



Universitat
Pompeu Fabra
Barcelona

PhD in Biomedicine

Doctoral Programme Annual Report
2013 – 2014

UPF PhD Programme in Biomedicine

2013-2014 ACADEMIC YEAR

An information session (**‘Welcome Session’**) for all pre-registered PhD candidates was held on 14 October 2013. The session was led by the PhD programme director with the collaboration of Elinor Thompson (director of the *Science in Action* activity), Mar Garreta (director of the UPF Mar Library and the *Sessions in computing and information competences* activity), Maria Parras (UPF Mar Library) and the programme’s administrative staff from the UPF CEXS Department’s secretary’s office. During the session, students were informed about the registration process, calendar, and PhD programme regulations and activities.

The Library has begun to offer *Sessions in computing and information competences* as a mandatory activity for new students in the PhD programme [‘Session 1. Getting around the Library and the IT Services: computer and information resources available’ (for new UPF students only) and ‘Session 2. How to manage bibliographic references (Mendeley) and Scientific publications’]. At the same time, the **number of seminars** on biomedical research at the PRBB that students are required to attend **has been reduced** from 20 to 10.

Concerning the marks for PhD theses, Spanish Royal Decree 534/2013, of 12 July, amended Spanish Royal Decree 99/2011, of 28 January, and **changed the marks for PhD theses** from PASS or FAIL to FAIL, PASS, GOOD or EXCELLENT. All theses defended during the 2013-2014 academic year were assessed according to the new marks.

Students admitted to the PhD programme in the 2013-2014 academic year are governed by **Spanish Royal Decree 99/2011**. It is worth noting that PhD students governed by other royal decrees were **simultaneously enrolled** on the programme in the 2013-2014 academic year:

RD 778/1998 (governing students admitted to the PhD programme in the 2005-2006 academic year or earlier): 4

RD 56/2005 (governing students admitted to the PhD programme in the 2006-2007, 2007-2008 or 2008-2009 academic years): 12

RD 1393/2007 (governing students admitted to the PhD programme in the 2009-2010, 2010-2011 or 2011-12 academic years): 206

RD 99/2011 (governing students admitted to the PhD programme in the 2012-2013 or 2013-2014 academic years): 209

ADMISSION AND REGISTRATION

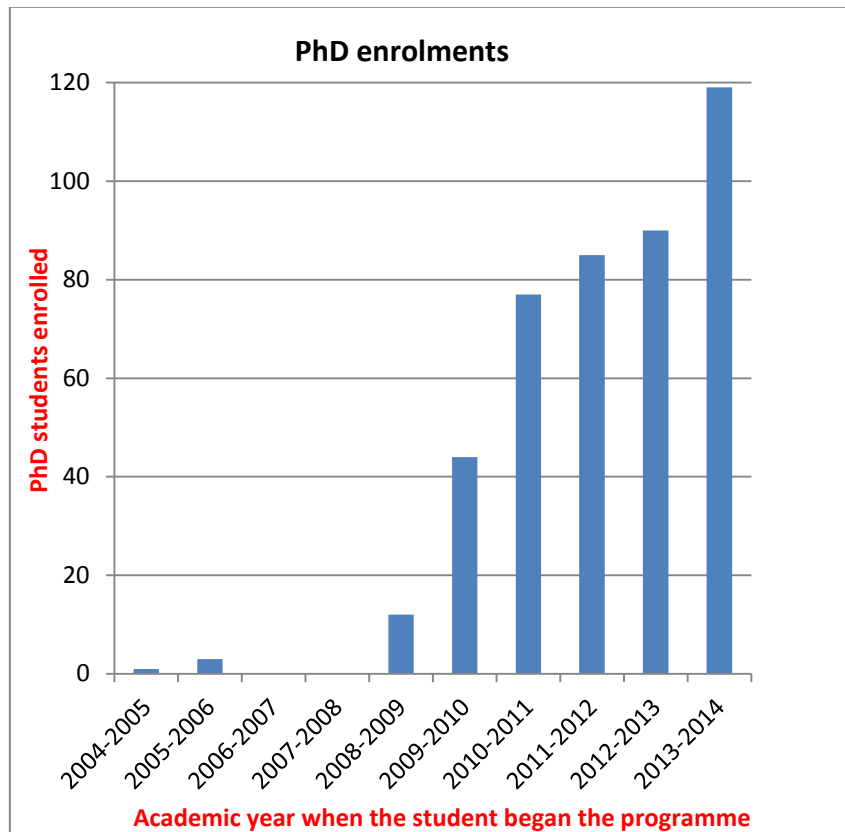
New PhD students admitted to the programme in the 2013-2014 academic year: 125

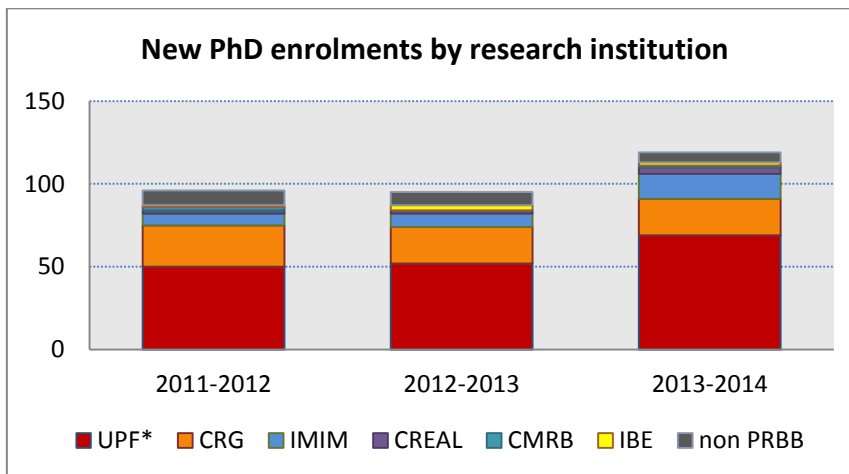
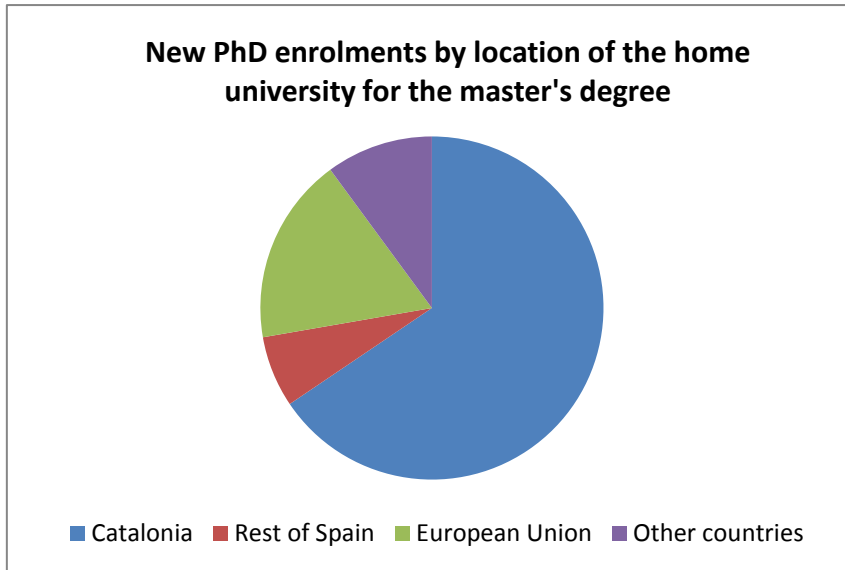
Total PhD students enrolled on the PhD programme: 431

New PhD students (admitted in the 2013-2014 academic year): 119

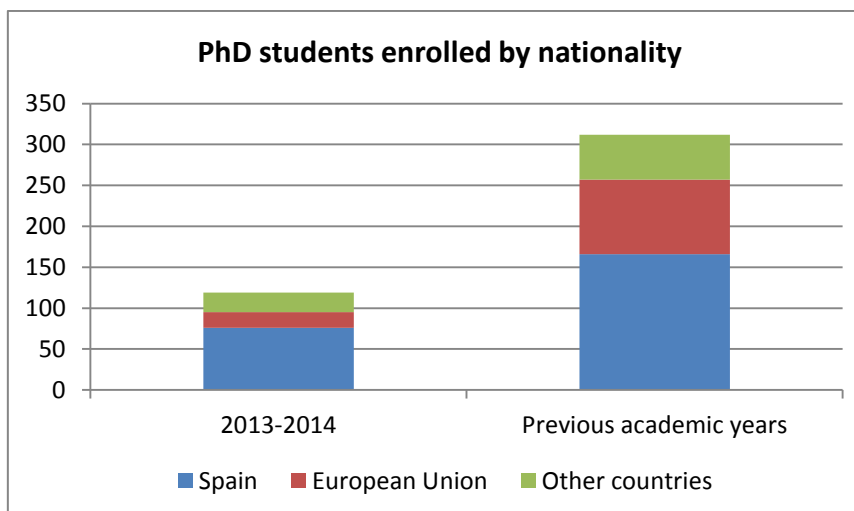
Returning PhD students (admitted in previous academic years): 312

The following chart shows how the number of PhD students has gradually grown to match the average number of positions offered by the programme (100). Most of the new PhD students are based at PRBB institutions.





* including UPF PhD supervisors with dual affiliations



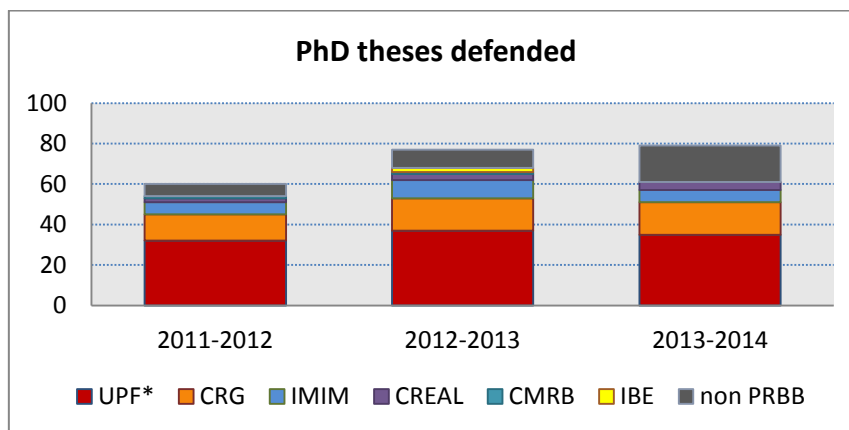
DOCTORAL THESES DEFENDED: 2013-2014 ACADEMIC YEAR

Total PhD theses defended: 79

PhD theses leading to the award of diplomas bearing the European Mention: 11

Average time spent completing the thesis: 4.05 academic years

Recent years have seen a gradual increase in the number of PhD theses defended in the programme. This increase can be attributed to the increase in the number of PhD students enrolling in previous years. Eleven theses were awarded a European Mention. A list of all the PhD theses defended is provided in the annex.



* including UPF PhD supervisors with dual affiliations

2013/2014 SPECIAL AWARD

PhD theses proposed for the award: 36

PhD theses given the award: 7

In keeping with the new regulations, a total of seven awards were given in the 2013-2014 academic year. Of the 79 PhD theses defended, 36 (45.56%) received the three positive votes from the PhD committee members needed for consideration of the thesis for a Special Award. The Postgraduate Committee evaluated the quality of the PhD report and publications comprising the PhD theses.

The full details of the PhD theses given awards are provided in the annex.

PROGRAMME ACTIVITIES

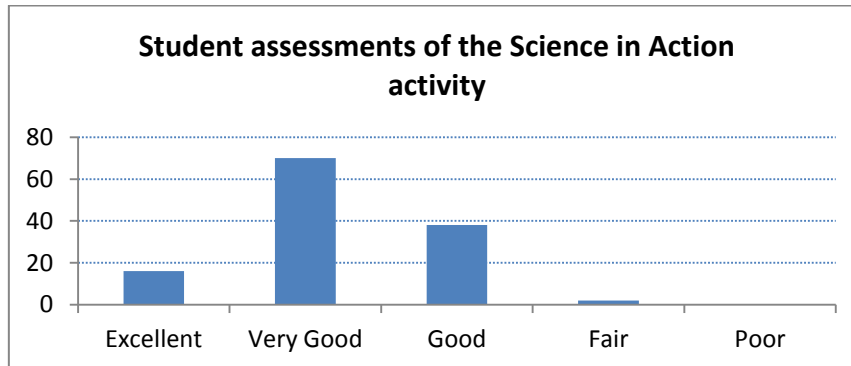
- *Welcome Session.* The aim of this session is to give new PhD students a detailed explanation of the programme's mechanics and the activities they must complete for it. The session was held on 14 October 2013, in the Ramon y Cajal Room at the PRBB.
- *Sessions in computing and information competences.* 'Session 1. Getting around the Library and the IT Services: computer and information resources available' (for new UPF students only). 'Session 2. How to manage bibliographic references (Mendeley) and scientific publications'. The sessions were held five and six times respectively in October, November and December 2013.
- *Seminars on biomedical research at the PRBB.* The aim of this activity is to promote student attendance of the interdisciplinary seminars held in the PRBB environment. Students have to attend at least 10 seminars.
- *Doctoral Thesis Project Committee and PhD Project Defence.* The aim of this activity is to assure the viability of the PhD proposals submitted, identify potential problems and provide alternative solutions for them.
- *Science in Action course.* This course aims to familiarize post-graduate biomedicine students with current ideas and debates surrounding the topic of good scientific practice. The course content is based on the PRBB Code of Good Scientific Practice. The Science in Action methodology includes group discussions, role playing and other interactive activities. Two editions were held, in autumn 2013 and spring 2014.

Evaluation of the Science in Action course

Two editions of the Science in Action course were held in the 2013-2014 academic year: the autumn edition (October to December 2013) and the spring edition (April to June 2014). During the spring edition, master's and PhD students were enrolled on the course. In all, 129 students enrolled on the two editions of the course (64/65 students per course).

Students evaluated several aspects of the course, including its relevance, their expectations, its interest to them, the tutors' competence, experience and presentation skills, and the materials and content, among other things. The questionnaire was completed by 127 students.

The overall assessment is reflected in the item 'How would you rate this course overall?'



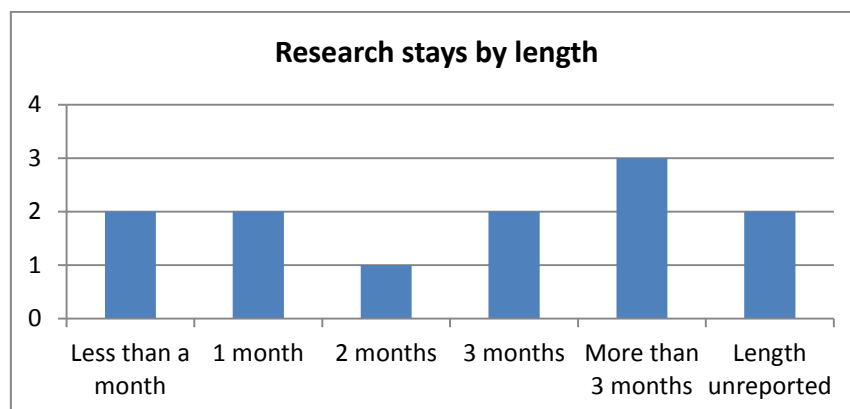
RESEARCH STAYS

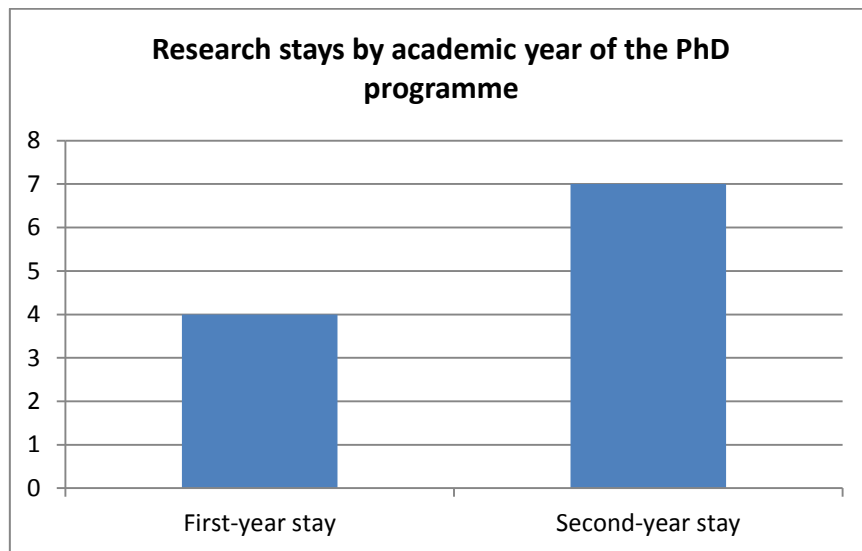
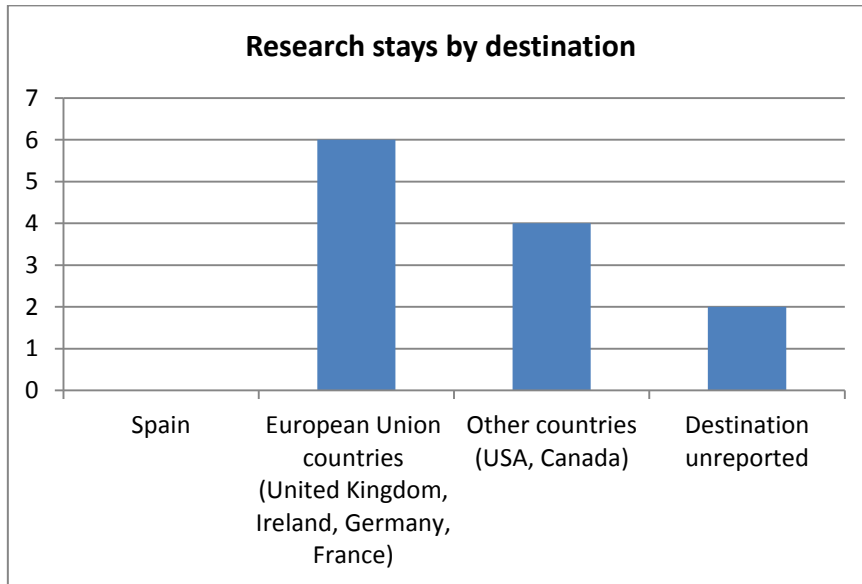
Students governed by RD 99/2011 (admitted in the 2012-2013 and 2013-2014 academic years): 209

Number of research stays reported by students: 12

Number of students: 11

Students are responsible for recording the different activities they complete over the course of the PhD programme in the IT module ('Activities Document and Research Plan'). Consequently, the figures on research stays may underrepresent the actual number.





ANNEX

PhD theses defended for the PhD Programme in Biomedicine in the 2013-2014 academic year.

	STUDENT	INSTITUTION	SUPERVISOR	THESIS TITLE
13-14	Agostini, Federico	CRG	Tartaglia, Gian Gaetano	'Predictions of RNA-binding ability and aggregation propensity of proteins'
13-14	Aigner, Johanna	CRG	Estivill, Xavier	'Genetic, structural and functional characterization of the BTNL gene cluster'
13-14	Aparicio Prat, Estel	UPF	García de Herreros, Antonio	'Natural antisense transcripts control LEF1 gene expression'
13-14	Barriga de Vicente, Francisco Martin	IRB	Batlle, Eduard	'Identification and functional analysis of intestinal stem cell genes in homeostasis and cancer'
13-14	Bassaganyas Bars, Laia	CRG	Estivill, Xavier	'Characterization of simple and complex genomic structural variation: a study of human populations and leukaemia'
13-14	Benítez Arciniega, Alejandra	IMIM	Schröder, Helmut	'Patrones dietéticos y componentes nutricionales específicos asociados con la obesidad'
13-14	Biarnés Perez, Marc	TEKNON	Monés, Jordi & Arias, Lluís	'Increased fundus autofluorescence, a biomarker of lipofuscin content, as a risk factor for progression of geographic atrophy secondary to age-related macular degeneration'
13-14	Burokas, Aurelijus	UPF	Maldonado, Rafa & Martín-García, Elena	'New behavioural models to investigate eating disorders'
13-14	Calzolari, Simone	UPF	Pujades, Cristina	'Study of the molecular mechanisms involved in the formation of hindbrain boundaries'

13-14	Campos Serna, Javier	UPF	García Benavides, Fernando & Ronda, Elena	'Gender inequalities in occupational health: A systematic literature review and the influence of the welfare state regime and the occupational social class throughout the Spanish and the European Working Conditions Surveys'
13-14	Carnero Montoro, Elena	UPF	Bosch, Elena	'Genomic and functional approaches to genetic adaptation'
13-14	Carreras Sureda, Amado	UPF	Vicente, Rubén & Valverde, Miguel	'Modulation of T lymphocyte activation by ORMDL3'
13-14	Cornejo Ovalle, Marco	UPF	Borrell, Carme & Pérez, Glòria	'Salud bucal y su atención en las personas mayores institucionalizadas de Barcelona y el impacto en su calidad de vida'
13-14	Cornelio, Cecilia Ines	UPF	Fernández, Esteve & García Benavides, F.	'Physical activity in the community: correlates of change and overall mortality in two population - based cohorts'
13-14	Cuenca Royo, M ^a Aida	IMIM	Domingo, Antonia	'Cannabis en los jóvenes: patología psiquiátrica y escalas de consumo'
13-14	Dall'Olio, Giovanni Marco	UPF	Bertranpetit, Jaume & Laayouni, Hafid	'Applications of network theory to human population genetics: from pathways to genotype networks'
13-14	D'Amico Davide	CRG	Dierssen Soto, Mara & Santos, Monica	'Fear memories in TgNTRK3 mice, a model of panic disorder: definition of mechanism and search for new therapeutic targets'
13-14	Demajo Meseguer, Santiago	CRG	Di Croce, Luciano	'ZRF1 - mediated transcriptional regulation in acute myeloid leukemia'
13-14	Di Stefano, Bruno	CRG	Graf, Thomas	'C/EBP α poises B cells for rapid reprogramming into induced pluripotent stem cells'
13-14	Di Vona, Chiara	CRG	de la Luna, Susana	'Nuclear DYRK1A: new insights into its role within the nucleus'
13-14	Drechsel, Nils Jan Daniel	UPF	Vilà Freixa, Jordi & Dill, Ken A.	'Development of a multiscale protocol for the study of energetics of protein dynamics'

13-14	Duran Jordà, Xavier	UPF	García Benavides, Fernando & Martínez, José Miguel	‘Trayectoria laboral e incapacidad permanente: análisis de los años de vida laboral perdidos. Un estudio basado en la muestra continua de vidas laborales (MCVL) de la seguridad social’
13-14	Fabregat Rossell, Andreu	UPF	Pozo Mendoza, Oscar & Ventura Alemany, Rosa	‘Re-exploring testosterone metabolism: new insights for doping control’
13-14	Gascon Merlos, Mireia	CREAL	Vrijheid, Martine	‘Persistent organic pollutants, bisphenol A, phthalates and respiratory and immune health in childhood’
13-14	Gómez Castellà, Cristina	IMIM	Ventura Alemany, Rosa	‘Improving detection capabilities of doping agents by identification of new phase I and phase II metabolites by LC - MS/MS’
13-14	Guegan, Thomas	UPF	Maldonado, Rafael & Martín, Miquel	‘Common neuroplasticity mechanisms underlying drugs and food reward’
13-14	Guixa Gonzalez, Ramon	UPF	Selent, Jana	‘Modeling the interplay between membrane lipids and GPCRs’
13-14	Haber, Marc	UPF	Comas Martínez, David	‘Study of human genetic diversity: Inferences on population origin and history’
13-14	Herráiz Yebes, Alba	IBE	Bellés, Xavier & Piulachs, Maria Dolors	‘Molecular analysis of ovarian resorption induced by hydric stress in <i>Blattella germanica</i> ’
13-14	Hoffmeister, Lorena	UdG	Castells, Xavier	‘Cuidado agudo y resultados de salud de los accidentes cerebrovasculares isquémicos en Chile’
13-14	Iannone, Camila	UPF	Valcárcel Juárez, Juan	‘Links between chromatin structure and regulation of alternative pre-mRNA splicing in mammalian cells’
13-14	Invergo, Brandon	UPF	Bertranpetit, Jaume & Montanucci, Ludovica	‘A system - level, molecular evolutionary analysis of mammalian phototransduction’
13-14	Jalencas Giménez, Xavier	UPF	Mestres, Jordi	‘Chemoisosterism and its impact on drug polypharmacology’

13-14	Kessler, Roman	IRB	Azorín, Ferran	'Molecular and functional characterization of the HP1c complex in <i>Drosophila melanogaster</i> '
13-14	Lecland, Nicolas	CRG	Lüders, Jens	'Non-centrosomal microtubule nucleation and organization in mitosis'
13-14	Lugano, Roberta	ICCC-CSIC	Badimon, Lina & Padró, Teresa	'Low density lipoproteins, vascular smooth muscle cell function and vascular remodeling'
13-14	Malhotra, Sunny	VALL D'HEBRON	Montalban, Xavier & Comabella, Manuel	'Search of prognostic biomarkers in patients with multiple sclerosis'
13-14	Marcon, Luciano	CRG	Sharpe, James	'A dynamic Turing model of digit patterning'
13-14	Margalef González, Pol	IMIM	Espinosa Blay, Lluís & Bigas Salvans, Anna	'Identification and characterization of an oncogenic form of IKKa in colorectal cancer'
13-14	Mariotti, Marco	UPF	Guigó, Roderic	'Computational genomics of selenoproteins'
13-14	Martínez Fundichely, Alexander	ICREA	Caceres, Mario	'Bioinformatic characterization and analysis of polymorphic inversions in the human genome'
13-14	Masgrau Fortuny, Aina	CRG	Mendoza, Manuel	'The cytokinetic inhibitors Boi1 and Boi2 are required for activation of the exocyst complex by Rho GTPases'
13-14	Mateu Huertas, Elisabet	CRG	Estivill, Xavier & Martí, Eulàlia	'Insight into the disease processes of fragile X premutation carriers associated pathologies'
13-14	Mehdipanah, Roshanak	UPF	Muntaner, Carles & Borrell, Carme	'Urban Renewal and Health: The effects of the Neighbourhoods Law on health and health inequalities in Barcelona'
13-14	Millán Ariño, Lluís	UPF-TECNO	Jordan Vallès, Albert	'Genomic distribution and functional specificity of human histone H1 subtypes'

13-14	Millanes Romero, Alba	IMIM	Peiró, Sandra & Garcia de Herreros, Antonio	'Heterochromatin Dynamics during Epithelial - to - Mesenchymal Transition'
13-14	Mrkonjic, Sanela	UPF	Valverde, Miguel Angel	'TRPV4 channel regulation and involvement in cell motility'
13-14	Nadal Ribelles, Mariona	UPF	Posas, Francesc & de Nadal, Eulàlia	'Control of transcription by the stress activated Hog1 Kinase'
13-14	Nuñez Olle, Marc	UPF	Gil Gómez, Gabriel	'The Role of Cyclin O in the DNA Damage Response'
13-14	Paetzold, Bernhard	CRG	Serrano, Luis	'OSynthetic biology in M. pneumoniae'
13-14	Pavlovic, Milica	IRB	Gomis Cabre, Roger	'Identification of genetic determinants of breast cancer metastasis to the bone'
13-14	Pellegrini, Pasquale	PEBC	González Suárez, Eva	'RANK signalling, a master regulator of mammary stemness and cancer'
13-14	Petrovic, Jelena	UPF	Giraldez, Fernando	'Dual function of Notch signalling and role of Hes/Hey genes in the inner ear sensory development'
13-14	Pons Espinal, Meritxell	CRG	Dierssen Soto, Mara & Martínez de Lagrán, Maria	'Role of DYRK1A in hippocampal neuroplasticity: implications for Down syndrome'
13-14	Posavec, Melanija	IMPPC	Buschbeck, Marcus	'The role of the histone variant macroH2A1 in muscle physiology and pathophysiology'
13-14	Puig Barrachina, Vanesa	UPF	Benach, Joan & Martínez, José Miguel	'Monitoring employment - related health inequalities in Europe: the case of unemployment and precarious employment'
13-14	Puig Vilanova, Ester	IMIM	Barreiro Portela, Esther	'Biological mechanisms in respiratory and limb muscle dysfunction in chronic respiratory conditions: influence of disease severity and body composition'

13-14	Ramada Rodilla, José Maria	UPF	Delclós Clanchet, George & Serra Pujadas, Consol	'Translation, cross - cultural adaptation and validation of the work role functioning questionnaire (WRFQ) to Spanish spoken in Spain'
13-14	Rapino, Francesca	CRG	Graf, Thomas	'Induced transdifferentiation of human B - leukemia/lymphoma cell lines and inhibition of leukemigenicity'
13-14	Robles Hellin, Claudia	CREAL	De Sanjosé, Silvia & Kogevinas, Manolis	'Role of human polyomaviruses in lymphoproliferative disorders and bladder cancer'
13-14	Rodríguez Cuadrado, Sara	UPF-TECNO	Costa, Albert	'Attenuation of information during native/non - native interactions'
13-14	Sánchez García, Carolina	UPF-TECNO	Soto Faraco, Salvador	'Cross - modal predictive mechanisms during speech perception'
13-14	Santamaria García, Hernando	UPF-TECNO	Sebastián Gallés, Núria	'Understanding the social brain: Neurocognitive effects of experiencing a social hierarchy'
13-14	Santamariña Rubio, Elena	ASPB	Pérez, Catherine	'Riesgo de lesión por colisión de tráfico según movilidad en Cataluña. El tiempo en desplazamiento como medida de exposición'
13-14	Schmidt, stefanie	IMIM	Ferrer Forés, Montserrat	'Quality of Life in Urinary Bladder and Prostate Cancer Patients'
13-14	Slebe Concha, Juan Felipe	IRB	Guinovart, Joan & Gomis, Roger	'The FoxA1/FoxA2 - LIPG axis regulates breast cancer growth through changes in lipid metabolism'
13-14	Stanisavljevic, Jelena	IMIM	Baulida, Josep	'Snail1- the architect behind the matrix: Novel roles in desmoplastic microenvironments'
13-14	Stevanovic, Irena	IRB	Stracker, Travis	'Characterization of the in vivo functions of PrimPol, a novel TLS primase - polymerase'
13-14	Tejedor, Juan Ramon	UPF	Valcárcel Juárez, Juan	'Systematic functional analyses of Spliceosomal components reveal novel mechanisms of alternative splicing regulation'

13-14	Titos Vivancos, Iris	CRG	Mendoza, Manuel	'Topoisomerase II and dynamic microtubules solve sister chromatic intertwinings in anaphase'
13-14	Trujillano Lidón, Daniel	CRG	Estivill, Xavier	'Mendelian disease gene identification and diagnosis using targeted next generation sequencing'
13-14	Tur Mongé, Inmaculada	UPF	Castelo, Robert	'Mapping eQTL networks with mixed graphical models'
13-14	Vafeiadi, Marina	CREAL	Kogevinas, Manolis & Vrijheid, Martine	'Effect of hormone disruptors on birth outcomes and child's anogenital distance'
13-14	Valvi, Damaskini	CREAL	Vrijheid, Martine & Mendez, Michelle Ann	'Effects of endocrine-disrupting chemicals on childhood growth and obesity'
13-14	Vargas Prada, Sergio	UPF	Serra Pujadas, Consol & Martínez, Martínez, José Miguel	'Role of psychological and culturally influenced risk factors on symptoms and disability for musculoskeletal disorders: CUPID study (Spain)'
13-14	Vidal Torres, Alba	LAB. ESTEVE	Zamanillo, Daniel & Vela, José Miguel	'Selective antagonism of sigma-1 receptors as a new strategy for pain treatment: Behavioural and neurochemical studies'
13-14	Whissell, Gavin	IRB	Batlle, Eduard	'WNT signalling, hypoxia and GATA6: their role in colorectal cancer, stem cells and disease progression'
13-14	Yubero Lahoz, Samanta	UPF	de la Torre, Rafael	'MDMA pharmacology in humans and serotonergic effects'
13-14	Zecca, Andrea	UPF	Pujades, Cristina & López-Schier, Hernan	'Mechanisms responsible of sensory afferent projections into the hindbrain'

Recipients of a 2013-2014 Special Award