



European Union

Individual International Fellowships & Schemes

Delegation of the European Union to India
Research & Innovation Section

Vivek DHAM, Advisor for R&I

The European Research Council



European Research Council

Established by the European Commission



ERC basics

What is ERC?



European Research Council

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- An **autonomous funding body** set up by the EU in 2007 and **led by scientists**
- **Funding excellent researchers of any nationality**, to carry out frontier research in Europe, via annual competitions
- In **all fields** of science and humanities, without thematic priorities
- 1 researcher, 1 Host Institution, 1 project, 1 selection criterion
- Substantial grants and a recognised label of excellence
- International, top level peer-review

ERC basics

ERC structure



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The European Commission

- Provides financing through the EU framework programmes
- Guarantees autonomy of the ERC
- Assures the integrity and accountability of the ERC
- Adopts annual work programmes as established by the Scientific Council



The ERC Scientific Council

- 22 prominent researchers proposed by an independent identification committee
- Appointed by the Commission (4 years, renewable once)
- Establishes overall scientific strategy; annual work programmes (incl. calls for proposals, evaluation criteria); peer review methodology; selection and accreditation of experts
- Controls quality of operations and management
- Ensures communication with the scientific community



The ERC Executive Agency

- Executes annual work programme as established by the Scientific Council
- Implements calls for proposals and provides information and support to applicants
- Organises peer review evaluation
- Establishes and manages grant agreements
- Administers scientific and financial aspects and follow-up of grant agreements
- Carries out communications activities and ensures information dissemination to ERC stakeholders



ERC basics

ERC Scientific Council Members



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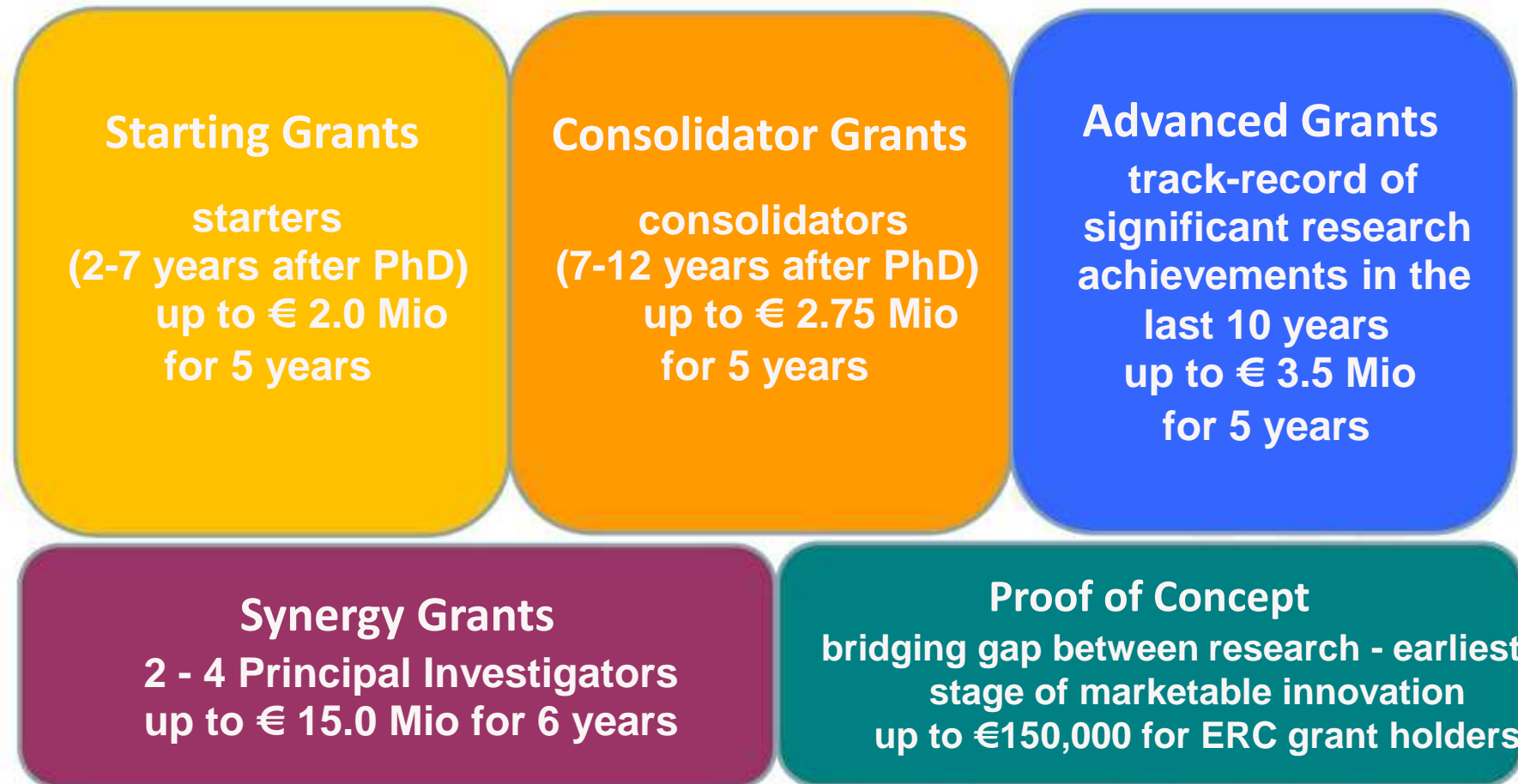
- Prof. Klaus BOCK (Chemistry)
- **Prof. Jean-Pierre BOURGUIGNON (Mathematics), ERC President**
- Prof. Nicholas CANNY (History)
- Prof. Sierd A.P.L. CLOETINGH (Earth Sciences)
- Prof. Tomasz DIETL (Physics)
- Prof. Daniel DOLEV (Computer Sciences)
- Prof. Athene DONALD (Biological Physics)
- Dr. Barbara ENSOLI (Medicine)
- Prof. Pavel EXNER (Applied Mathematics & Mathematical Physics), ERC Vice President
- Prof. Reinhard GENZEL (Astrophysics)
- Prof. Carl-Henrik HELDIN (Molecular Cell Biology), ERC Vice President
- Prof. Timothy HUNT (Biology)
- Prof. Matthias KLEINER (Engineering)
- Prof. Eva KONDOROSI (Biology)
- Prof. Nuria SEBASTIAN GALLES (Psychology)
- Prof. Nils Christian STENSETH (Ecology & Evolution)
- Prof. Martin STOKHOF (Philosophy)
- Prof. Mart SAARMA (Biology)
- Prof. Anna TRAMONTANO (Biochemistry)
- Prof. Isabelle VERNOS (Molecular and Cell Biology)
- Prof. Reinhilde VEUGELERS (Economics)
- Prof. Michel WIEVIORKA (Sociology)



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ERC basics

ERC funding schemes



ERC basics

Substantial grants to the very best



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- **The Researcher (PI : Principal Investigator)**
 - **ERC funds individual** scientists
 - **Any nationality**, age or current place of work in the world
 - Starting, consolidator or advanced grant (depending on work experience and scientific achievements)
- **Research team**
 - The PI can choose EU national or trans-national team members if scientific added value proven
 - The grant covers the salary of team members

ERC basics

Substantial grants to fund frontier research



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- **Frontier research project**
 - All fields of fundamental research: Physical Sciences & Engineering, Life Sciences, Social Sciences & Humanities
 - Bottom-up: no predetermined subjects, no priorities
 - High risk/high gain
 - 5 years projects
 - No consortia
- **Host Institution (HI) in Europe**
 - EU Institute in any EU Member State, or any other institution established in the EU or associated countries
 - Grants are portable (= the PI can change Host Institution)
 - Universities, research centres; public or private
 - **50% of her/his total working time** at a host institution in an EU Member State

ERC basics

Evaluation of proposals: main features



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- **Goal of the evaluation: select the best frontier research proposals**
- **Only evaluation criteria: excellence**
- **Method: peer review**
- **Structure: 25 panels distributed in 3 scientific domains (10 Physical Sciences, 9 Life sciences and 6 Social Sciences and Humanities)**
- **Each panel consists of 1 panel chair and 12-16 panel members**

**What makes
ERC evaluation
exceptional?**



**Peers
Review procedure**

ERC basics

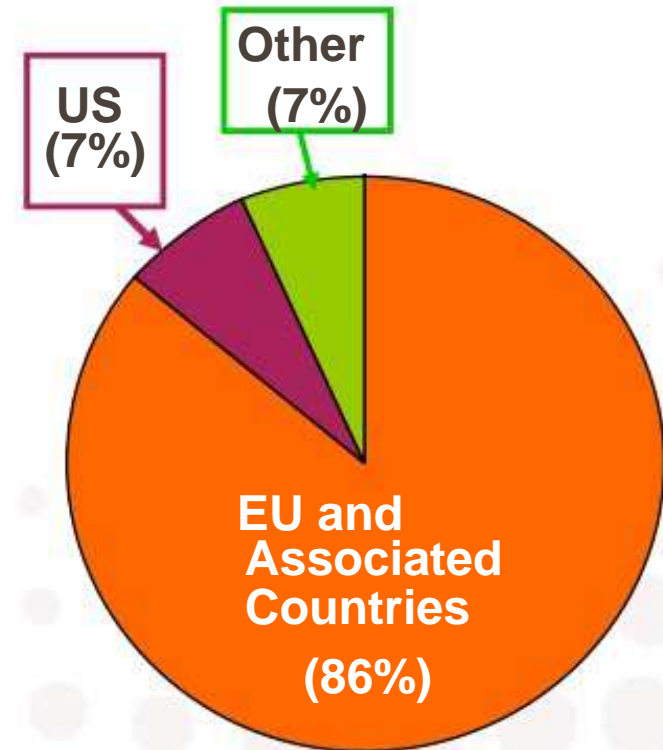
Evaluation of proposals: peers



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- Panel members: **typically 375 / call**
 - High-level scientists
 - Recruited by ScC from all over the world: ~14% from outside Europe
 - About 12-16 members plus a chair person
- Referees: **typically 2000 / call**
 - Evaluate only a small number of proposals
 - Similar to normal practise in peer-reviewed journals

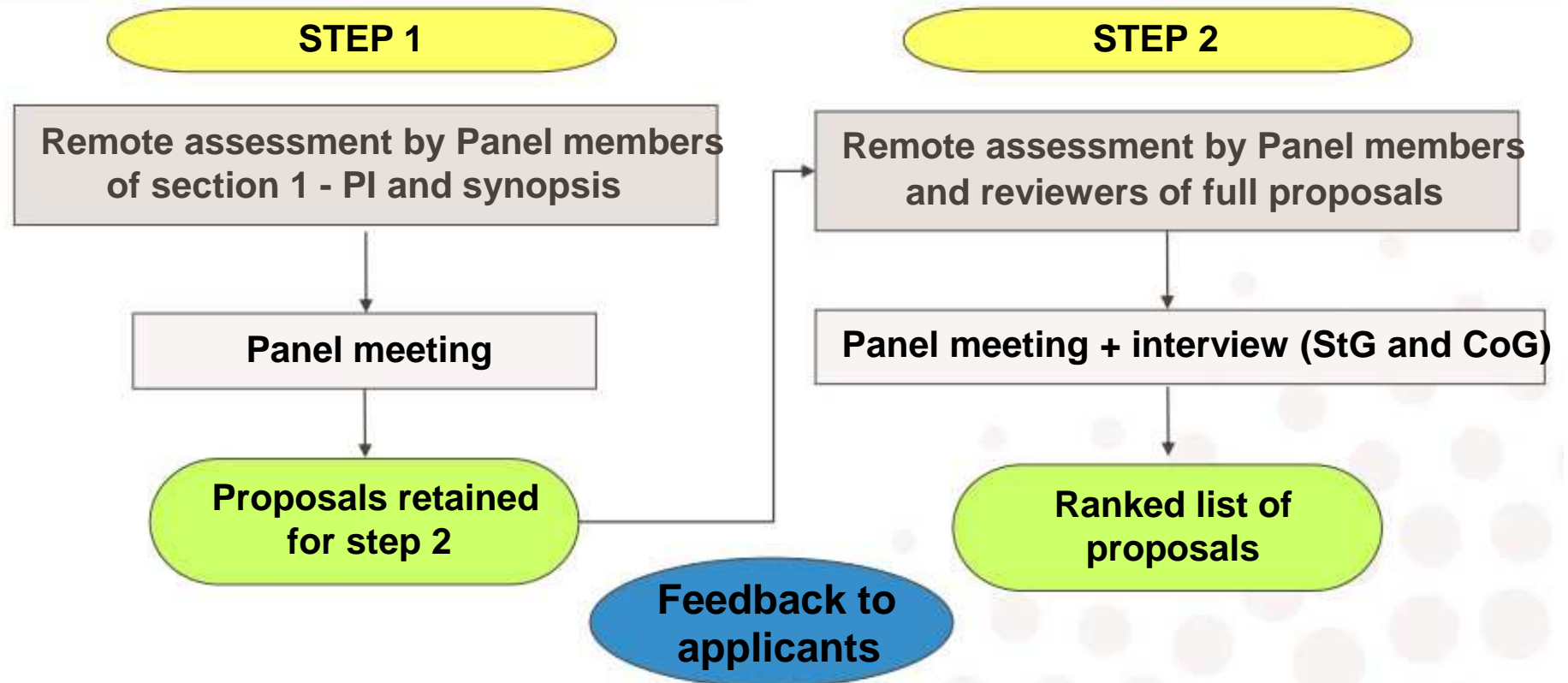


ERC basics

Evaluation of proposals: review procedure



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- Right balance between generalist + specialized review
- Appropriate treatment of interdisciplinary proposals
- Good benefit-cost ratio

ERC basics

Evaluation of proposals: panel structure



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Life Sciences

- LS1 Molecular & Structural Biology & Biochemistry
- LS2 Genetics, Genomics, Bioinformatics & Systems Biology
- LS3 Cellular and 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 & biotechnology

Social Sciences and Humanities

- SH1 Individuals, institutions & markets
- SH2 Institutions, values, beliefs and behaviour
- SH3 Environment, space and population
- SH4 The Human Mind and its complexity
- SH5 Cultures & cultural production
- SH6 The study of the human past

Physical Sciences & Engineering

- PE1 Mathematics
- PE2 Fundamental constituents of matter
- PE3 Condensed matter physics
- PE4 Physical & Analytical Chemical sciences
- PE5 Materials & Synthesis
- PE6 Computer science & informatics
- PE7 Systems & communication engineering
- PE8 Products & process engineering
- PE9 Universe sciences
- PE10 Earth system science



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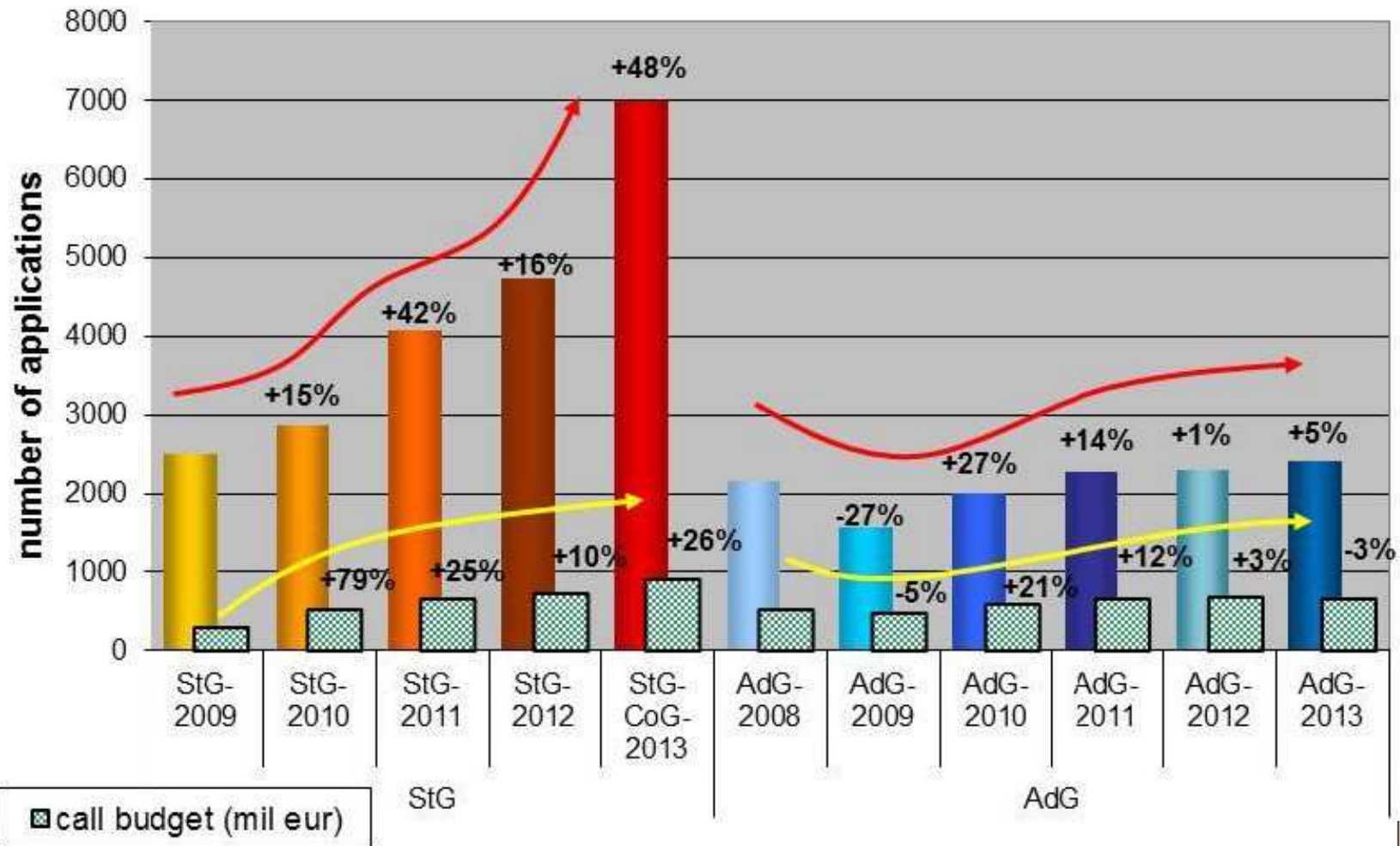
ERC achievements

ERC achievements

Rising applications



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ERC Calls



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ERC Call	Applications received	Of which		
		Evaluated*	Funded	Success rates (%)**
Starting Grant 2007	9,167	8,787	299	3.4
Starting Grant 2009	2,503	2,392	245	10.2
Starting Grant 2010	2,873	2,767	436	15.8
Starting Grant 2011	4,080	4,005	486	12.1
Starting Grant 2012	4,741	4,652	566	12.2
Starting Grant 2013	3,329	3,266	300	9.2
Starting Grant total	26,693	25,858	2,332	10.5***
Consolidator Grant 2013	3,673			
Consolidator Grant total	3,673			
Advanced Grant 2008	2,167	2,034	282	13.9
Advanced Grant 2009	1,584	1,526	245	16.1
Advanced Grant 2010	2,009	1,967	271	13.8
Advanced Grant 2011	2,284	2,245	301	13.4
Advanced Grant 2012	2,304	2,269	319	14.1
Advanced Grant 2013	2,408	2,363	284	12.0
Advanced Grant total	12,756	12,404	1,702	13.9***
Proof of Concept 2011	151	139	51	36.7
Proof of Concept 2012	143	120	60	50.0
Proof of Concept 2013	145	139	33	23.7
Proof of Concept total	439	398	144	36.8***
Synergy Grant 2012	710	697	11	1.6
Synergy Grant 2013	450	427	13	3.0
Synergy Grant total	1,160	1,124	24	2.1***

* Ineligible and withdrawn proposals not taken into account

** Basis: evaluated proposals

*** Average of the individual call success rates

ERC achievements

After 6 years of existence...



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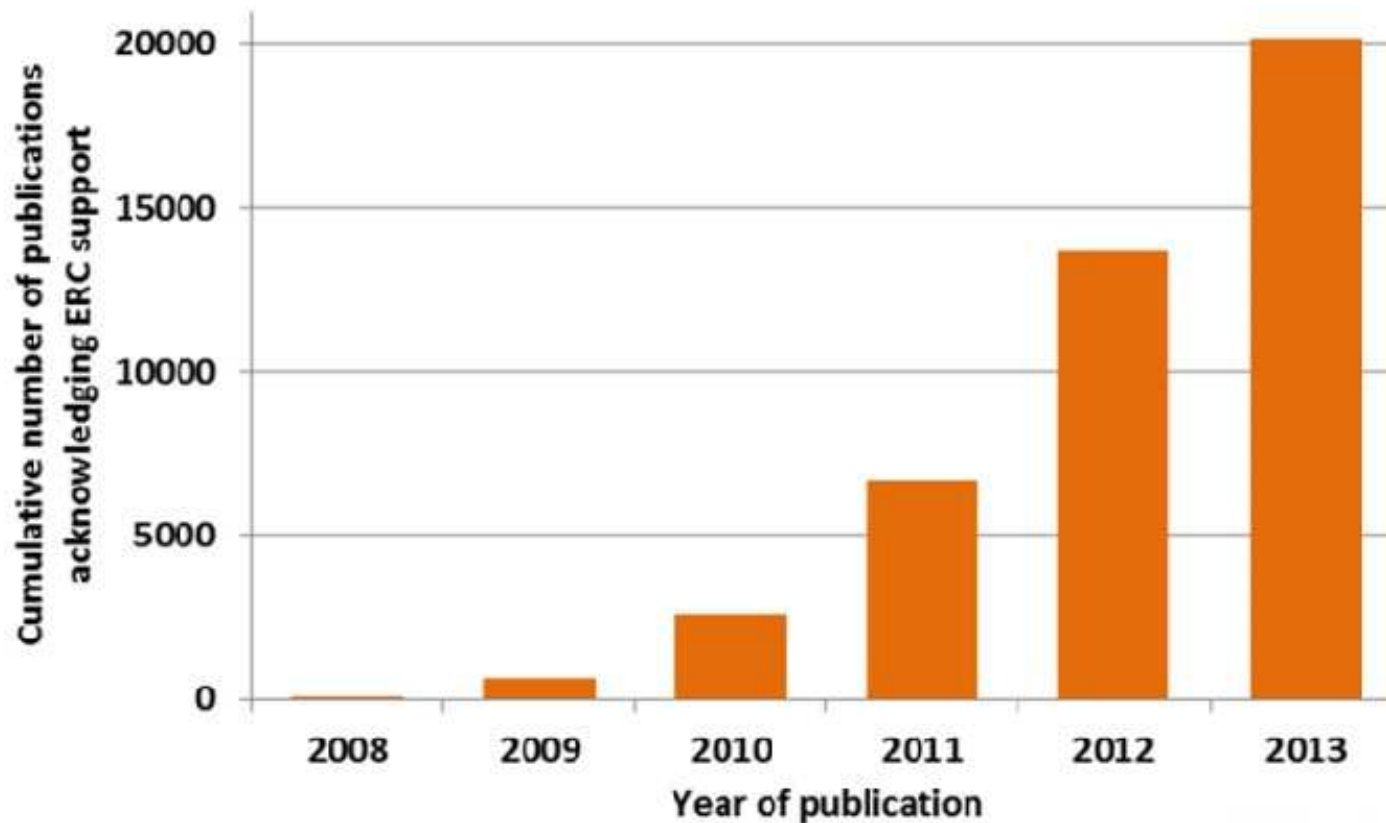
- **Highly recognised** by the research community
- **4 000 top researchers funded** (65% are at an early-career stage); 58 nationalities represented
- Highly **competitive** (average success rate 12%)
- Working in >500 different institutions in 29 countries
- 50% of grantees in 50 institutions : “Excellence attracts excellence”
- Benchmarking effect: impact on national programmes and agencies; national funding for best "runners-up"
- Efficient and fast grant management

ERC achievements

Publication from ERC funded projects



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Already over **20.000** papers acknowledging ERC support published in international, peer reviewed journals.

ERC achievements

Highly distinguished grantees



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 Serge Haroche Nobel 2012	 Konstantin Novoselov Nobel 2010	 Ada Yonath	 Andre Geim	 Christoforos Pissarides	 Theodor Hansch	 James Heckman	 Jean-Marie Lehn
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Stanislav Smirnov AdG 2008
Simon Donaldson AdG 2009
Elon Lindenstrauss AdG 2010

2013 Wolf Prize awarded to Peter Zoller - SyG 2012
2013 Holberg Prize awarded to Bruno Latour - AdG 2010
2013 Crafoord Prize awarded to Lars Klareskog - AdG 2009

Other Prizes awarded to ERC grantees

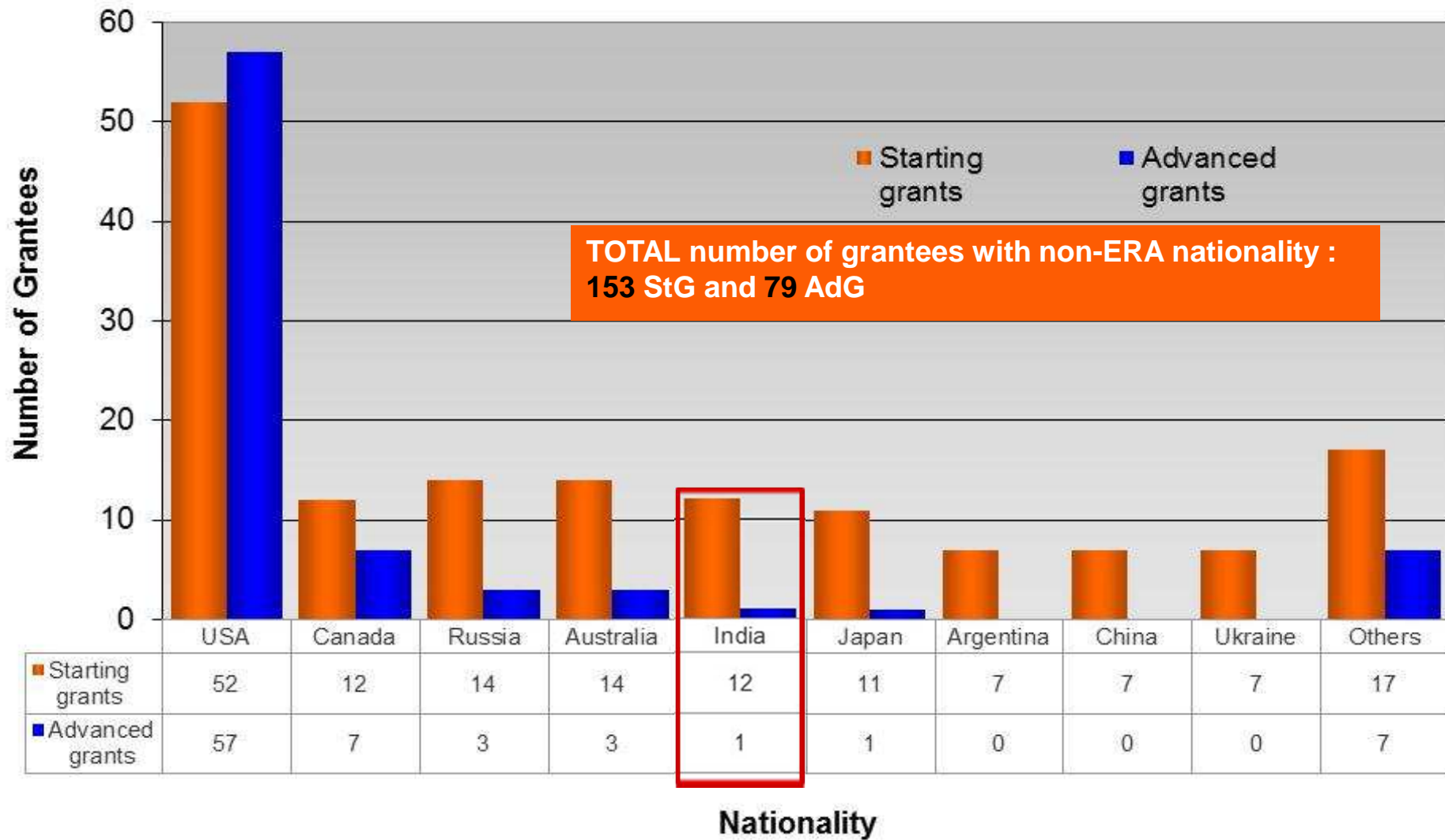
EMBO GOLD MEDAL 2011 - Simon BOULTON - AdG 2010
FEBS|EMBO WOMEN IN SCIENCE 2011 - Carol ROBINSON - AdG 2010
EMBO GOLD MEDAL 2010 - Jason W CHIN - StG 2007
THE SHAW PRIZE IN MATHEMATICAL SCIENCES 2011 - Christodoulou Demetrios - AdG 2009
CRAFOORD PRIZE 2011 and EUROPEAN LATSIS PRIZE 2010 - Ilkka Hanski - AdG 2008
L'ORÉAL-UNESCO AWARD FOR WOMEN IN SCIENCE 2011 - Anne L'Huillier - AdG 2008
WOLF PRIZE 2010 - Anton ZEILINGER, David BAULCOMBE - AdG 2008, Alain ASPECT - AdG 2010
MILLENIUM AWARD 2010 - Michael GRATZEL - AdG 2009

2012 Prizes awarded to ERC grantees

EMBO GOLD MEDAL 2012 Jiri FRIML - StG 2011
BALZAN PRIZE 2012 David BAULCOMBE - AdG 2008
EUROPEAN LATSIS PRIZE 2012 Uffe HAAGERUP - AdG 2009
KELVIN PRIZE 2012 Colin McINNES - AdG 2008
LEIBNIZ PRIZE 2012 Michael BRECHT - AdG 2008 & Joerg WRACHTRUP - AdG 2010

Indian in ERC

Non-European* ERC grantees in FP7



* : nationality as last declared by the principal investigator

Data as of 21/01/2013

Grantees with Indian nationality

ERC Starting Calls 2007 – 2012

ERC Advanced Calls 2008 - 2012

13 Indian grantees (3 women)

ERC grantees					
Country*	Project title	HI country**	ERC call	Domain	Grantees
India	Dissecting the biogenesis of eukaryotic ribosomal subunits	CH	StG-2010	Life Science	1
	Small RNA-guided complex machinery for epigenetic silencing	DE		Life Science	1
	Mechanics of ESCRT-III mediated membrane scission	UK		Life Science	1
	CRYSP: A Novel Framework for Collaboratively Building Cryptographically Secure Programs and their Proofs	FR	StG-2011	Phys Sci & Eng.	1
	A theory of quantitative graph games	AT		Phys Sci & Eng.	1
	Finding order to harness chaos: A new approach to understanding and controlling high Reynolds-number wall-bounded turbulence.	UK		Phys Sci & Eng.	1
	Interactive Systems Involving Multi-point Surfaces, Haptics and true-3D displays	UK		Phys Sci & Eng.	1
	Control mechanisms that pattern microtubules for switching cell division planes during plant morphogenesis	BE		Life Science	1
	STRUCTURE PRESERVING APPROXIMATIONS FOR ROBUST COMPUTATION OF CONSERVATION LAWS AND RELATED EQUATIONS	CH		Phys Sci & Eng.	1
	Smart interrogation of the immune synapse by nano-patterned and soft 3D substrates	FR	StG-2012	Phys Sci & Eng.	1
	Parameterized Approximation	NO		Phys Sci & Eng.	1
	Partially Coherent Many-Body Nonequilibrium Dynamics for Information Applications	UK		Phys Sci & Eng.	1
	Modern Moves: Kinetic Transnationalism and Afro-Diasporic Rhythm Cultures	UK		AdG-2012	Soc Sci & Hum

*) nationality as last declared by the principal investigator

**) current host institution (data as 29/01/2013)

Indian in ERC



ERC in H2020

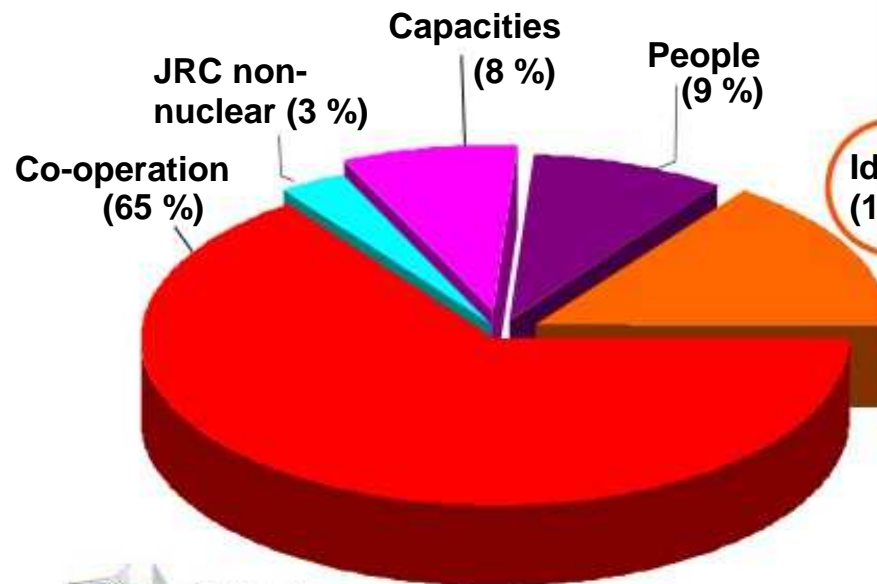
Budget Horizon 2020



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H2020 budget € 77 billion
ERC budget € 13.1 billion

FP7 budget € 50.5 billion
ERC budget € 7.5 billion



ERC in H2020

Work program 2014 planning



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ERC calls	Budget	Call Publication	Submission Deadline(s)
Starting Grants ERC-2014-StG	485 M€	11 December 2013	25 March 2014
Consolidator Grants ERC-2014-CoG	713 M€	11 December 2013	20 May 2014
Advanced Grants ERC-2014-AdG	450 M€	17 June 2014	21 October 2014
Proof of Concept ERC-2014-PoC	15 M€	11 December 2013	DL1: 1 April 2014 DL2: 1 Oct. 2014

The European Research Council



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More information on

<http://erc.europa.eu>

National Contact Point in your country

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

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Doctoral training under Marie Skłodowska-Curie actions

MSC Actions

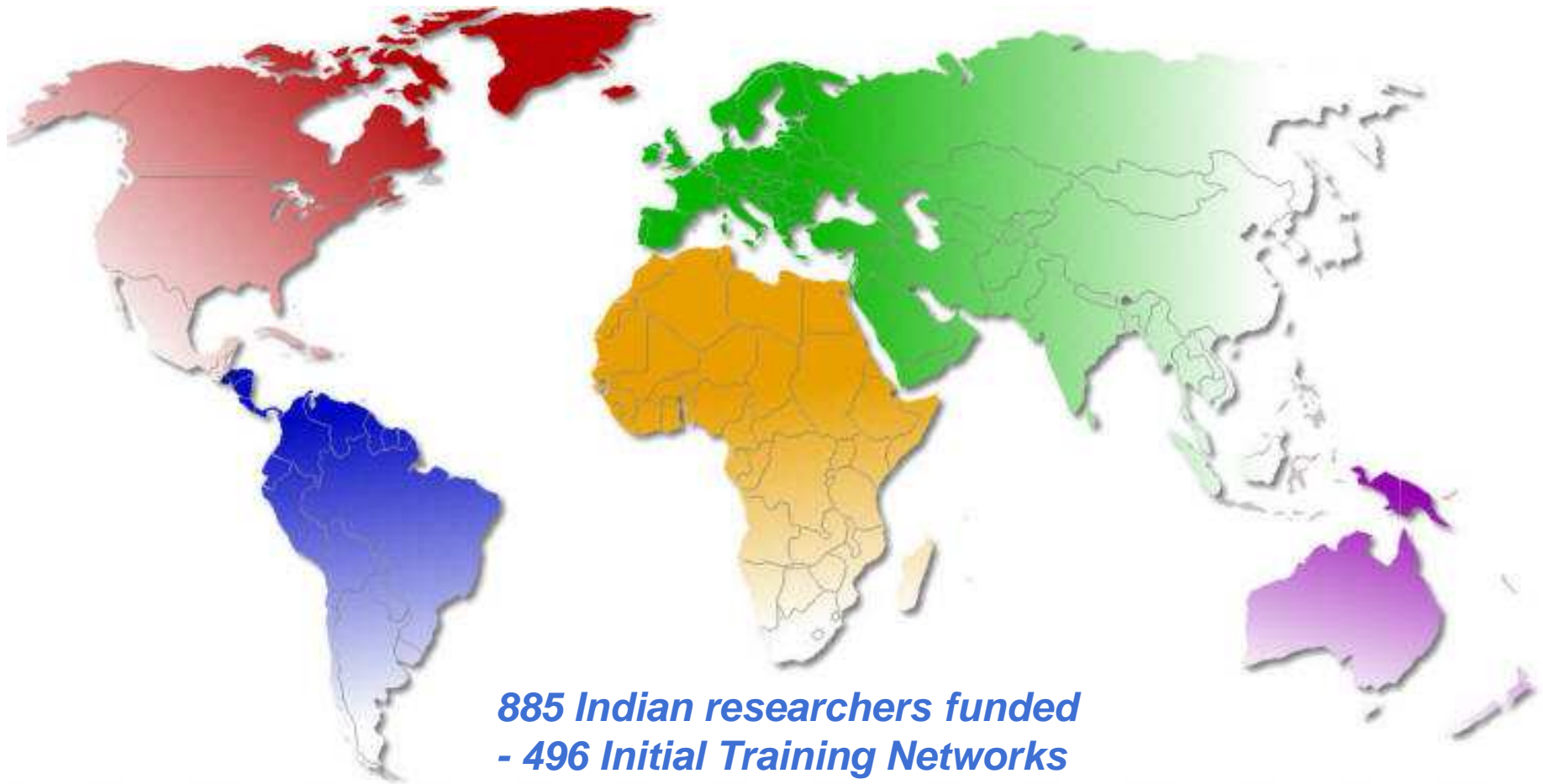


HORIZON 2020

... are a significant EU fellowships programme since the early 1990s

... support the mobility, training and career development of researchers of all nationalities

... fund all domains of research (bottom-up approach) and the financing rate is 100%



885 Indian researchers funded
- 496 Initial Training Networks
- 118 International Incoming Fellowships

HORIZON 2020



Marie Curie Actions, India Success Story

€4.6 million

- India's "Take" from FP7 Marie Curie Action (2007-2013)

1st

- Rank in non-European participation

885

- Indian Researchers funded

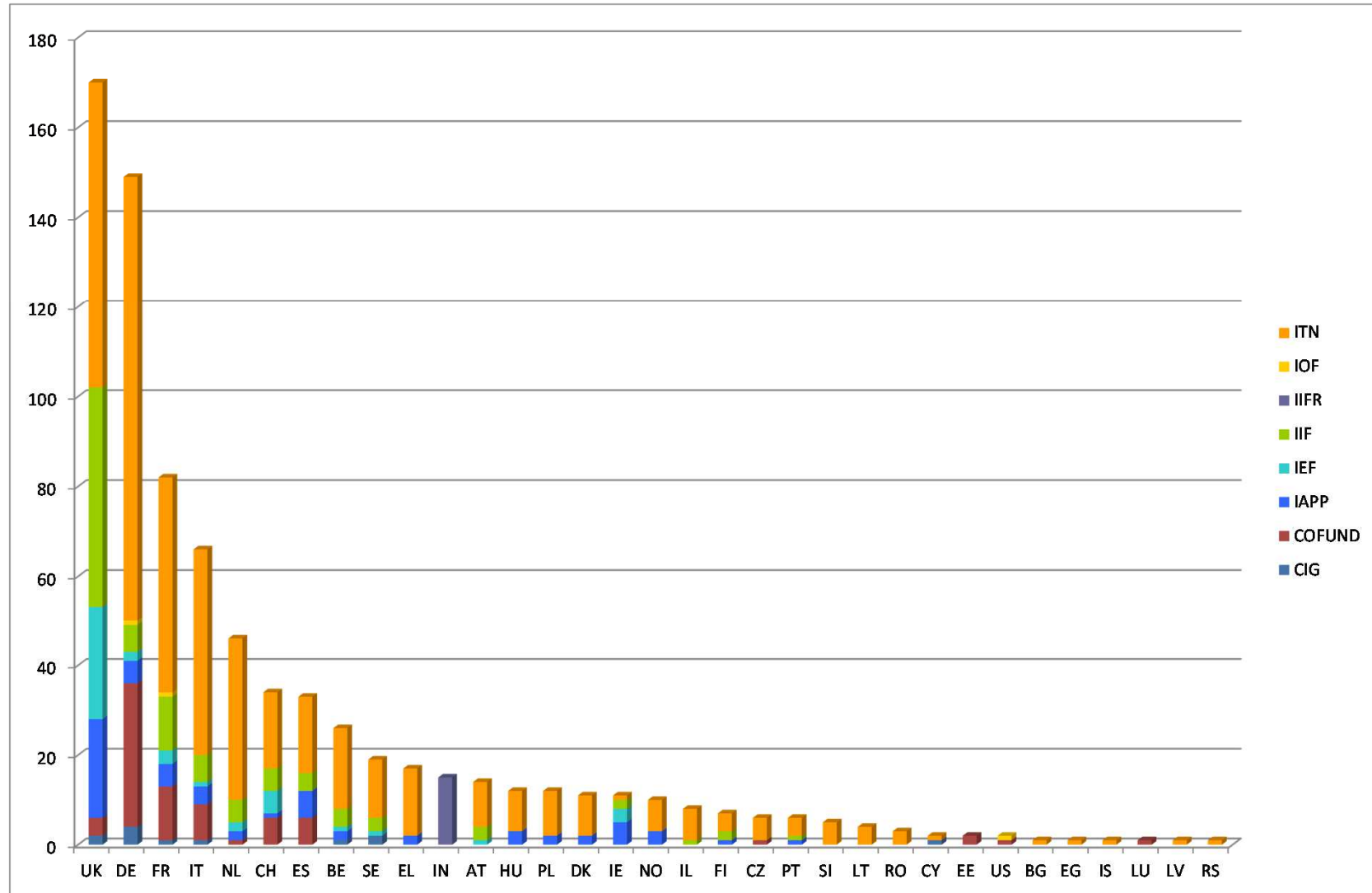
78

- Indian Institute participated

>50%

- Indian Fellows hosted by UK, Germany and France

Indian fellows benefitting from a MC grant, grouped by the country of destination



What are the MSC Actions?



- Intellectual Capital
 - Enter the Researcher Profession
 - Stay in Europe
 - Attracting international researchers
- Knowledge Transfer
 - International & Inter-Sectoral Cooperation

“Bottom-Up”

- Chemistry
 - Physics
 - Mathematics
 - Life Sciences
 - Economic Sciences
 - ICT and Engineering
 - Social Sciences & Humanities
 - Earth & Environmental Sciences
-
- Applications are assessed in these 8 Panels
 - Call success is equalised across the Panels

As a researcher I want to...

- ... undertake a project in Europe
- ... spend my time at the leading labs in Europe
- ... be part of a well-established and prestigious programme
- ... benefit from good working conditions



Maybe I want to...

- ... work with businesses
- ... be part of a short-term exchange
- ... bring a researcher from Europe at no cost to my employer



MSCA in Horizon 2020



Innovative Training Networks	ITN	Support for doctoral and early-stage training European Training Networks, European Industrial Doctorates, Joint Doctorates
Individual Fellowships	IF	Support for experienced researchers undertaking international and inter-sector mobility European Fellowships and Global Fellowships Dedicated support for career restart and reintegration
Research and Innovation Staff Exchange	RISE	International and inter-sector cooperation through the exchange of staff
Co-funding of programmes	COFUND	Co-funding of regional, national and international programmes: - doctoral programmes - fellowship programmes



WHICH ACTIONS
are suited for me?

<i>MSCA Innovative Training Networks (ITN)</i>	Yes
<i>MSCA Research and Innovation Staff Exchange (RISE)</i>	Yes, but only if IN researchers are staff members at organisations located in EU/AC
<i>Individual fellowships (IF): European Fellowships</i>	Yes
<i>Individual fellowships (IF): European Fellowships-Reintegration Panel</i>	Yes, but only if IN researcher is a "long-term resident" of EU/AC: Long-term residence means a period of full-time research activity of at least 5 consecutive years in EU/AC
Individual fellowships (IF): Global Fellowships	Yes, but only if IN researcher is a "long-term resident" of EU/AC: Long-term residence means a period of full-time research activity of at least 5 consecutive years in EU/AC
Co-funding of regional, national and international programmes (COFUND)	Yes – depending on the eligibility criteria of the co-funded programme



Category 1: Monthly Living Allowance

- €58,500 gross salary per ER / year x country coefficient (4-10 years)
- €87,500 gross salary per ER / year x country coefficient (>10 years)

Category 2: Mobility Allowance

- €1,000 – €700 (family or not) per researcher month x country coefficient

Category 3: Contribution to Research, training and Transfer of Knowledge

- € 800 per researcher month
- Flat-rate cost category

Category 5: Overheads (and management)

- € 700 per researcher month x country coefficient
- Flat-rate cost category

IIF Return Phase for expenses related to the integration of the researcher in the host institution

Flat rate of EUR 15 000 per researcher/year during the period of reintegration up to a maximum of 1 year - Not subject to country correction coefficient



HORIZON 2020
WORK PROGRAMME 2014 – 2015

3. *Marie Skłodowska-Curie Actions*

Important Notice on the First Horizon 2020 Work Programme

This Work Programme covers 2014 and 2015. Due to the launching phase of Horizon 2020, parts of the Work Programme that relate to 2015 (dates, budget) are provided at this stage on an indicative basis only. Such Work Programme parts will be decided during 2014.

(European Commission Decision C (2013)8631 of 10 December 2013)

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-msca_en.pdf

Information on Marie Curie Actions

Funded projects

The screenshot shows the Marie Curie Actions website interface. At the top, there is a navigation bar with the following tabs: Home, About, Apply now, Funded projects, News and events, and Media library. Below the navigation bar is a featured article titled "MARIE CURIE spotted: COFUND™ at the OPEN DAYS" with a date of 7 to 10 October 2013. To the right of the featured article is a search bar and a list of "Open calls" with their respective deadlines: H2020-MSCA-NIGHT-2014 (04/03/2014), H2020-MSCA-NCP-2014 (02/04/2014), H2020-MSCA-ITN-2014 (09/04/2014), and H2020-MSCA-RISE-2014 (24/04/2014). Below the open calls is a "Participant portal" section and a "JOB VACANCIES for you" section. At the bottom, there is a "WHICH ACTIONS are suited for me?" section and a "Marie Curie ALUMNI" section.

Published vacancies in funded projects

Calls currently open

Apply here!

Euraxess



Marie Curie Actions Website

<http://ec.europa.eu/mariecurieactions>

Horizon 2020

<http://ec.europa.eu/programmes/horizon2020>

Participant Portal (applications)

<http://ec.europa.eu/research/participants/portal>



Call for expert for H2020 programme

A bigger pool of international experts will serve several purposes:

- To broaden the pool of available expertise (all domains)
- To provide the opportunity for an 'outside' perspective to proposal evaluations/ monitoring of actions when necessary
- To provide additional expertise that may be required in the case of actions targeting cooperation with international partner countries

Advantages for the experts:

- International experts to get to know H2020 better, to appreciate the peer-review process and possibly to consider participation in the future.
- They have the opportunity for interaction with European experts in their domain
- Experts are **remunerated** for their work.



CORDIS

Community Research and Development Information Service

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[New Search \(Beta\)](#) | [Map Search](#) | [Advanced Search](#)

Search in Partners Service

Partners Service

[Tutorials & Help](#)

Looking for research partners?

These profiles and collaboration requests are currently active to build your network

- 6934 Partner profiles
- 160 Open FP7 Calls for Proposals
- 4685 Partnership requests
 - 991 Proposing project
 - 3694 Offering collaboration

- 276 Groups

The [National Contact Point](#) networks can provide further support to find partners in your specific theme

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HORIZON 2020





European
Commission

Erasmus+

*The EU programme for
Education, Training, Youth and Sport
2014-2020*

Education
and Culture

COME AND STUDY IN EUROPE!

WHAT IS ERASMUS MUNDUS?

The Erasmus Mundus programme aims to enhance quality in higher education through scholarships and academic co-operation between Europe and the rest of the world.

WHAT DOES ERASMUS MUNDUS OFFER STUDENTS?

Erasmus Mundus offers:

- * **Scholarships** to students and researchers of exceptional quality to follow an Erasmus Mundus **Masters Course** or **Joint Doctorate** at **two or more European universities**
- * Nearly **130 masters and doctoral courses** to choose from
- * **Scholarships** to promote the **exchange of students** between European and non-European universities - study periods can vary between 3 months and 3 years
- * A scheme **open to students throughout the world**

HOW CAN STUDENTS FROM INDIA BENEFIT FROM ERASMUS MUNDUS?



Since the start of the programme in 2004, **aprox. 2500 Indians** have been selected for Erasmus Mundus scholarships.

From 2009 to 2013, students from India can apply for Erasmus Mundus joint courses and scholarships either by applying directly to the course co-ordinator (Action 1) or through an exchange if their home university is a partner in one of the consortia selected under Action 2.

<p>HOW DO I APPLY?</p> <p>ACTION 1</p> <p>ERASMUS MUNDUS MASTERS COURSES AND JOINT DOCTORATES</p>	<p>First, go to the Erasmus Mundus website:</p> <p>http://eacea.ec.europa.eu/erasmus_mundus/funding/scholarships_students_academics_en.php</p> <p>Click on the link to:</p> <p>Erasmus Mundus Masters Courses (EMMCs) or</p> <p>Erasmus Mundus Joint Doctorates (EMJDs)</p> <p>You can view all available courses or search for courses in a specific discipline.</p> <p>Once you have made your selection, go to the website of your chosen course. The course website will give you the details you require about tuition, fees, application procedures, etc.</p> <p>Please remember to send your application directly to the co-ordinator of your selected course.</p>
<p>HOW DO I APPLY?</p> <p>ACTION 2</p> <p>ERASMUS MUNDUS SCHOLARSHIPS FOR MOBILITY</p>	<p>Students of European and Indian partner universities that belong to consortia selected under Action 2 can apply directly within the consortium. These consortia may also accept applications from students of non-partner universities.</p> <p>For information on scholarships for Indian students, go to:</p> <p>http://eacea.ec.europa.eu/erasmus_mundus/results_compendia/selected_projects_en.php</p> <p>and click on the link for Action 2. There is a list of countries covered by each project.</p>
<p>HOW MUCH IS THE SCHOLARSHIP?</p>	<p>The size of the scholarship may vary according to the level of your studies, their duration (3 months to 3 years) and your nationality. For Indian students, the amounts are:</p> <p>24 000 Euro per year for Masters Courses (Action 1)</p> <p>60 000 Euro to 130 000 Euro for three-year Joint Doctorates (Action 1)</p>



European
Commission



For more information

<http://ec.europa.eu/erasmus-plus>

Education
and Culture