters  
(2-7 years after PhD)  
up to € 1.5 Mio  
for 5 years

## Consolidator Grants

consolidators  
(7-12 years after PhD)  
up to € 2 Mio  
for 5 years

## Advanced Grants

track-record of  
significant research  
achievements in the  
last 10 years  
up to € 2.5 Mio  
for 5 years

## Proof-of-Concept

bridging gap between research - earliest  
stage of marketable innovation  
up to €150,000 for ERC grant holders

## Synergy Grants (re-launched 2018)

2 – 4 Principal Investigators  
up to € 10.0 Mio for 6 years

# Evaluation Panel Structure (WP2018)



European Research Council

Established by the European Commission

## Life Sciences

- LS1 Molecular Biology, Biochemistry, Structural Biology and Molecular Biophysics
- LS2 Genetics, 'Omics', Bioinformatics and Systems Biology
- LS3 Cellular and Developmental Biology
- LS4 Physiology, Pathophysiology and Endocrinology
- LS5 Neurosciences and Neural Disorders
- LS6 Immunity and Infection
- LS7 Applied Medical Technologies, Diagnostics, Therapies and Public Health
- LS8 Ecology, Evolution and Environmental Biology
- LS9 Applied Life Sciences, Biotechnology and Molecular 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

## Social Sciences and Humanities

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

Country	Higher-Education Institution	No	StG	CoG	AdG	Total	LS	PE	SH
UK	University of Cambridge	1	90	34	78	202	71	96	35
UK	University of Oxford	2	78	35	80	193	56	79	58
UK	University College London	3	76	26	47	149	58	44	47
CH	Swiss Federal Institute of Technology Lausanne (EPFL)	4	59	15	50	124	33	88	3
IL	Weizmann Institute	5	62	23	36	121	70	49	2
CH	Swiss Federal Institute of Technology Zurich (ETH Zurich)	6	48	7	65	120	36	79	5
IL	Hebrew University of Jerusalem	7	58	15	37	110	48	44	18
UK	University of Edinburgh	8	42	14	38	94	30	38	26
UK	Imperial College	9	52	13	23	88	29	57	2
NL	University of Amsterdam	10	43	14	22	79	7	24	48
DK	University of Copenhagen	11	36	19	19	74	33	27	14
DE	University of Munich (LMU)	12	35	4	33	72	32	23	17
IL	Tel Aviv University	12	46	10	16	72	31	33	8
BE	University of Leuven	13	38	10	21	69	18	35	16
UK	University of Bristol	14	27	7	29	63	11	39	13
CH	University of Zurich	15	27	9	25	61	32	13	16
NL	Delft University of Technology	16	32	12	16	60	8	46	6
FI	University of Helsinki	17	30	9	19	58	35	15	8
NL	Leiden University	17	30	10	18	58		23	35
NL	Utrecht University	18	26	16	15	57	10	26	21
NL	Radboud University Nijmegen	18	33	9	15	57	21	14	22
IL	Technion - Israel Institute of Technology	19	36	6	12	54	17	36	1
UK	University of Manchester	20	22	8	20	50	10	32	8
Country	Research Organisation	No	StG	CoG	AdG	Total	LS	PE	SH
FR	National Centre for Scientific Research (CNRS)	1	215	83	94	392	112	233	47
DE	Max Planck Society	2	96	21	82	199	100	87	12
DE	Helmholtz Association of German Research Centres	3	62	28	25	115	71	43	1
FR	National Institute of Health and Medical Research (INSERM)	4	43	24	25	92	86	3	3
FR	French Alternative Energies and Atomic Energy Commission	5	43	5	16	64	9	53	2
ES	Spanish National Research Council (CSIC)	6	29	17	17	63	19	37	7

**Top European Institutions Hosting ERC Grantees by Funding Schemes**

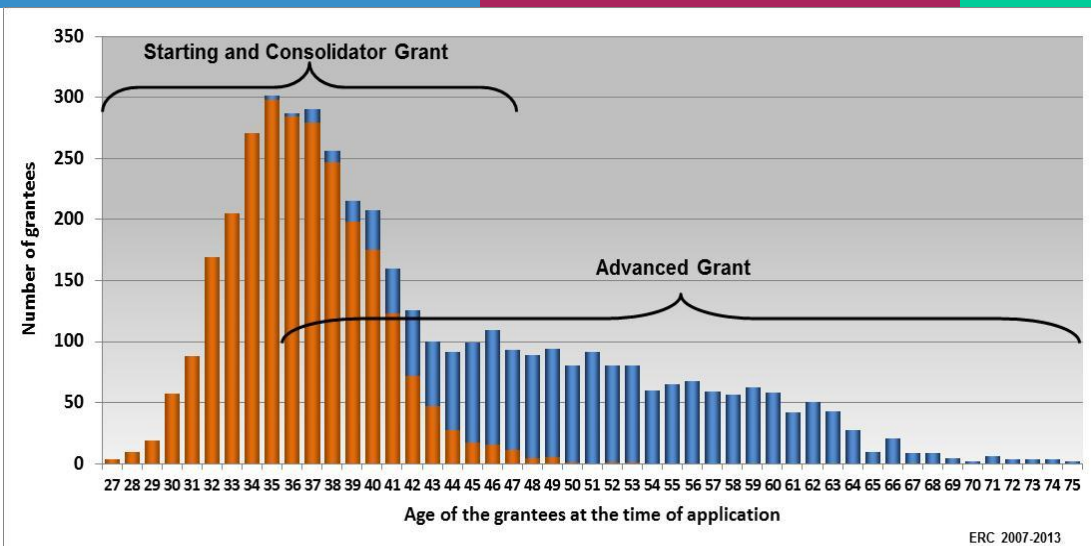
ERC calls 2007-2016 and StG2017

*Current signatories of the grant agreement*

*Data as of 21/08/2017*



# Priority to Young Scientists

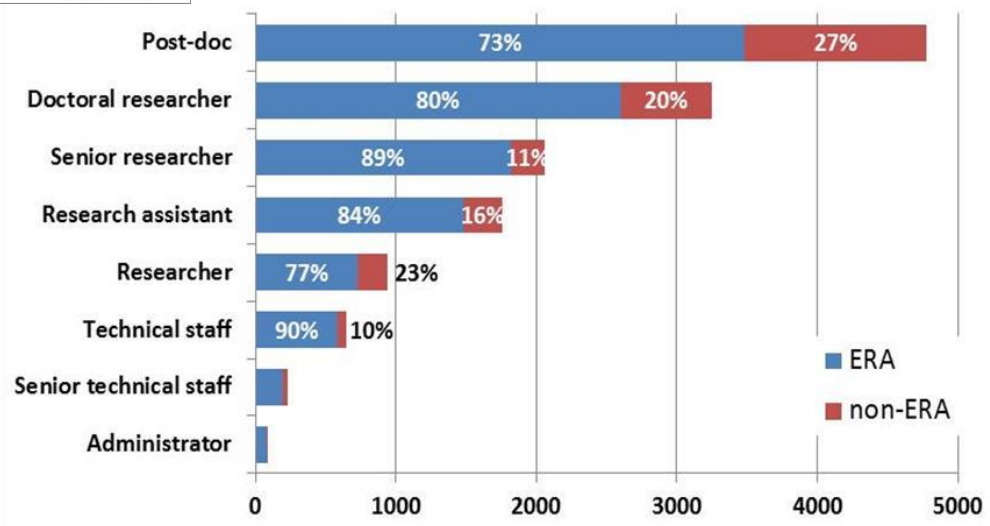


ERC 2007-2013

+ 30 000 PhD and post-doc researchers working in ERC teams.

Two-thirds of ERC grants to early-stage Principal Investigators.

Reported team members (2015)  
head count (1901 projects; almost 14,000 team members)



# 'ERC-Open to the World'




European Research Council

Established by the European Commission


ERC Europe @ERC\_Research · 15h

**#ERCworld:** An international career to push the frontiers of epigenetics  
[bit.ly/1U4W5iY](https://bit.ly/1U4W5iY) @AlsaceBiovalley



*"I choose Europe because there is a strong stress on hypothesis-driven research. International mobility is essential, you can learn a lot from experiencing various approaches. And culturally, it's very enriching."*

Dr Maria Elena Torres-Padilla  
ERC grantee from Mexico




#ERCworld

Pinned Tweet

ERC Europe @ERC\_Research · Mar 10

ERC breathes new life into its mission to make Europe a hub for global talent  
**#ERCWorld** [bit.ly/1SBJCT0](https://bit.ly/1SBJCT0)

Horizon 2020, Carlos Moedas, European Commission and 7 others



**ERC - Open to the World**

ERC grants are open to top researchers of any nationality ready to work in Europe

ERC Europe @ERC\_Research · 20h

**#ERCworld:** Dr Chembo works on the next generation of microwave systems for aerospace engineering @CNRS



*"The fact that excellence is the ERC's sole criterion of selection is of particular importance for scientists from all over the world who want to lead their research in Europe."*

Dr Yanne K. Chembo  
ERC grantee from Cameroon



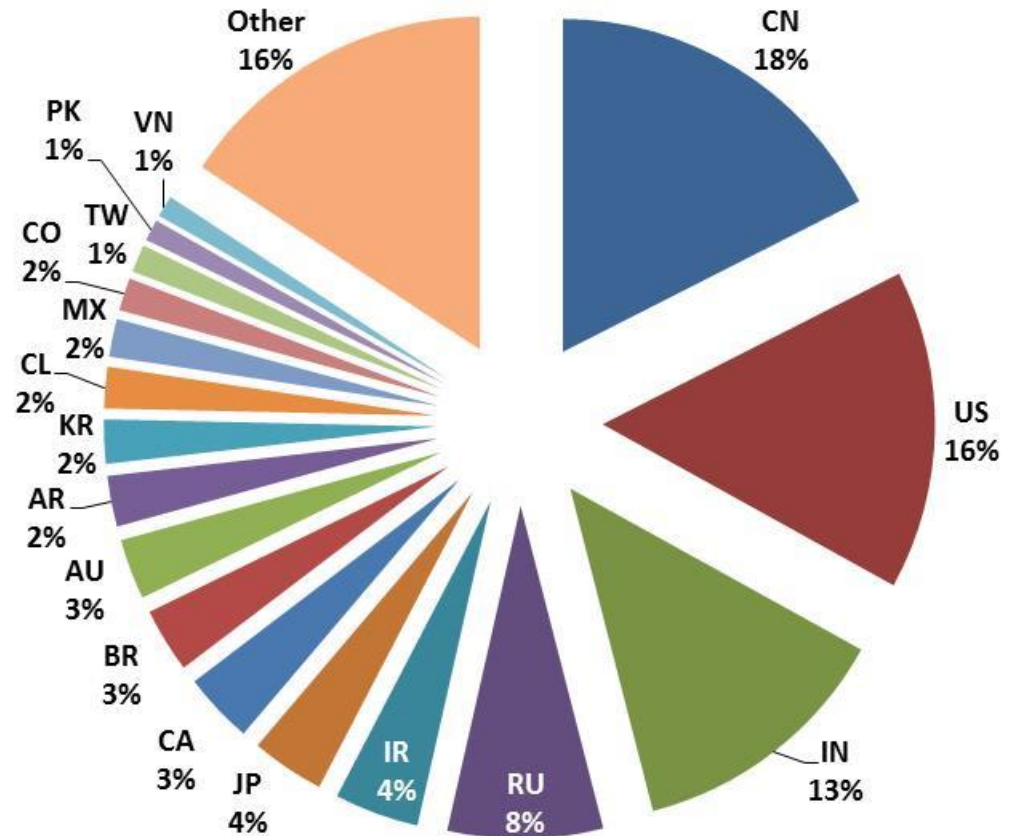
#ERCworld

# Attracting Researchers to Europe

Nationality of ERC project teams (PIs not included)  
Analysis of 1,901 Starting and Advanced Grants

**EU: 71%**  
**Assoc. Countries: 10%**  
**non-ERA: 17%**  
unknown: 2%

In all ERC grants  
**+ 9,000 non-ERA team members**  
most from  
**China, US, India, and Russia**



# After 10 Years, a Success Story



Over **7,500**  
top researchers funded since  
the ERC's creation in 2007



Over **90,000**  
articles from ERC projects published  
in prestigious scientific journals



Over **50,000**  
researchers and other professionals  
employed in ERC research teams



**738** research institutions  
hosting ERC grantees – universities,  
public or private research centres in  
the EU or associated countries



**€ 13 billion**  
ERC budget for 2014-2020 under  
Horizon 2020



**72**  
nationalities of  
grant holders



European Research Council

Established by the European Commission

# INTERNATIONAL PARTICIPATION TO ERC

# Attracting Researchers from Outside Europe



European Research Council

Established by the European Commission

## Flexibility

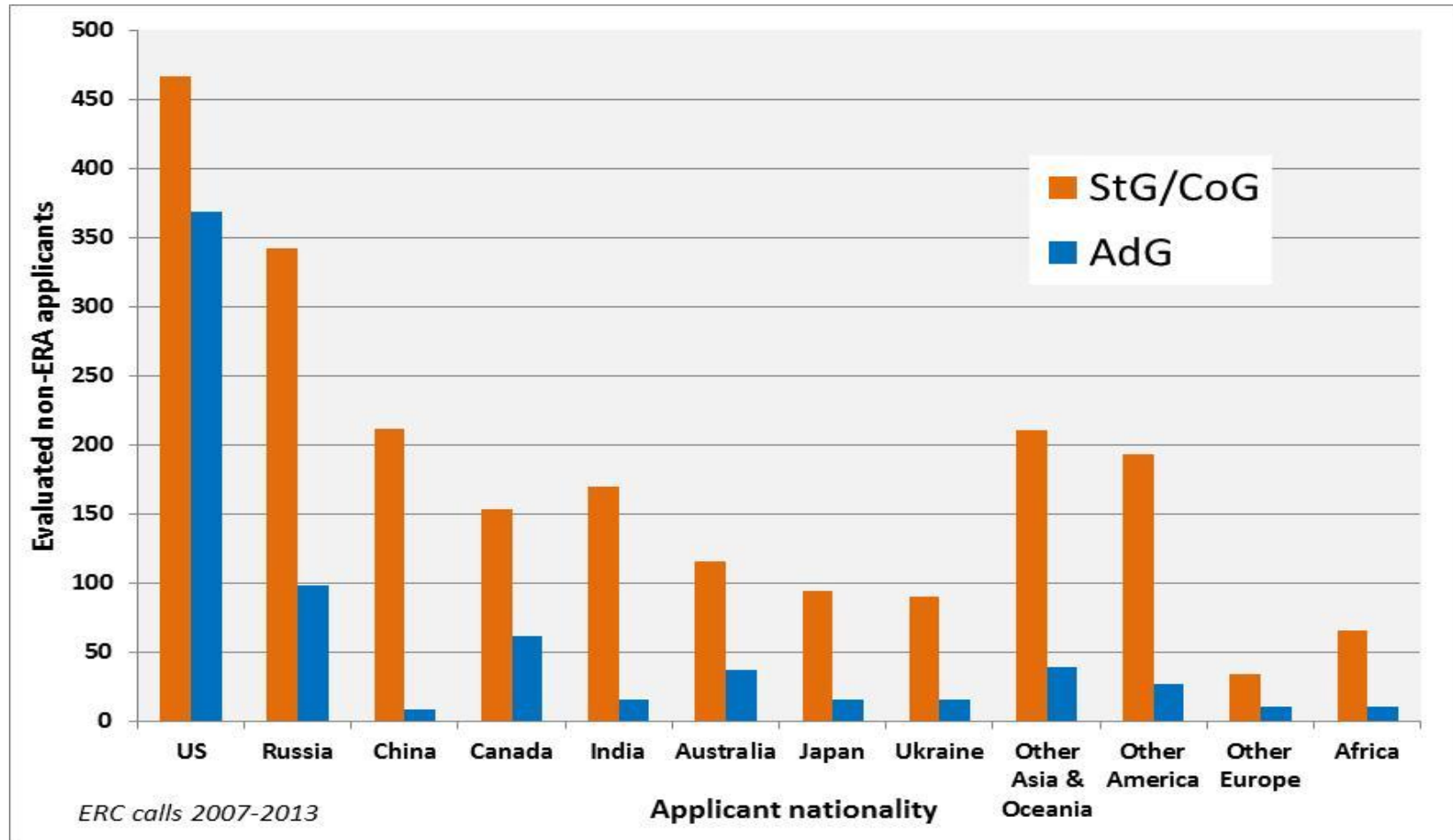
- Additional “start-up” funding for scientists moving to Europe (EUR 500 000 for Starting, EUR 750 000 for Consolidator and EUR 1 Million for Advanced grantees)
- Grantee can keep affiliation with home institute outside Europe (“significant part” of work time in Europe, at least 50%)
- Team members can be based outside Europe
- Grantee can move within Europe with the grant

## Accompanying measures

- Several European countries/host institutions assist applicants and reward grantees with top-up funds

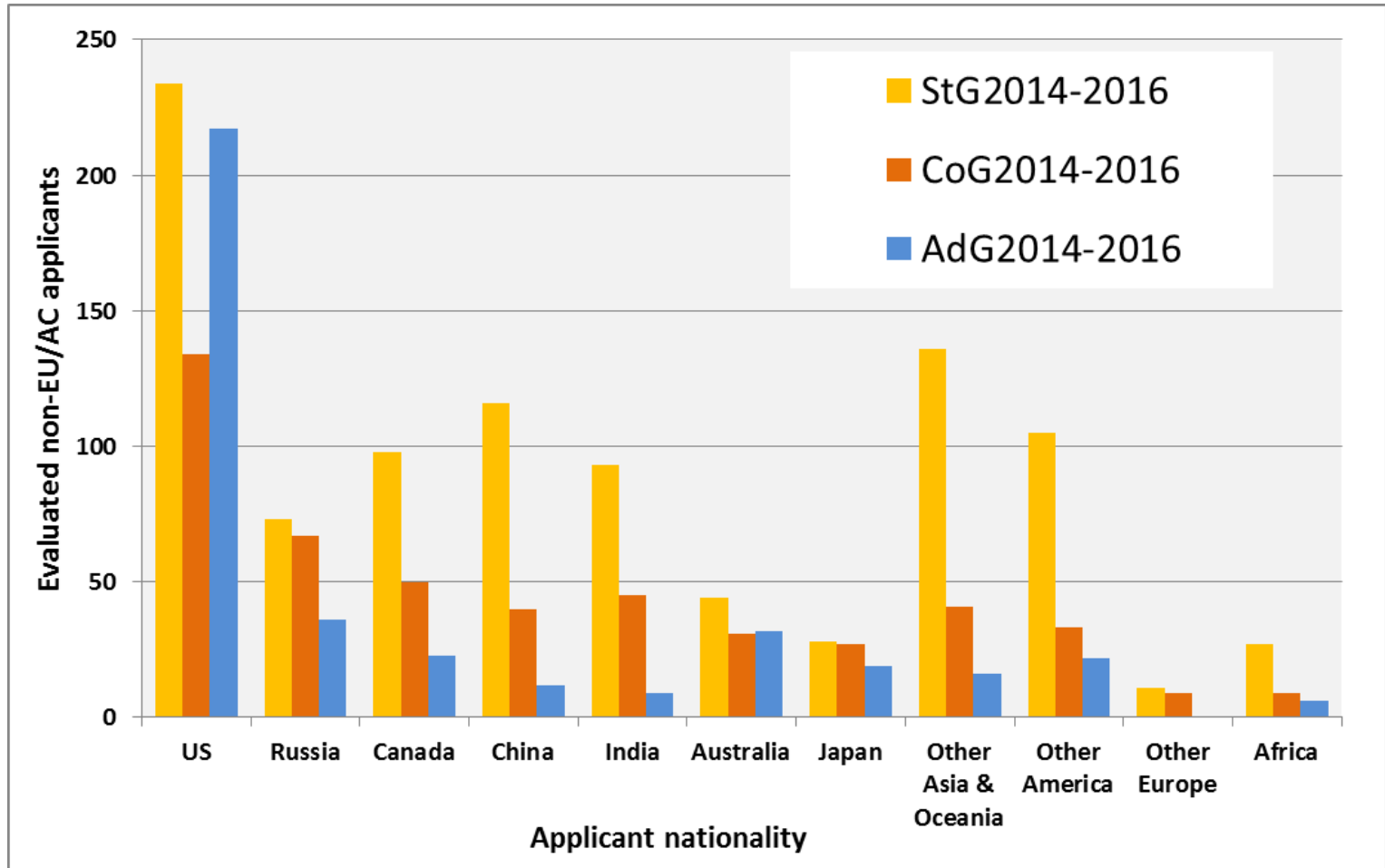
# FP7 ERC 2007-2013

## Evaluated Proposals from non-ERA Nationals



# ERC Calls 2014-2016

## Evaluated Proposals from non-EU/AC Nationals





# 38 Non-EU/AC Nationalities



European Research Council

Established by the European Commission

Almost 8% of all ERC grants to principal investigators of non-EU/AC nationality

Non-EU/AC Principal Investigators	Starting and Consolidator grants	Advanced grants	Total grants
USA	153	93	246
Canada	56	10	66
Russia	38	9	47
India	41	2	43
Australia	33	6	39
Japan	23	6	29
China	27	0	27
New Zealand	10	6	16
Argentina	13	0	13
Other	62	8	70
<b>Total</b>	<b>456</b>	<b>140</b>	<b>596</b>



European Commission

Horizon 2020  
European Union funding  
for Research & Innovation

# The European Research Council



European Research Council

Established by the European Commission

- More information: [erc.europa.eu](http://erc.europa.eu)
- National Contact Point: [erc.europa.eu/national-contact-points](http://erc.europa.eu/national-contact-points)
- Sign up for news alerts: [erc.europa.eu/keep-updated-erc](http://erc.europa.eu/keep-updated-erc)
- Follow us on



[www.facebook.com/EuropeanResearchCouncil](http://www.facebook.com/EuropeanResearchCouncil)



[twitter.com/ERC\\_Research](https://twitter.com/ERC_Research)



[www.linkedin.com/company/european-research-council](http://www.linkedin.com/company/european-research-council)

# Thank you for your attention



## Key figures

**7,000**

top researchers funded

**50,000**

researchers & other professionals  
hired in ERC teams

with **€12 billion**



## Breakthroughs

**73%**

of completed projects  
led to breakthroughs/major  
advances



## Scientific impact

**> 5,500**

articles among  
1% most cited  
scientific journals



## Open to the World

**9**

international initiatives  
for non-EU talent  
to join ERC teams



## Prestigious prizes, e.g.

**6**

Nobel  
Prizes

**5**

Wolf  
Prizes

**4**

Fields  
Medals



## ERC as model

**15**

EU countries set up  
ERC-like structures/funding  
schemes