

# The European Research Council

Raising opportunities for  
Turkish researchers in ERC grants



European Research Council

Established by the European Commission



**Dr David Krása**

Head of Sector Physical Sciences & Mathematics  
ERC Scientific Management Department

Conference on Turkish Universities in the ERA, 8-9 October 2015

# ERC Basics - 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**

**Budget:** € 13 billion (2014-2020) - 1.9 billion €/year

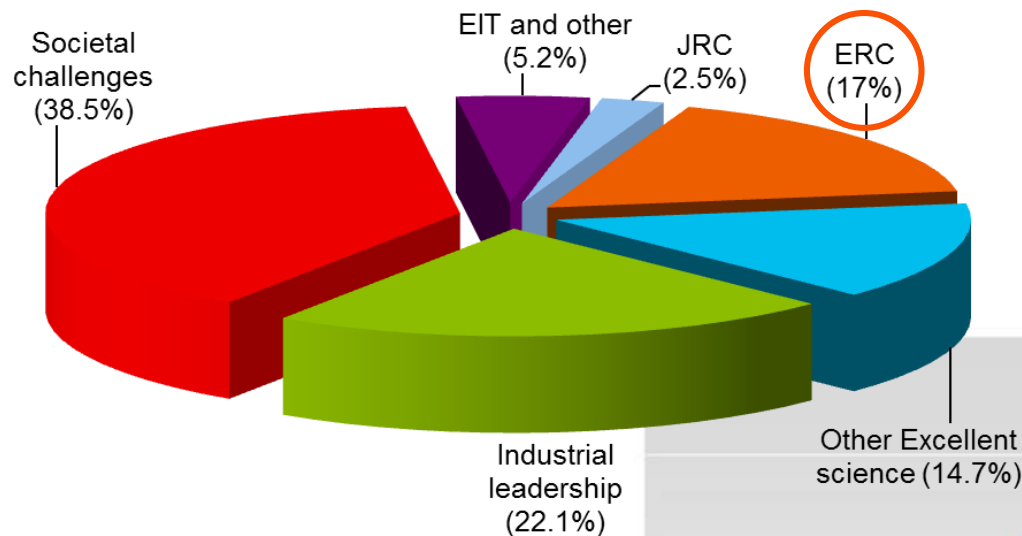
## Legislation

- Scientific governance: independent Scientific Council with 22 members including the ERC President; full authority over funding strategy
- Support by the ERC Executive Agency (autonomous)
- Excellence as the only criterion

## Strategy

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

# ERC Horizon2020 Budget



**ERC Budget  
€ 13 billion**





# Creative freedom of the individual grantee

## ERC offers independence, recognition & visibility

- to work on a research topic of **own choice**, with a team of **own choice**
- to gain true **financial autonomy** for 5 years
- to negotiate with the host institution the **best conditions** of work
- to attract **top team members** (EU and non-EU) **and collaborators**
- to move with the grant to any place in Europe if necessary (**portability of grants**)
- **to attract additional funding and gain recognition**; ERC is a quality label

# After 8 years of existence...

## A success story

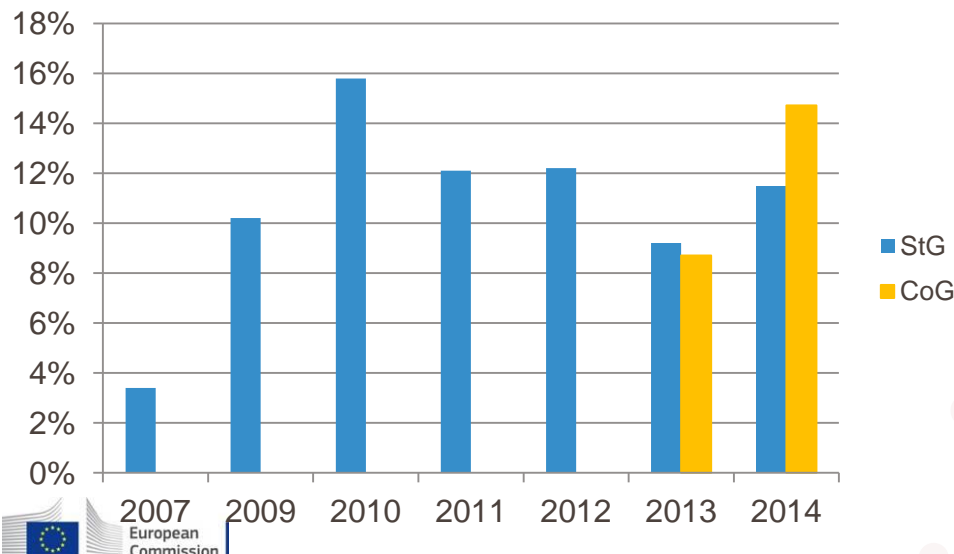


European Research Council

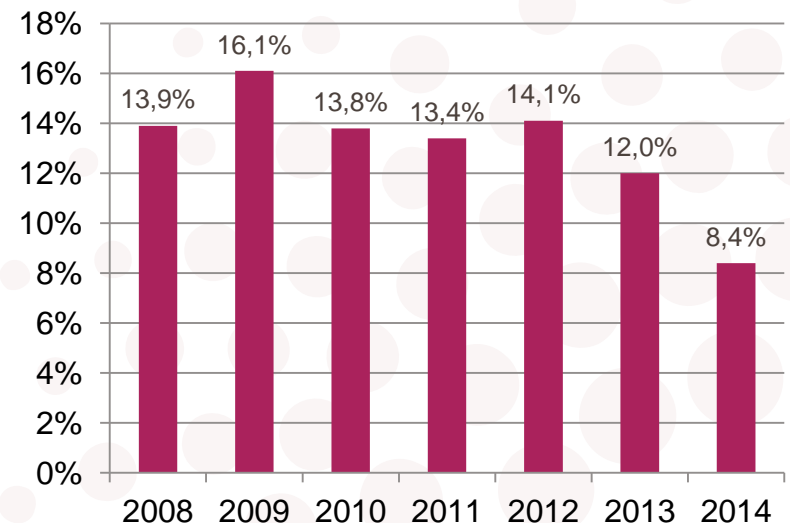
Established by the European Commission

- more than 5 000 funded proposals; over € 9 billion awarded
- “excellence attracts excellence”: 50% of PIs in 50 institutions, but more than 500 different host institutions in 29 countries host the other 50% of the projects
- highly competitive: average success rate 12%

### Starting/Consolidator Grant



### Advanced Grant



# 2014 Distinctions to ERC Grantees



European Research Council

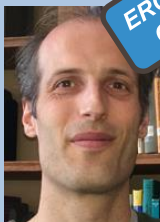
Established by the European Commission



Artur Avila

ERC Grantee  
StG 2010

Two of the Fields Medals 2014 awarded to researchers based in Europe: **Artur Avila** "for his work in dynamical systems" and to **Martin Hairer** "for his work on stochastic singularities".



Martin Hairer

ERC Grantee  
CoG 2014



Jean Tirole

ERC Grantee  
AdG 2009

The Nobel Prize in Economic Sciences 2014 was awarded to **Jean Tirole** "for his analysis of market power and regulation".



May-Britt Moser

ERC Grantee  
AdG 2010

The Nobel Prize in Physiology/Medicine 2014 was awarded to **May-Britt Moser** and **Edvard Moser**, together with **John O'Keefe**, "for their discoveries of cells that constitute a positioning system in the brain".



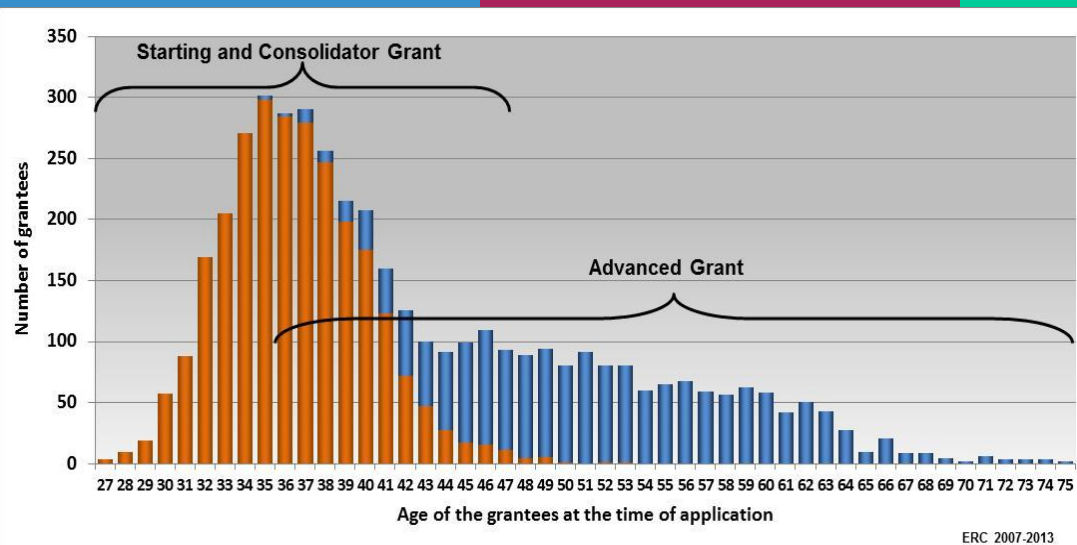
Edvard Moser

ERC Grantee  
AdG 2008

ERC Grantee  
AdG 2013

The research leading to these discoveries was supported by FP5. ("Spatial Representation in the Entorhinal Cortex" *Science* 2004)

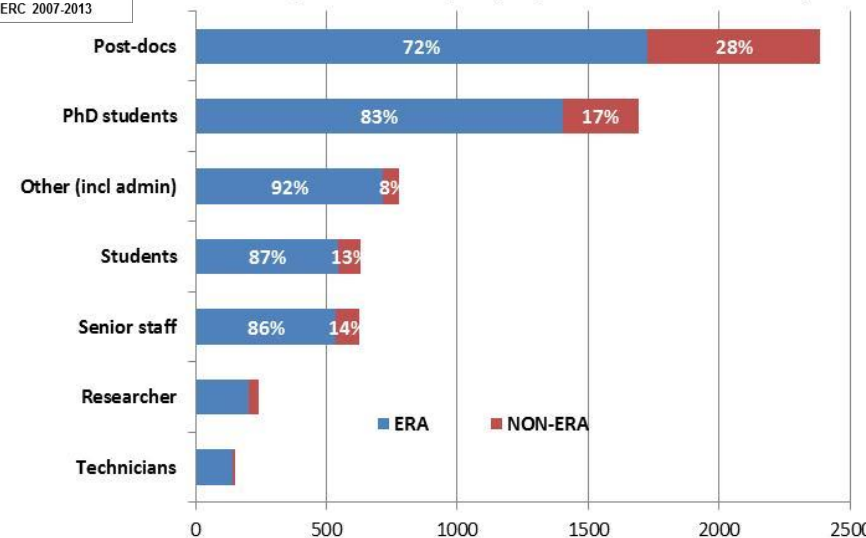
# Priority to Young Scientists



+ 15 000 PhD and post-doc researchers working in ERC teams.

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

Reported ERC team members (May 2013)  
\*simple head count (995 projects; 6800 team members)



# ERC Grant schemes



European Research Council

Established by the European Commission

## Starting Grants

starters  
(2-7 years after PhD)  
up to € 2.0 Mio  
for 5 years

## Consolidator Grants

consolidators  
(7-12 years after PhD)  
up to € 2.75 Mio  
for 5 years

## Advanced Grants

track-record of  
significant research  
achievements in  
the last 10 years  
up to € 3.5 Mio  
for 5 years

## Proof-of-Concept

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



# Submission of Proposals

## ERC Work Programme 2016: calendar



European Research Council

Established by the European Commission

ERC calls	Submission Deadlines	Budget Million EUR (estimated grants)
<b>Starting Grants</b> ERC-2016-StG	<u>17 November 2015</u>	<b>485 (335)</b>
<b>Consolidator Grants</b> ERC-2016-CoG	<u>2 February 2016</u>	<b>605 (335)</b>
<b>Advanced Grants</b> ERC-2016-AdG	<u>1 September 2016</u>	<b>540 (235)</b>

# ERC Starting and Consolidator Grants 2015

## The applicant's profile

*“Am I competitive enough?”*

- Potential for research independence
- Evidence of scientific maturity
- At least one (StG) /several (CoG) publications without participation of PhD supervisor

Condition StG: PhD **at least 2 and up to 7 years before 1 January 2016**

Condition CoG: PhD **over 7 and up to 12 years before 1 January 2016**

*Promising track-record of early achievements*

- Significant publications
- Invited presentations in conferences
- Funding, patents, awards, prizes

All these need to be shown in your proposal that will include your CV and an early achievements track record.

# ERC Advanced Grants

## The applicant's profile

*“Am I competitive enough?”*

- Exceptional leader in terms of originality and significance of your research
- Excellent track record and achievements during the last 10 years (this time window can be extended in case of eligible career breaks)

*Substantial track-record of significant research achievements*

- **as appropriate for the field**
- publications in peer-reviewed journals, monographs, invited presentations, funding, patents, awards, prizes
- Organisation of international conferences
- Major contributions to the early careers of excellent researchers
- Bibliometry may be one of the proxies used (where appropriate) among many others

# ERC Evaluation process (StG, CoG & AdG)

## Panel structure: 3 domains and 25 panels



European Research Council

Established by the European Commission

Each panel :  
Panel Chair and  
10-15 Panel Members

### Life Sciences (LS) - 9 panels

- LS1 Molecular & Structural Biology & Biochemistry
- LS2 Genetics, Genomics, Bioinformatics & Systems Biology
- LS3 Cellular & Developmental Biology
- LS4 Physiology, Pathophysiology & Endocrinology
- LS5 Neurosciences & Neural disorders
- LS6 Immunity & Infection
- LS7 Diagnostic Tools, Therapies & Public health
- LS8 Evolutionary, Population & Environmental Biology
- LS9 Applied Life Sciences & Non-Medical Biotechnology

### Social Sciences and Humanities (SH) - 6 panels

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

### Physical Sciences & Engineering (PE) - 10 panels

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

# Submission to Panels



European Research Council

Established by the European Commission

- Proposals are submitted to a *Targeted Panel* (of PI's choice)
  - ➔ Can flag one “*Secondary Review Panel*”
- **Applicant chooses his/her panel**, this panel is “responsible” and takes ownership for the evaluation of the particular proposal
- Switching proposals between panels not possible unless clear mistake on part of applicant, or due to the necessary expertise being available in a different panel
- **But:** In case of cross-panel or cross-domain proposals, evaluation by members of other panels possible
- If you think that your proposal is cross-panel or cross-domain, explain in proposal part B1



# Online Submission

## Proposal structure (Advanced Grant)



European Research Council  
Established by the European Commission

### Administrative forms (Part A)

- 1 – General information
- 2 – Administrative data of participating organisations
- 3 – Budget
- 4 – Ethics
- 5 – Call specific questions

**Administrative forms**

### Annexes

Commitment of the host institution

### Part B1 (submitted as pdf)

***Evaluated in Step 1 & Step 2***

Text box - Cross-panel explanation

- a – Extended synopsis 5 pages
- b – Curriculum vitae 2 pages
- c – Track-record 2 pages

Appendix – Funding ID

### Part B2 (submitted as pdf)

***Not evaluated in Step 1 (Step 2 only)***

Scientific proposal 15 pages

- a – State-of-the-art and objectives
- b – Methodology
- c – Resources

**Guidelines and Recommendations in the 2016 Information for Applicants**

# How are the proposals evaluated?

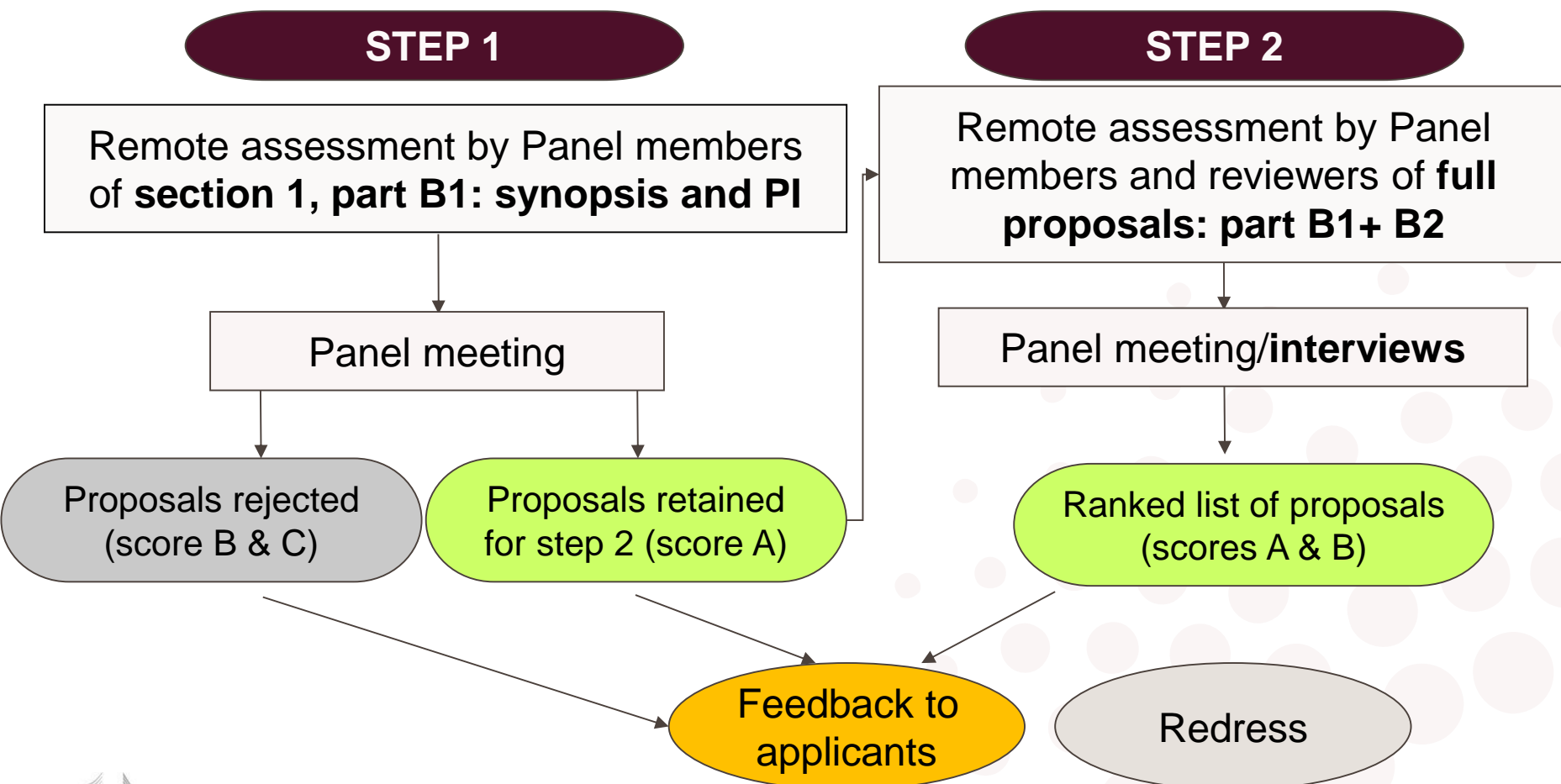
Evaluation procedure – AdG calls

Single submission, but a two-step evaluation



European Research Council

Established by the European Commission



# What is evaluated?

**Excellence is the sole evaluation criterion**  
**check the criteria in the Work Programme!**



European Research Council

Established by the European Commission

## Excellence of the Research Project

- ✓ **Ground breaking nature** Important challenge? Substantially beyond the current state of art? High-gain/high-risk balance
- ✓ **Potential impact** Possibility of a major break-through?
- ✓ **Scientific Approach Feasibility, novel concepts/methodology**

## • Excellence of the Principal Investigator

- ✓ **Intellectual capacity:** Track-record, capacity to go significantly beyond the state of the art, evidence of creative independent thinking
- ✓ **Creativity**
- ✓ **Commitment** : Willing to devote a **significant** part of PI's working time (minimum of 30% for Advanced Grant)

Referees and panels **evaluate and score** each criterion, which results  
**in a ranking** of the proposals.

# Scoring Scheme



European Research Council

Established by the European Commission

**A score: within panel budget**

➡ Proposals for immediate funding.

**A score: outside panel budget**

➡ One or more reserve list proposals may be funded. Unfunded applicants can resubmit next year.

**B score: not funded**

➡ Proposals rejected (Step 1 or 2). No resubmission next year if B awarded in step 1

**C score: non fundable**

➡ Proposals rejected (Step 1). No resubmission next 2 years

# Questions to ask yourself as an applicant



European Research Council

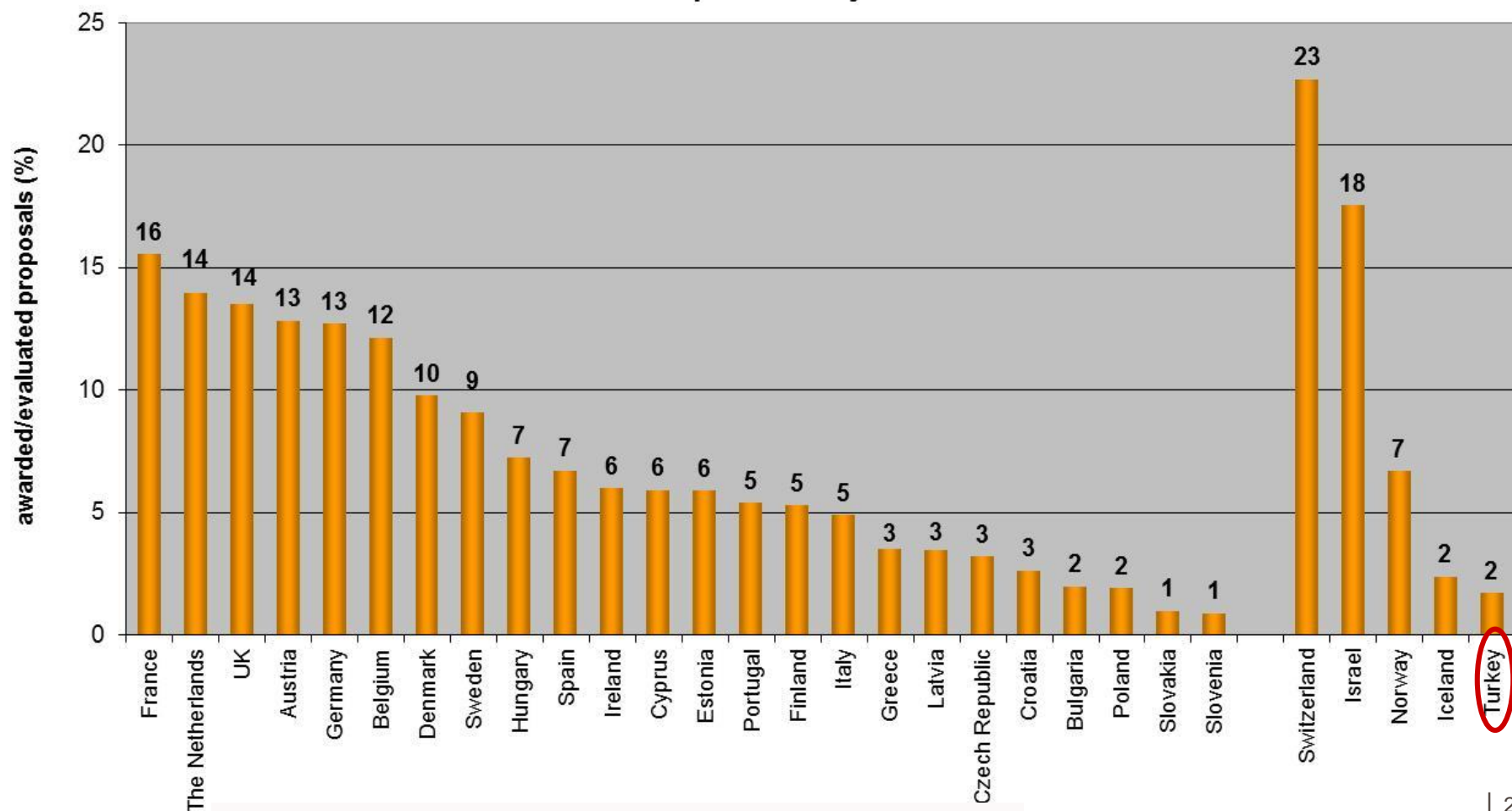
Established by the European Commission

- Am I internationally competitive in my discipline?
- Did I produce in the past 10 years (AdG)/since the beginning of my career (StG,CoG) significant research achievements/ground-breaking advances
- Why is my proposed project important?
- Does it promise to go substantially beyond the state of the art?
- Why am I the best/only person to carry it out?
- Is it timely? (Why wasn't it done in the past? Is it feasible now?)
- What's the risk? Is it justified by a substantial potential gain? Do I have a plan for managing the risk?



# Success Rates/Country of Host Institution in FP7 (2007-2013)

Success rates per country of HI



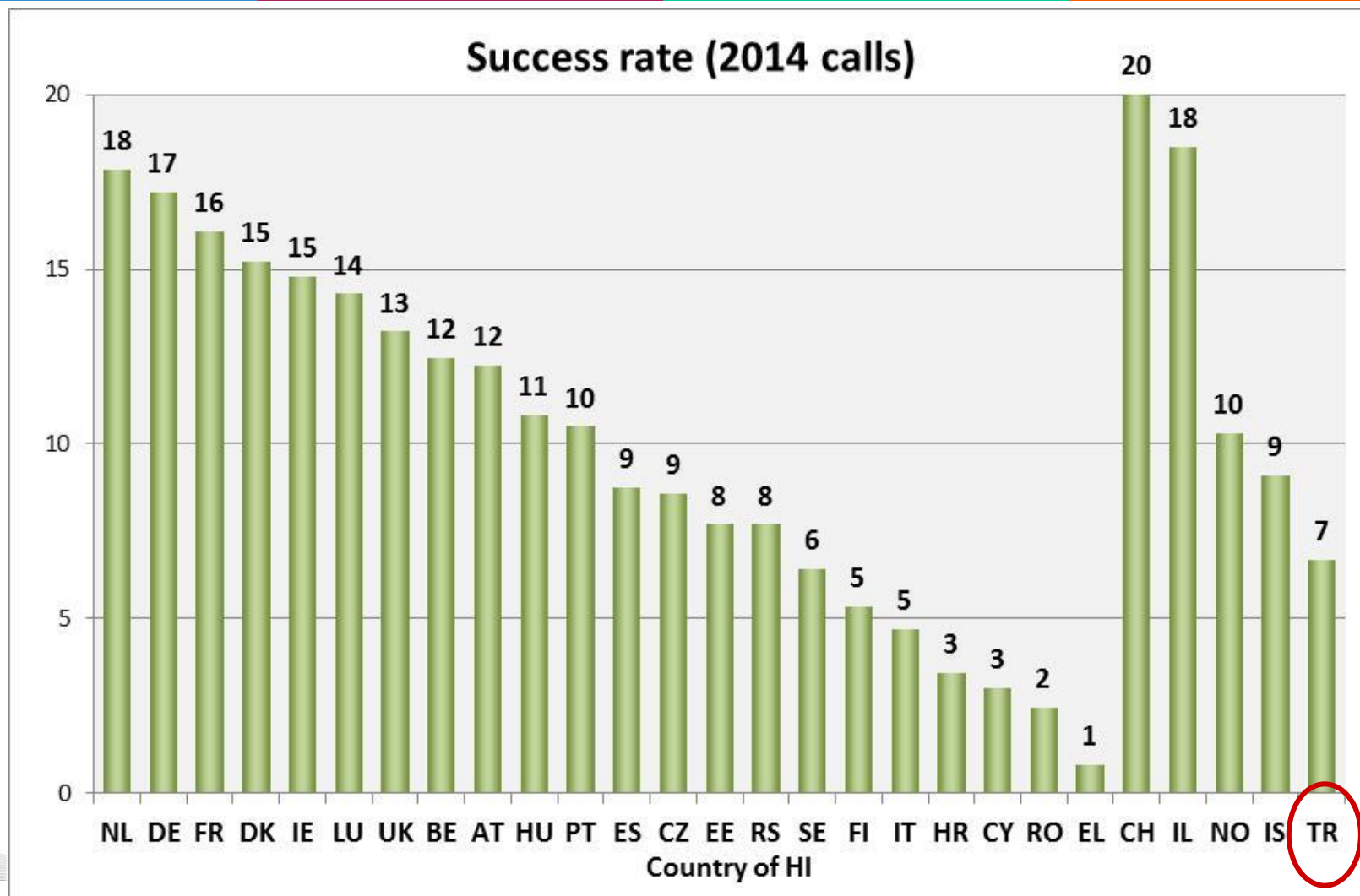
\*) First legal signatories of the first grant agreement taken into account

# H2020 ERC – Success Rate by Country of Host Institution

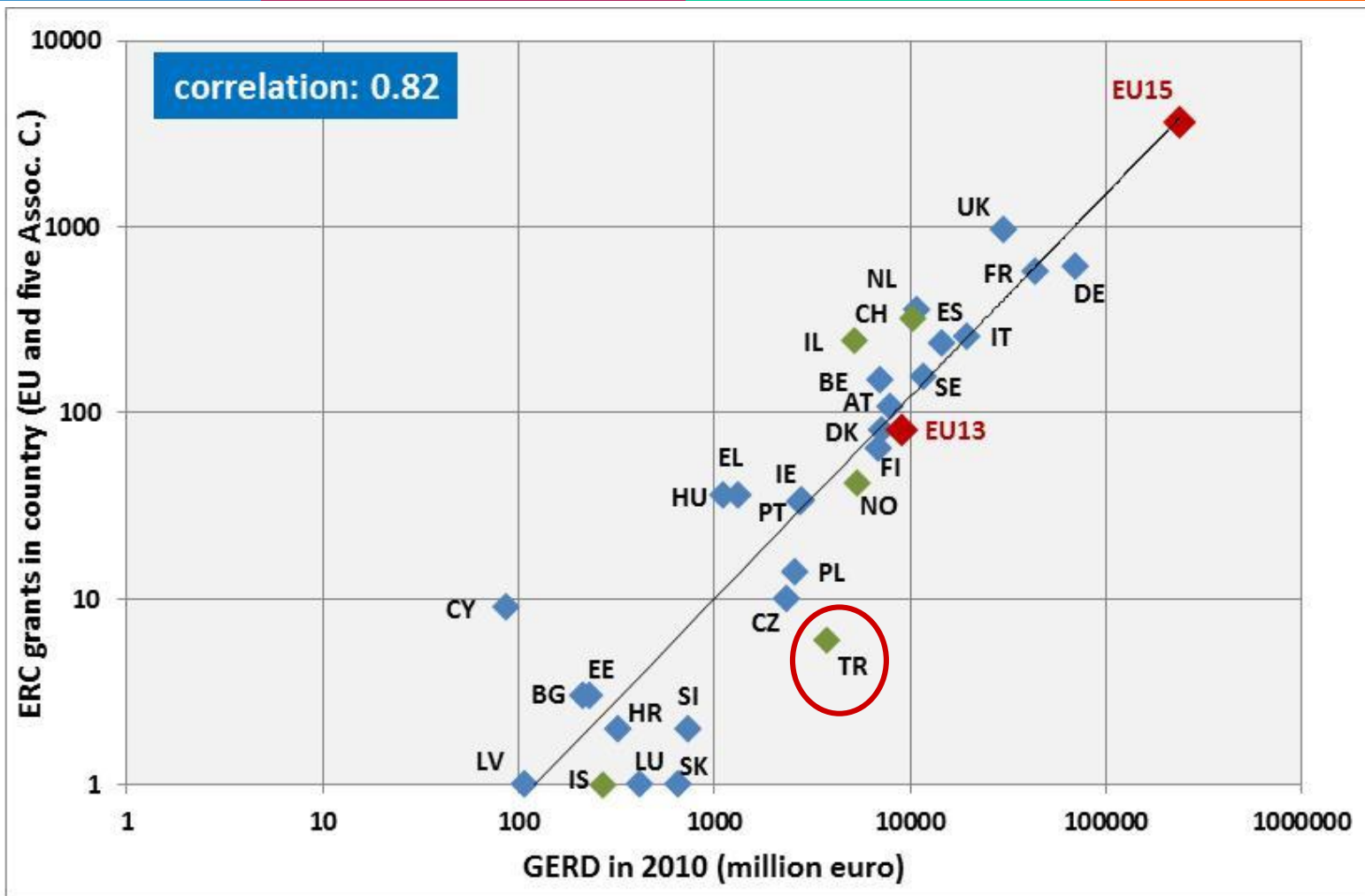


European Research Council

Established by the European Commission



# FP7 ERC Grant Distribution vs. R&D Expenditure



# ERC grants in Turkey

## PIs currently hosted at Turkish institutions



European Research Council

Established by the European Commission

Project Title		Host Institution	PI
Fabrication and characterization of dielectric encapsulated millions of ordered kilometer-long nanostructures and their applications	StG2012	Bilkent Üniversitesi	<b>Prof. Mehmet Bayindir</b>
Bioengineering prediction of three-dimensional vascular growth and remodeling in embryonic great-vessel development	StG2012	KOC UNIVERSITY	<b>Prof. Kerem Pekkan</b>
Wearable Augmented Reality 3D Displays	AdG2013	KOC UNIVERSITY	<b>Prof. Hakan Urey</b>
Communication Theoretical Foundations of Nervous System Towards BIO-inspired Nanonetworks and ICT-inspired Neuro-treatment	CoG2013	KOC UNIVERSITY	<b>Prof. Ozgur B. Akan</b>
Nonlinear Laser Lithography	CoG2013	Bilkent Üniversitesi	<b>Dr. Fatih ömer İlday</b>
The RNA bridge between IRE-1 and PKR leading to metaflammation: discovery and intervention in atherosclerosis	StG2013	Bilkent Üniversitesi	<b>Dr. Ebru Erbay</b>
Deciphering and reversing the consequences of mitochondrial DNA damage	StG2014	KOC UNIVERSITY	<b>Dr. Cory Dunn</b>
Novel Nanoengineered Optoelectronic Biointerfaces	StG2014	KOC UNIVERSITY	<b>Prof. Sedat Nizamoglu</b>

# Information about calls and projects

## Check the ERC website



European Research Council

Established by the European Commission



### ERC Funded Projects

Prizes and Awards

ERC Stories

Statistics

Funding Scheme



Research Area



Country of Host Institution



Free text search



Clear all

### ERC Funded Projects



The ERC operates according to an "investigator-driven", or "bottom-up", approach, allowing researchers to identify new opportunities in any field of research. Accordingly the portfolio of ERC funded projects spans a wide range of topics and research questions.

Since 2007, more than **4,500 projects** have been selected to receive ERC funding throughout the EU Member States and the associated countries. The ERC has received over **43,000 project proposals** for its calls.

**You can use the menu on the left to search quickly and easy ERC funded projects.**

Projects can be filtered according to: **Funding scheme**, **Research area (Panels/Domains)**, **Country of Host Institution** and/or **free keyword(s)**.

Information displayed is automatically updated through the information available on the **CORDIS** platform.

Please note that only funded projects, whose grant agreements have been signed, appear in this database. For this reason, the total number of projects in this database may differ from the figures provided in the statistics section which include also projects selected for funding whose grant agreements have not been signed yet.

For specific queries, please use this **contact form** and select the category "Web".

Menu allows  
searching by  
Funding  
Scheme,  
Research Area,  
Country of Host  
Institution.



# Information sources

## More information:

[david.krasa@ec.europa.eu](mailto:david.krasa@ec.europa.eu)

## To subscribe to the ERC newsletter:

<http://erc.europa.eu/keep-updated-erc>

## National Contact Points:

<http://erc.europa.eu/national-contact-points>

(For Turkey: Asli Vural, TÜBİTAK)

## Where to apply:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/index.html>



**European Research Council**

Established by the European Commission

# Thank you!