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AÑOS



CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

Spanish National Research Council

MAY 2014

Le Système De Recherche PUBLIQUE en Espagne : **CPIs : Centres publiques de Investigación (recherche)**

- **Universités (60-70)**
- **Quelques centres locaux et/ou sectorielles du Gouvernement central ou Régional**
 - Réseau CERCA (ICN2, ICFO, IQ Tarragona,...)
 - CENIC
 - CENIO, ...
- **OPIs (Organismes Publiques de Investigación)**

Sectorielles

INIA (Agroalimentaire)

IEO (Océanographie et bio marine)

IGME (Géologie et mines)

CIEMAT (ex nucléaire, environnement et énergie)

INTA (Aéronautique et l'espace)

ISC III (Biomedicine)

Multidisciplinaire

CSIC (Consejo Superior de Investigaciones Cientificas)

The Spanish National Research Council CSIC

- The largest **public Research Organisation** in Spain : 6% of CPI scientist, produces 20 % of knowledge (measured in terms of scientific papers)
- Devoted to **multidisciplinary** scientific and technological research
- Assigned to the Ministry of Economic Affairs and Competitiveness
- CSIC is not a “Council” in the sense of having economic money to Fund internal and/or external research projects

- **Mission:**

- Multidisciplinary Scientific and Technological Research
- Transfer of knowledge and technology
- Scientific and technical personnel training
- Management of infrastructures

- **Organisation:**

- Network of 123 Institutes
(including 53 Joint Centres with other Institutions)
- 118 Associated Units

- **Collaboration with:**

- Universities
- Other public R&D Organisations
- Companies, Professional Associations and Foundations
- Regional Governments

Centres and Institutes / Scientific staff



Human and Social
Science
17 / 355



Biology and
Biomedicine
23 / 755



Natural Resources
21 / 621



Agricultural Sciences
12 / 540



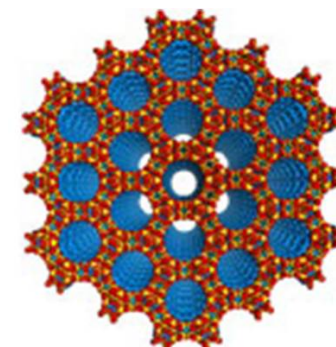
Physical Science and
Technology
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Materials Science and
Technology
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Food Science and
Technology
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Chemical Science and
Technologies
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Research Institutes and Centres

123 Institutes and Centres

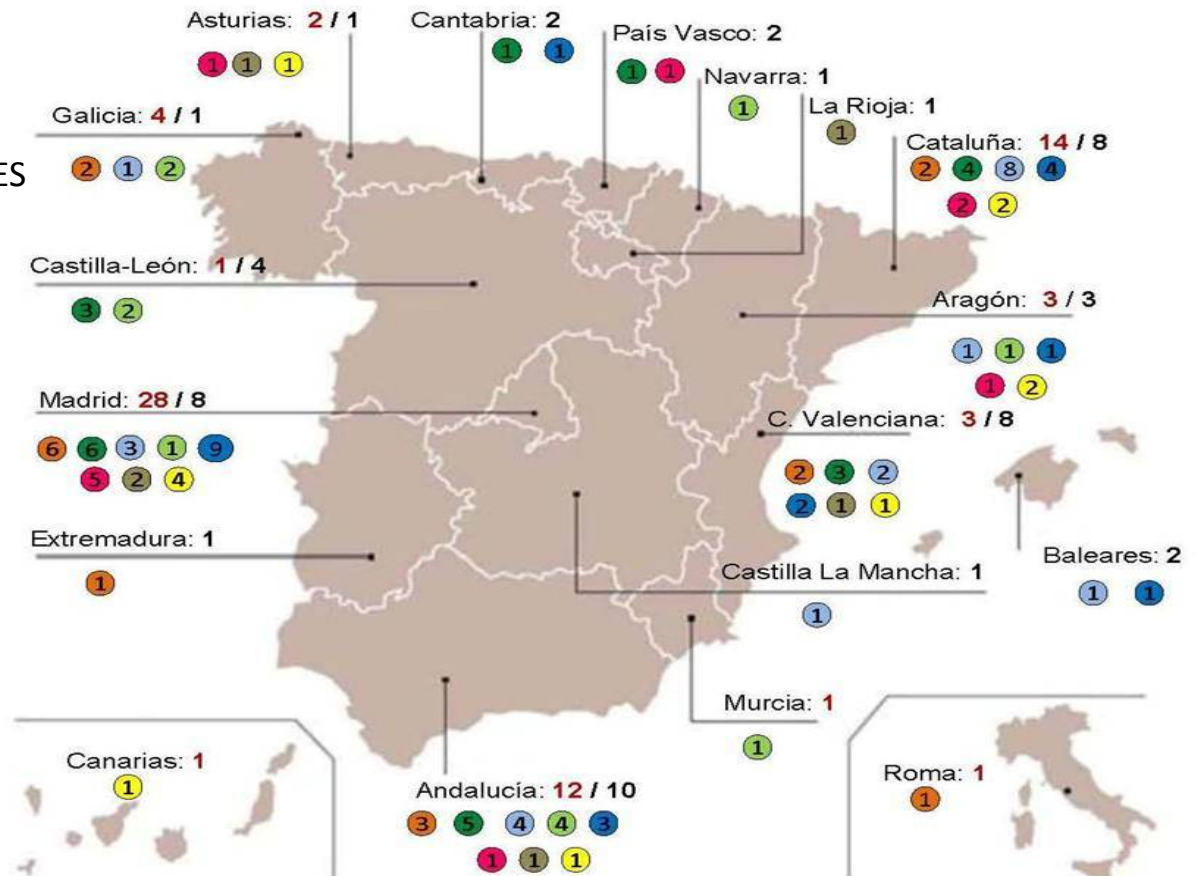
70 CSIC-ONLY CENTRES / **53** JOINT CENTRES

8 SERVICE CENTRES

118 ASSOCIATED UNITS

SCIENTIFIC AREAS

- 1. HUMANITIES AND SOCIAL SCIENCES
- 2. BIOLOGY AND BIOMEDICINE
- 3. NATURAL RESOURCES
- 4. AGRICULTURAL SCIENCES
- 5. PHYSICAL SCIENCE AND TECHNOLOGY
- 6. MATERIALS SCIENCE AND TECHNOLOGY
- 7. FOOD SCIENCE AND TECHNOLOGY
- 8. CHEMICAL SCIENCE AND TECHNOLOGIES





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8 SCIENTIFIC AREAS **123** CENTRES AND INSTITUTES

15,545 TOTAL PEOPLE

11,394 TOTAL CSIC'S OWN STAFF →

Scientific staff	3,949
Technician	6,132
Administration	1,313

March 2014

3,104 RTD Projects and Actions (ongoing), funded with **611.8** €M

❑ **2,647** National Programmes, amounting to **433.7** €M

❑ **457** European Projects, amounting to **178.1** €M

During 2013

4,795 RTD Contracts and Agreements, funded with **58.1** €M

During 2013

Large Infrastructures (ICTS)

National and international based, open access to international community researchers

International researchers / Countries



Antarctic Research Station Juan Carlos I

16 / 3



Calar Alto Astronomical Observatory

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Ocean Research Vessel Hesperides

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Integrated Microelectronics Cleanroom

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Doñana Biological Reservation

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Oceanographic Vessel Sarmiento de Gamboa

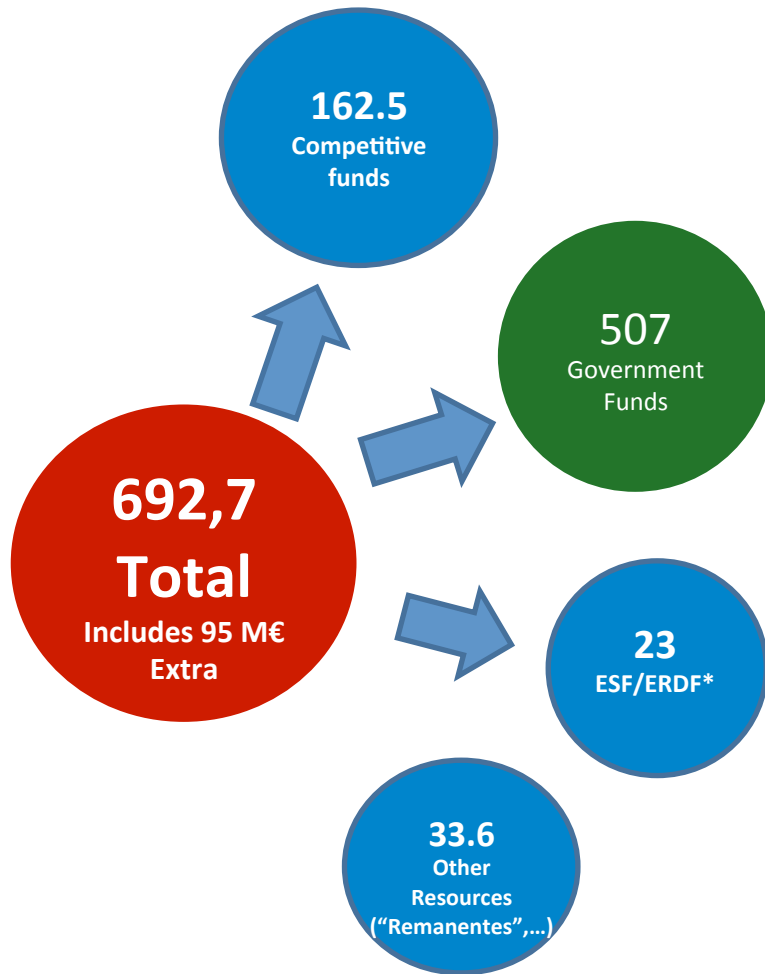
24 / 8



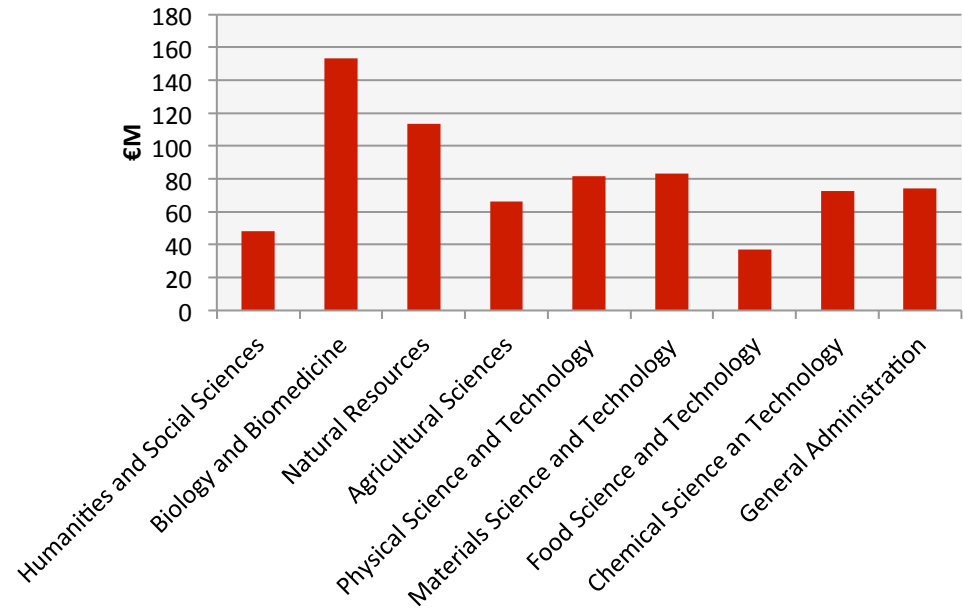
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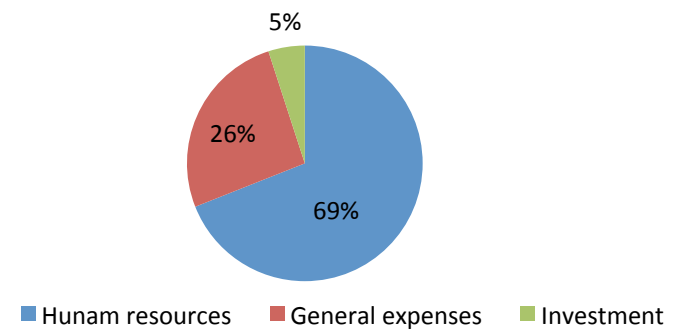
2013 INCOMES (€M)



2013 EXPENDITURES (€M)



2013 EXPENDITURES (€M)

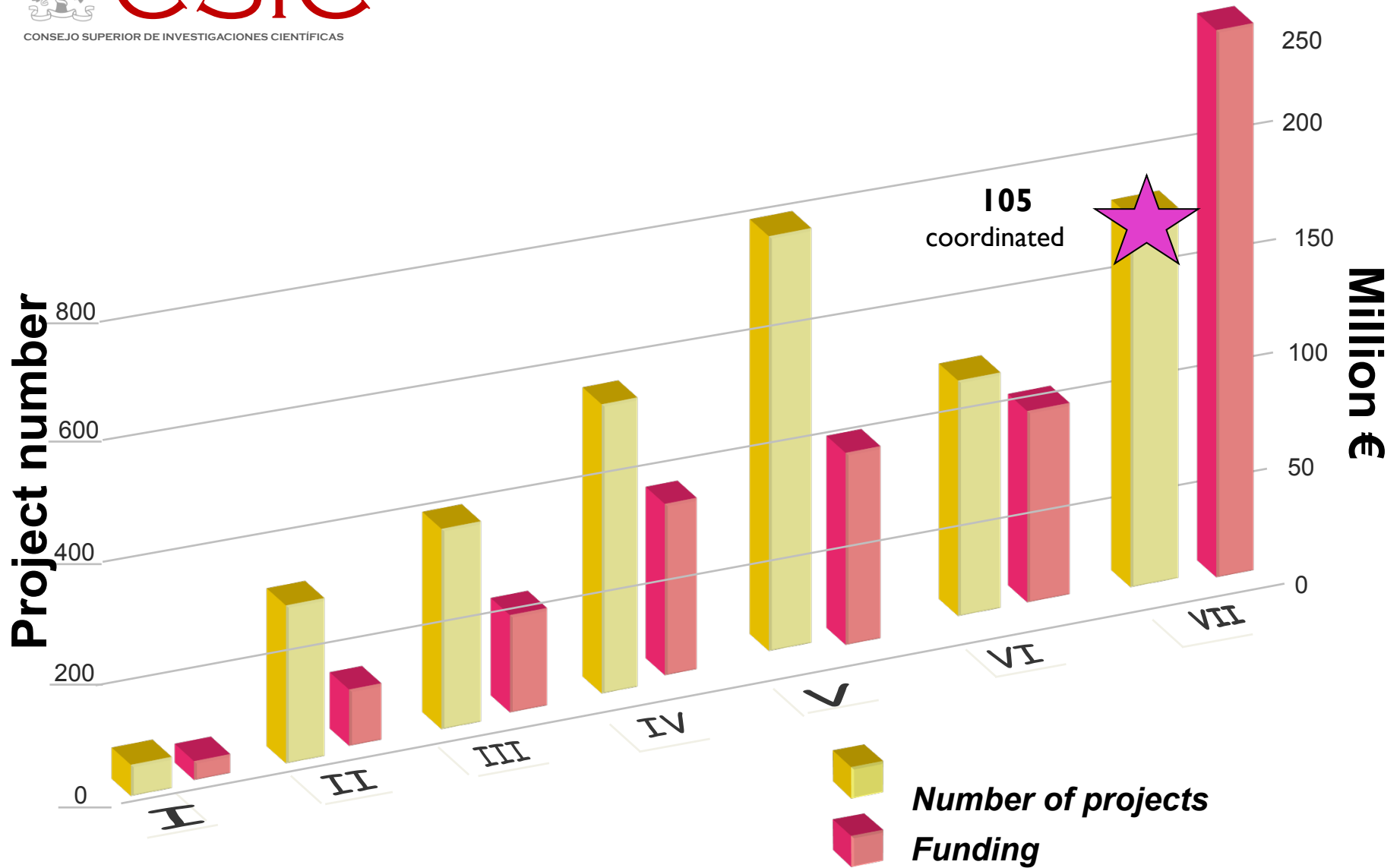


(*) ESF: European Social Fund. ERDF: European Regional Development Fund.



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At European level, CSIC is ranked 6th fundingwise



CSIC

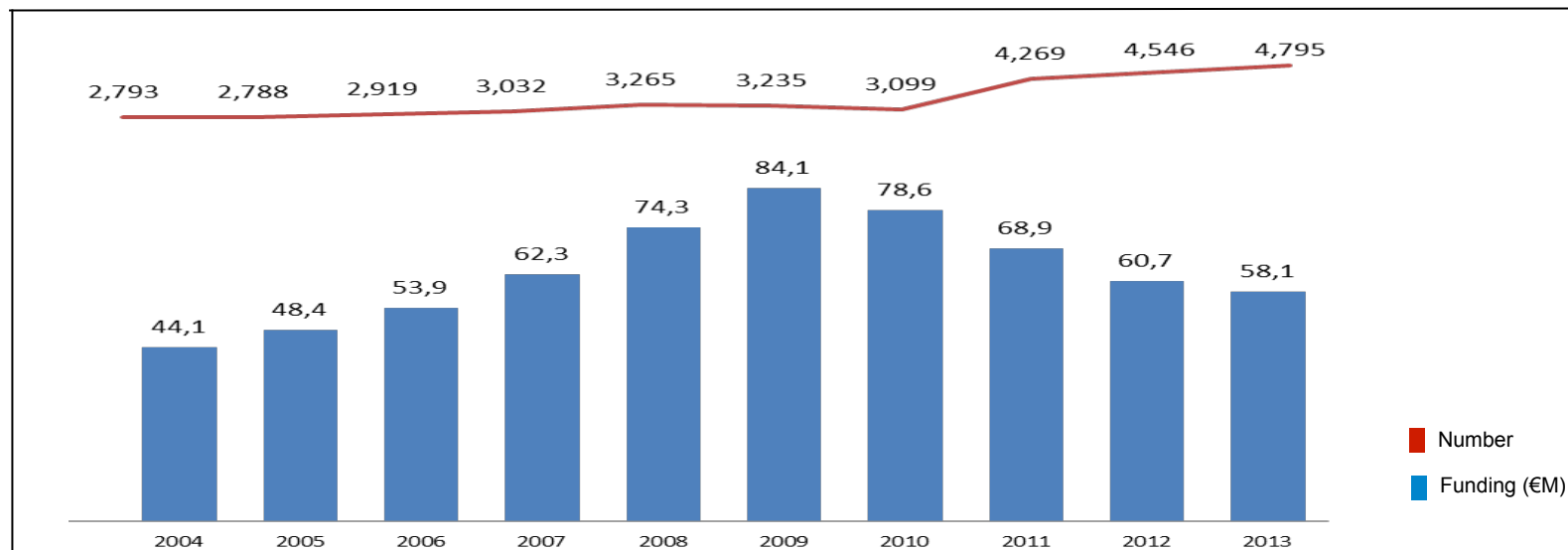
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

Output during 2013

ARTICLES	12.710
BOOKS	195
PHD THESES	887
PRIORITARY PATENTS	137

- CSIC represents the 45% Spanish participation in Nature & Science (2008-2012)
- CSIC with 6% Spanish scientific staff produces 20% of papers

Growth over the period 2004-2013 of the number of contracts and agreements in effect between the CSIC and companies and institutions and the (annualised) funding committed in them.





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Knowledge transfer during 2013

4,795 Contracts and agreements with companies and institutions (**58.1€M**)

137 Priority patent applications

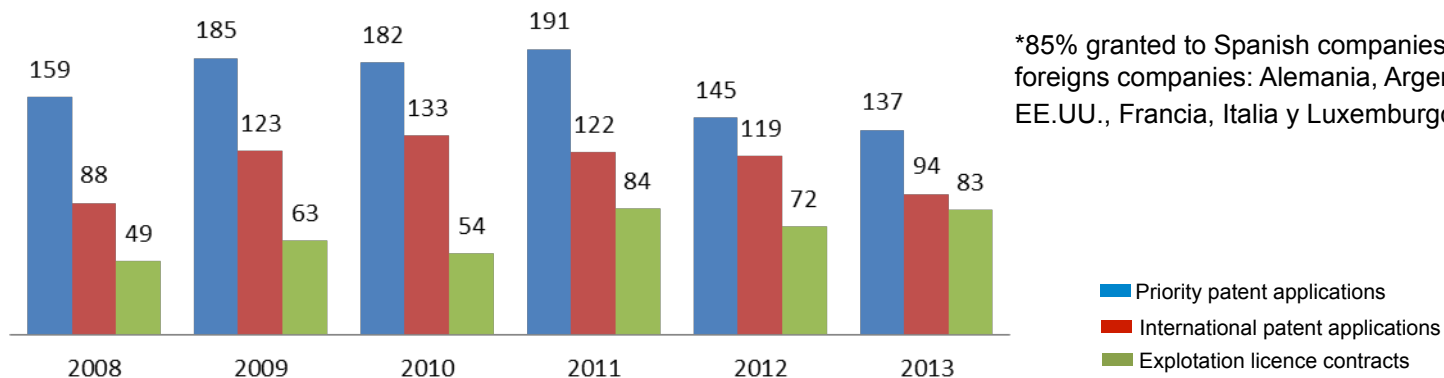
94 International patent applications

83 Exploitation licence contracts

85 Technological Based Enterprises

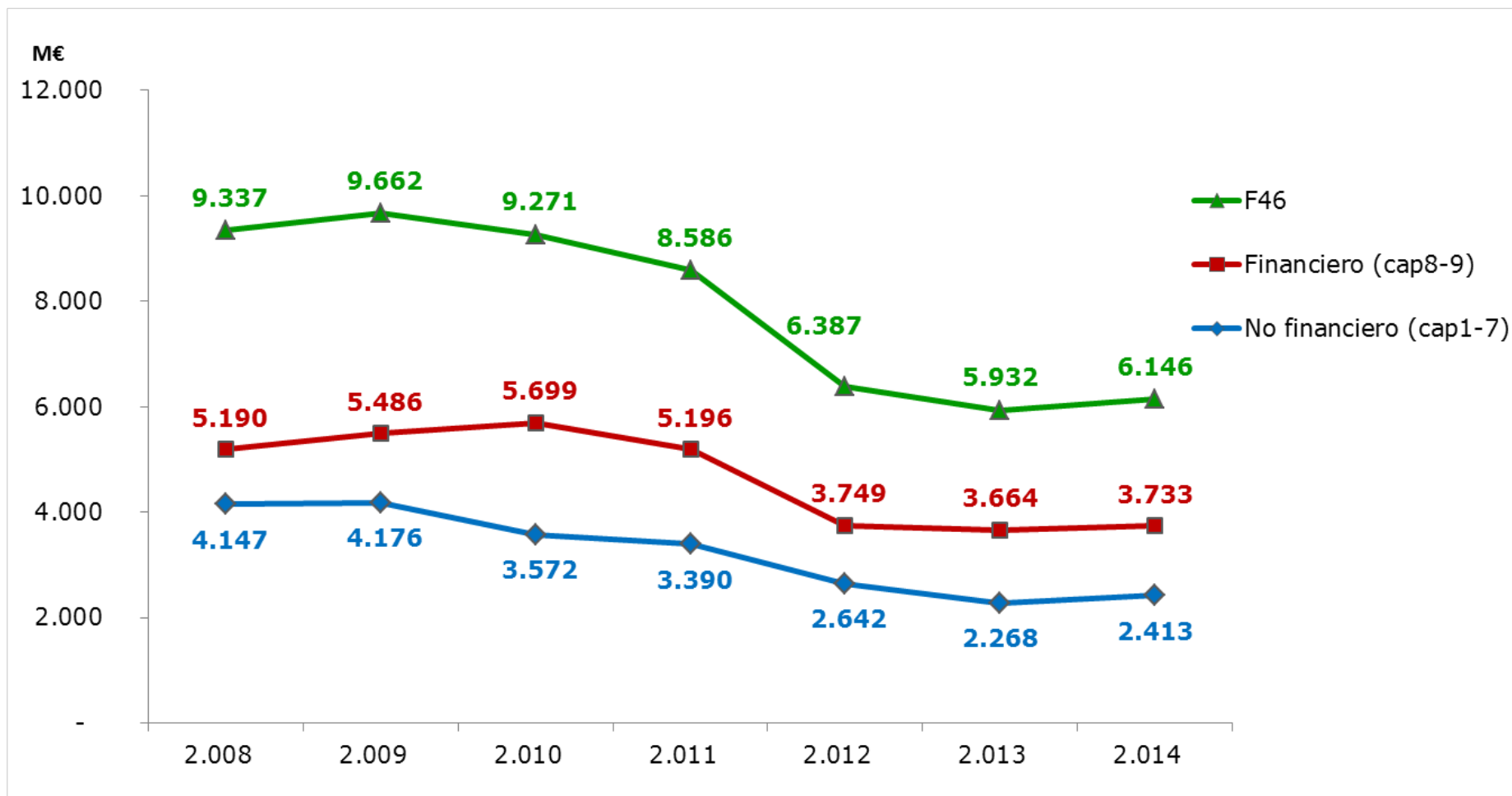
450 Patents portfolio

Number of Spanish and international PCT patent applications and licence contracts over the period *





R&D State Budget: P 46





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CSIC scientific career

Graduate + Master



CSIC Programme introduction to research 3-6 months

Doctoral

JAE Program

Started in 2007-8

Provides Fellowships and contract for:

Introduction to R&D

Predoc

Techniciens

Doctors

Drs dedicated to transfer

1/2/2012

Postdoc

to CSIC)

ears

FULLY FINANCED BY CSIC FUNDS!!!

1/2/2012

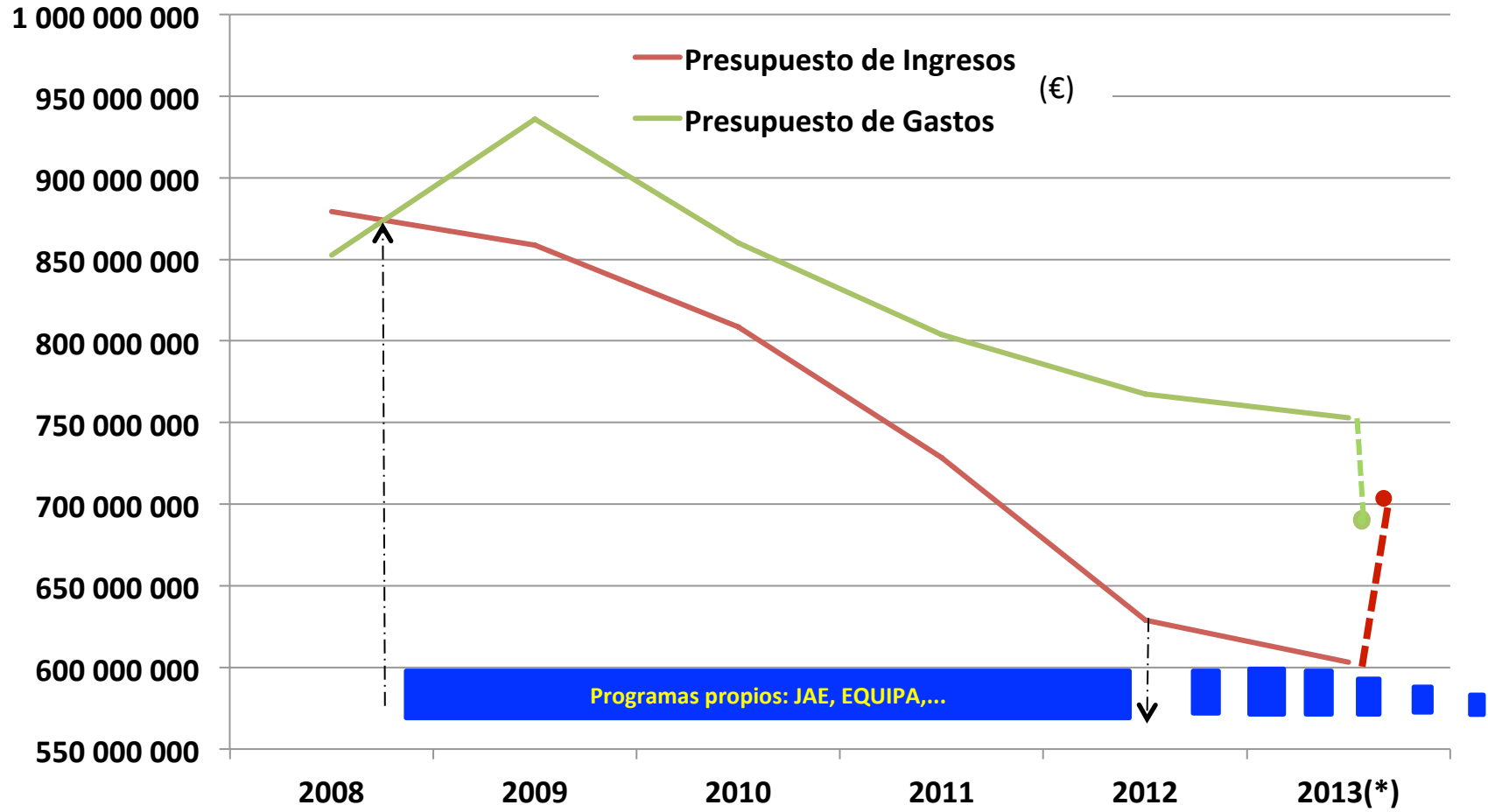
Permanent position at CSIC Civil Servant (Calls, competititons)



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The economic problems in CSIC

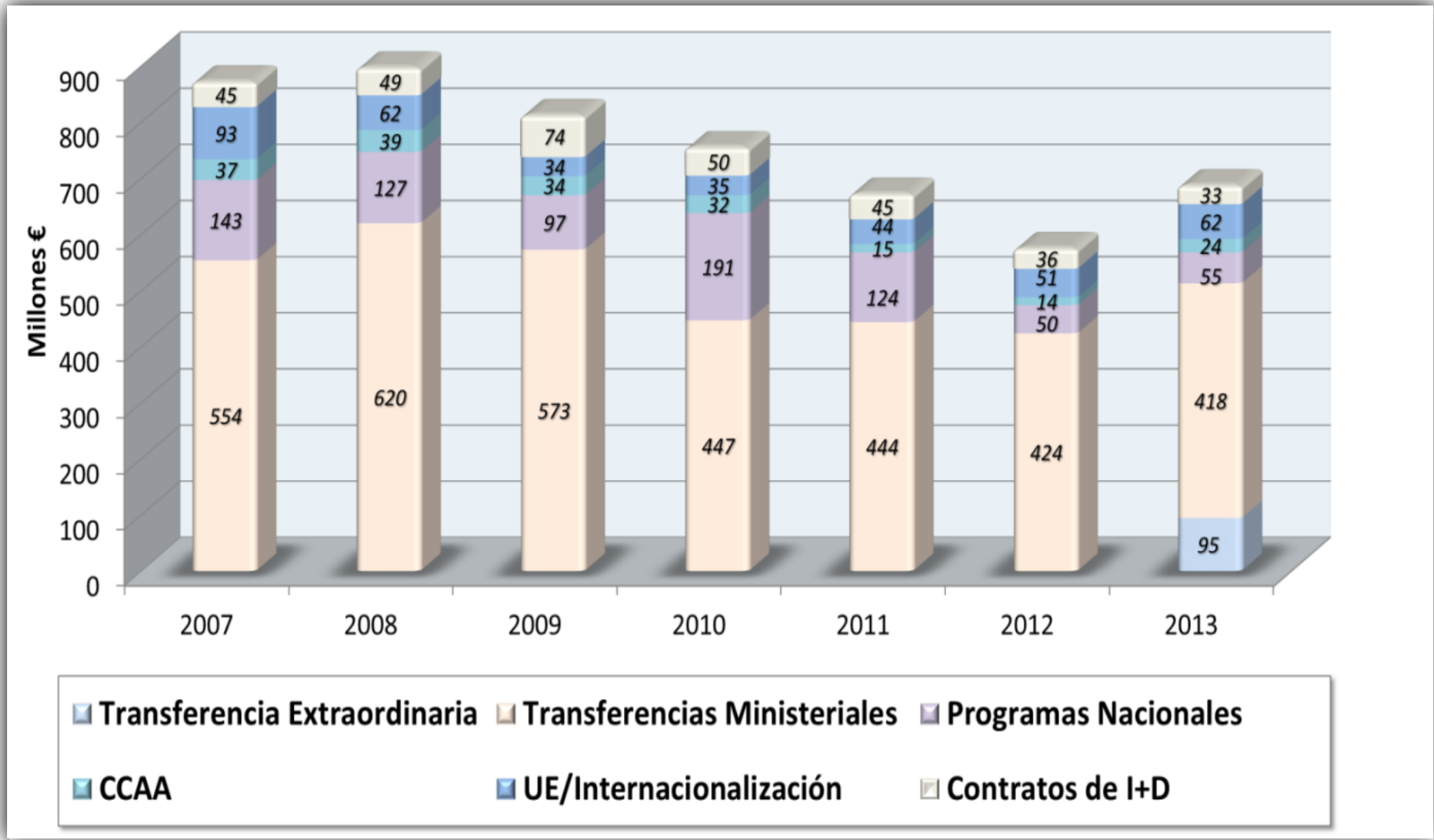




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Incomes Budget





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CSIC Present scientific career

Graduate + Master



CSIC Programme introduction to research 3-6 months

Doctoral Thesis



at CSIC

~~Fellowships / contracts Predoc~~
FPI (MINECO)
FPU (MECD)

No dismissals
Freeze own calls
Minimize core damage

RED LINE

Postdoc



at CSIC (or related to CSIC)

Contrato O. y S. (proyect)(CSIC) : aprox 3 years

Stage exterior (abroad) (MECD-Exterior): 2 - n years

Juan de la Cierva Programme (MINECO): 3 years

Postdoc Training Programme (MINECO): 2 years **New**

Postdoc Programme (MINECO) : 2 years **New**

Ramon y Cajal Programme (MINECO): 5 years **+ Grant**

CSIC Human Resources

	2007	2008	2009	2010	2011	Feb. 2012	March 2014
TOTAL CSIC STAFF	13,756	14,050	14,172	13,562	12,321	11,115	11,394
STAFF AT OTHER INSTITUTIONS IN CSIC CENTRES	4,672	4,605	4,383	3,769	2,610	976	4,151
TOTAL STAFF IN CSIC CENTRES	18,428	18,655	18,555	17,331	14,931	12,091	15,545
Scientists	5,419	5,375	4,433	4,368	4,186	4,198	3,949
							(CSIC: 3,060)
TOTAL CSIC STAFF							
Civil servant	5,862	5,885	5,858	5,879	5,610	5,464	5,600
Employment contract	1,240	1,246	1,268	1,151	1,096	1,045	1,203
Contracted	5,547	5,815	5,683	5,097	4,334	3,316	4,266
Fellowship	1,107	1,104	1,363	1,435	1,281	1,290	325
TOTAL	13,756	14,050	14,172	13,562	12,321	11,115	11,394

FP7

Applications **>3,000**

Signed contracts **724**

Success rate **24%**

Funding **300,3 €M**

Other non FP7 calls

(CIP, INTERREG, LIFE, RFCS...)

Signed contracts **>400**

CSIC internationalization action plan...

The objective is to promote the internationalization of CSIC activities through:

- Staff exchanges
- Joint research projects and networks
- Joint supervision of Master and PhD students
- Joint thematic workshops

with foreign institutions around the globe

...in a new global situation

CSIC programmes have been adapted to the new circumstances:

- Bilateral relations with European institutions in the framework of the EU
- Involvement of technological centers and companies as actors
- Restrictions in the resources to maintain many isolated bilateral programmes
- New principles of co-responsibility and co-funding in the cooperation with developing countries
- Increasing need of specialized training in emerging countries



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From bilateral programmes...

	2012	2013	2014
projects	132	45	29
countries	16	9	5



Active bilateral actions in 2014:

CNPq (Brazil)
 RGC Honk Kong
 CITMA (Cuba)
 VAST (Vietnam)
 CNRS (France)

...to joint workshops



First joint CSIC-CNRS workshop "Nanomaterials for Health"
 Madrid 18th-19th November 2013
 Salón de Actos del Instituto de Ciencias Agrarias, Campus Central del CSIC
 C/ Serrano 117, Madrid (Spain)

Chairs: Prof. Luisa de Cola (CNRS) and Dr. Puerto Morales (CSIC)

- Joint Workshop Chinese Academy of Social Sciences
'Social Inequality in China and Spain in the time of Globalization'
- Opening Doors CSIC-British Council
'Feeding the future'
- 1st Joint CSIC-CNR workshop
'Nanotechnology and energy'
- 2nd Joint CSIC-CNRS workshop
'Understanding of biological diversification'

...to large general programmes

i-LINK+; i-COOP+



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i-LINK: Programme for the promotion of scientific international collaboration.

Exchange of researchers without any geographical or thematic restrictions

31 active projects (2014)

<http://www.csic.es/web/guest/i-link>



i-COOP: Programme for scientific cooperation in developing countries.

22 active projects (2014)

<http://www.csic.es/web/guest/i-coop>

From i-LINK and i-COOP...

...to i-LINK+ and i-COOP+

+: adding the participation of companies

+: adding the co-funding of foreign partners

**From i-COOP...
exchange visits**

**...to i-COOP+
specialized training**

**to i-COOP-H₂O (2013); i-COOP-AgroFood (2014);
full projects on a specific thematic**



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Present priority regions for CSIC internationalization actions





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International Joint Centre

International Laboratory for Global Change Research



Research Groups



16 CSIC

12 Pontificia Universidad Católica de Chile

Open for the integration of new institutions



Las Cruces, Chile

TRAINING ACTIVITY
YEARLY SUMMER SCHOOL
around 40 Students



<http://www.lincg.uc-csic.es/>



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International Sponsorship

Annual programme funding research visits to Huinay (Patagonia-Chile)



AXA Chair on adversarial risk analysis



Prof. David Ríos





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Mediterranean actions

CSIC partner of ERANETMED



ERANETMED



Partner countries:

Algeria, Cyprus, Egypt, France, Jordan, Greece, Germany, Italy, Lebanon, Malta, Morocco, Portugal, Tunisia, Turkey, Spain

Duration

4 years (October 2013- September 2017)

Enhance Euro-Mediterranean co-ownership through innovation and competitive research
Increase coordination among national research programmes of Mediterranean Partner Countries.

The ERANETMED will consider actions to enhance innovation through applied research, capacity building, mobility and clustering.

CSIC and Morocco

CSIC, which has a collaboration framework agreement with the Moroccan CNRST, participates in several initiatives:

Jumelage institutionnel Maroc & France-Espagne (ended 2013)

Spain-Morocco working groups. Set up in 2012 by the research state secretaries of both countries to promote the scientific collaboration in topics of common interest (natural resources, solar energy, forestry, agriculture and food)



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CSIC Scientific Permanent Positions (civil servants)

CT: Científico Titular (eq. Profesor titular de Universidad)

IC: Investigador Científico (eq. Profesor Agregado Universidad -OBSOLETO)

PI: Profesor de Investigación (eq. Catedrático Universidad)

10-may-14

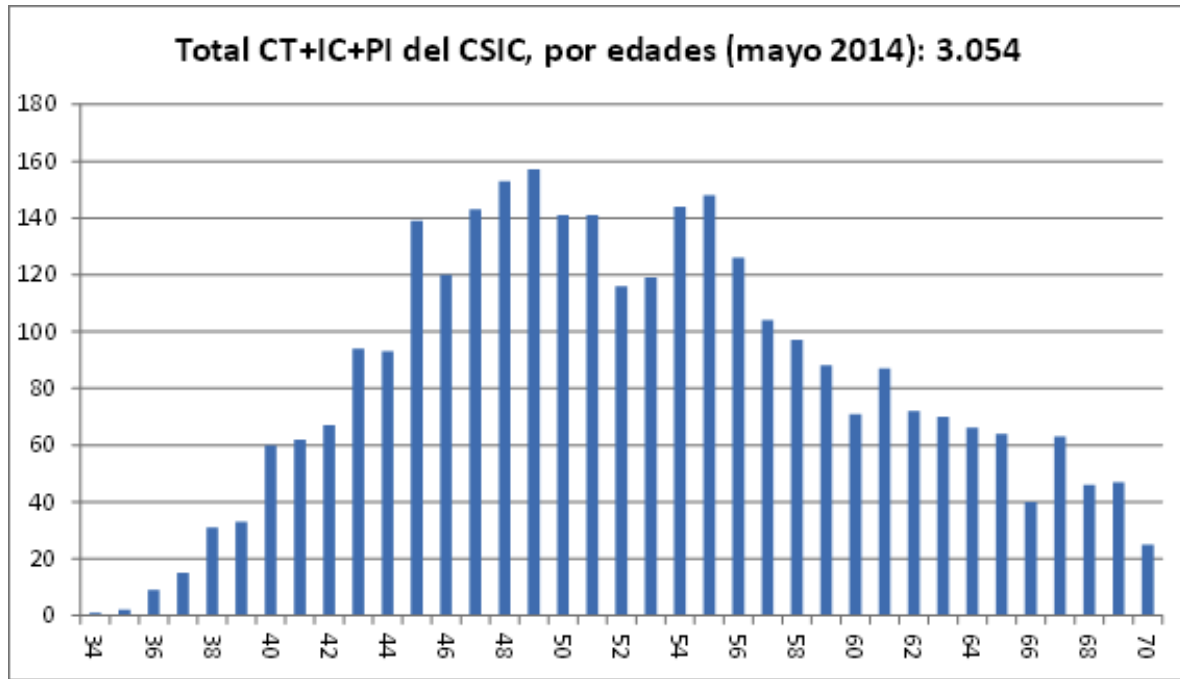
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CT	Todos	1.458	33,57	69,90	49,00
	edad <44 a	382	33,57	44,00	41,00
	44 < edad < 55	768	44,00	55,00	48,50
	edad > 55 a	302	55,00	69,90	60,60
IC	Todos	857	37,75	70,00	53,96
	edad <44 a	32	37,75	43,90	42,40
	44 < edad < 55	490	44,16	55,00	50,16
	edad > 55 a	335	55,00	70,00	60,65
PI	Todos	745	42,55	70,00	58,41
TODOS		3.060	33,57	70,00	52,70



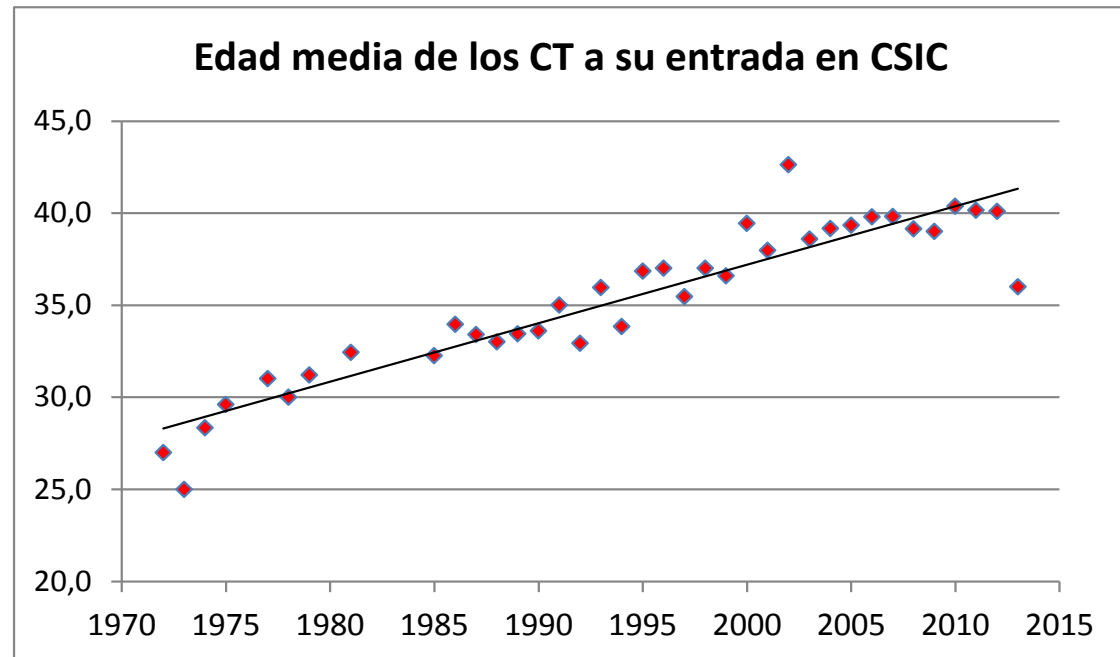
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CSIC Researchers
age pyramid
(civil servants)



Average age of
researchers' entry at CSIC

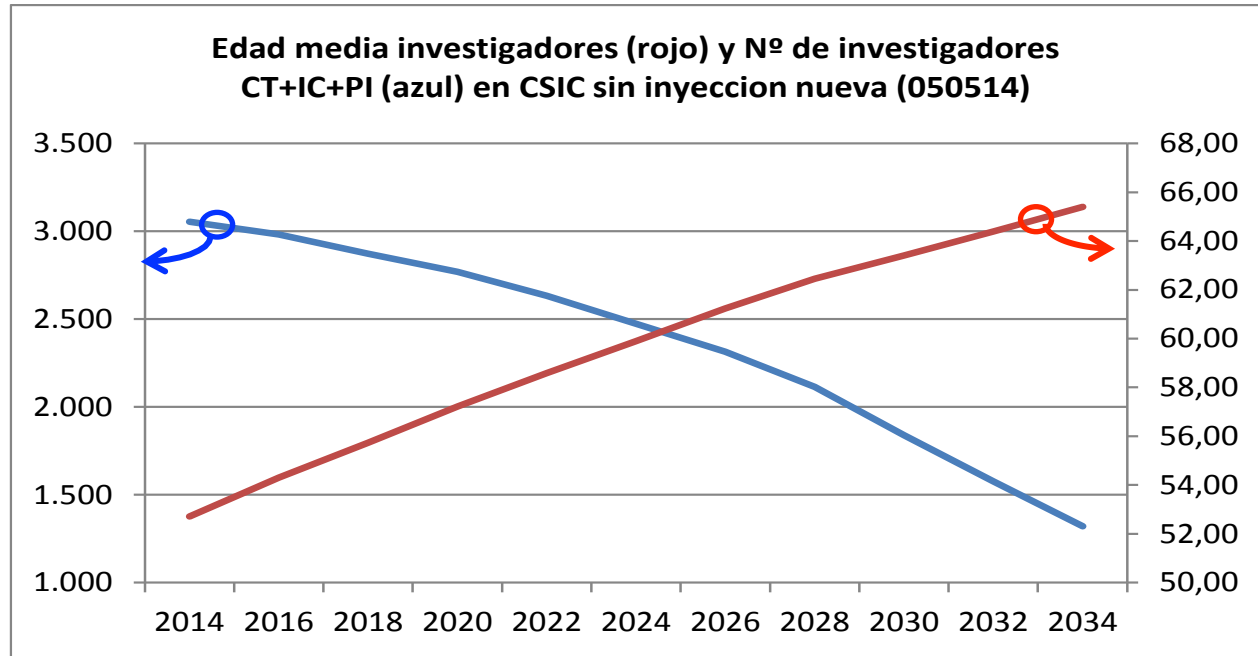




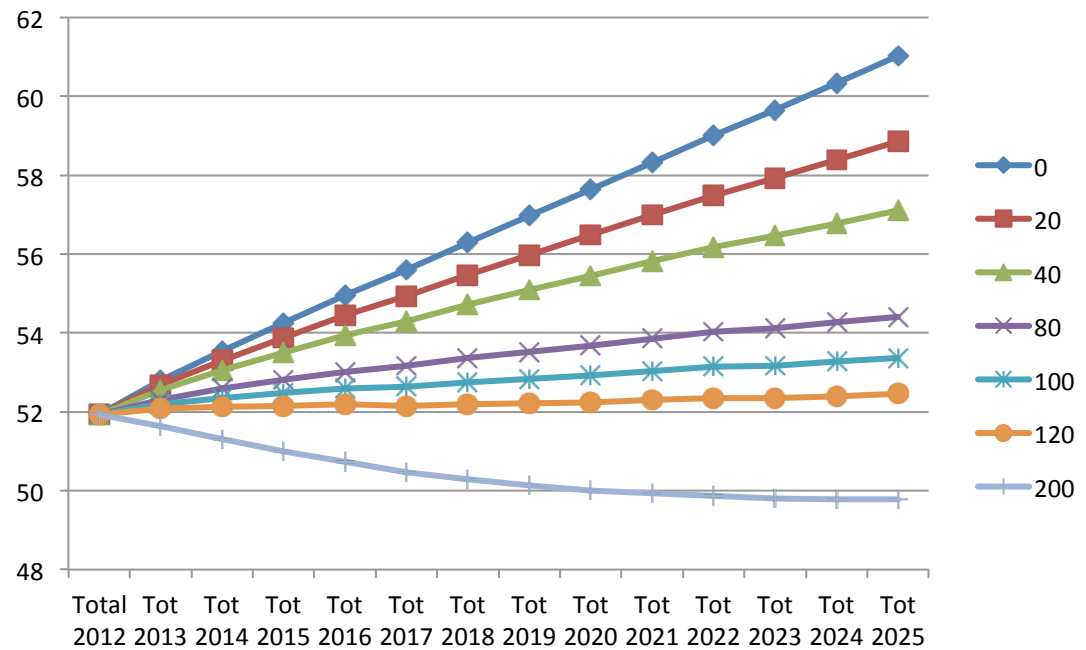
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Average age and number of
civil servant researchers.
(if CSIC doesn't hire new staff)
(May 2014)



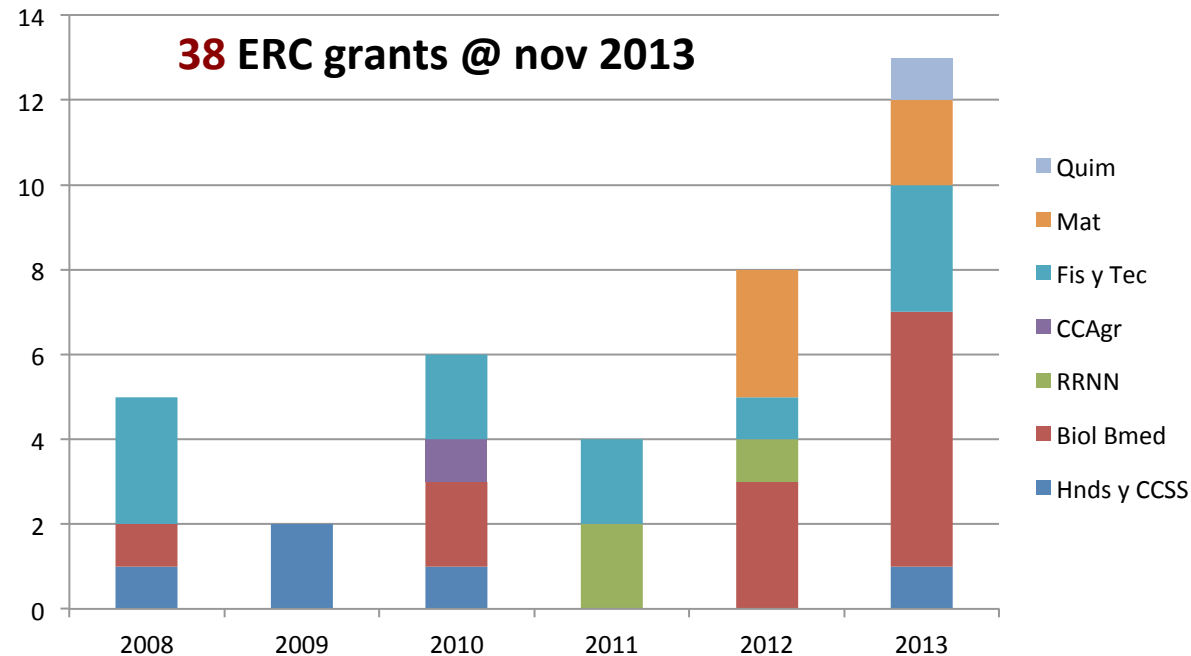
Simulation model: new researcher
positions vs average age evolution
(Nov 2013)





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44 ERC grants @ march 2014 (Approx. 76 €M)

- 21 StG
- 4 CoG
- 17 AdG
- 1 PoC
- 1 SyG

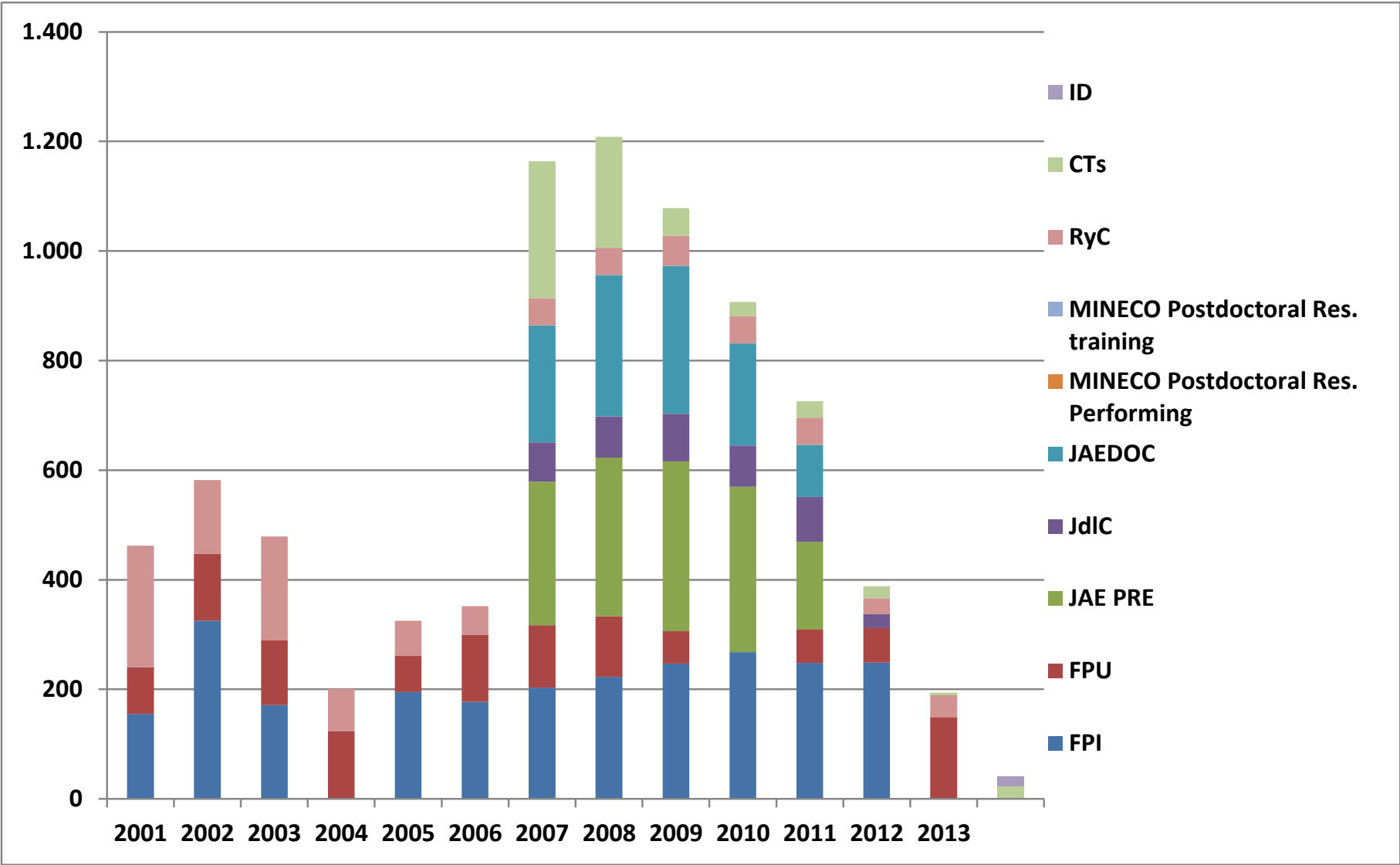
Most relevant areas in this respect are

- *Biology/Biomedecine*
- *Physics*

CSIC : new positions created (pre, postdoc and permanent)

NEW POSITIONS/year, within the scientific career		Stands for	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 (provs)
JAE intro									350	350	350	150	100	100		
Predoctoral	FPI	4 years	155	325	171		195	177	203	223	247	268	248	249		
	FPU	4 years	85	122	118	124	66	122	114	110	59		61	63	149	
	JAE PRE	4 years							262	290	310	302	160			
Postdoctoral	JdIC	3 years							72	75	87	75	82	25		
	JAEDOC	3 years							213	258	270	186	95			
	MINECO Postdoctoral Res. Performing	2 years														
	MINECO Postdoctoral Res. training	2 years														
	RyC	5 years	222	135	190	77	64	53	50	50	55	50	50	29	40	
Permanent position	CTs	Indef (civil servant)							250	202	50	26	30	22	5	24
	ID	Indef (Renovable 5 y.)														17
Total (Res)			462	582	479	201	325	352	1.164	1.208	1.078	907	726	388	194	41

CSIC : new positions created (pre, postdoc and permanent)



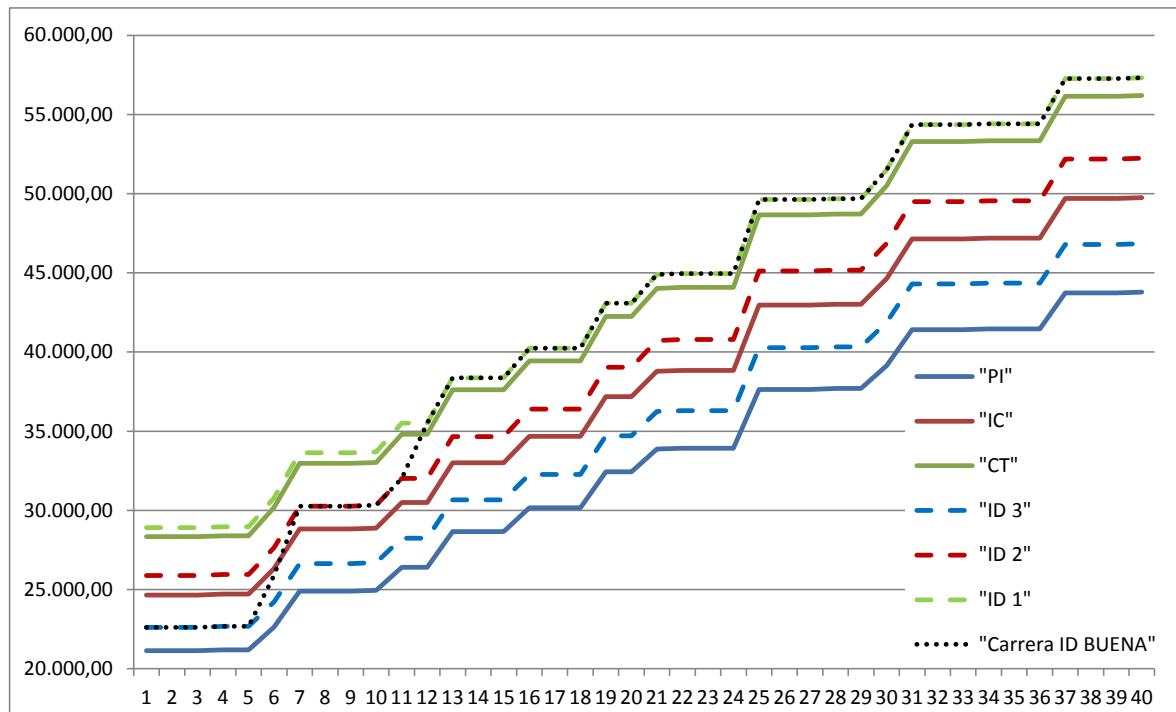


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CSIC Future scientific career

- New category “INVESTIGADOR DISTINGUIDO”
- Created by law Ley de la Ciencia (14/2011)
- Characteristic of this new category?
 - Similar to the civil servant scientifics
 - Periodically evaluation
 - Three levels of possible promotion after review squemes





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Spanish National Research Council

