



# Barcelona Biomedical Research Park

## Performance Report **2016**

March 2017



Web version: <http://performancereport2016.prbb.org>  
<http://informederesultats2016.prbb.org> (Catalan)

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## The park

The Barcelona Biomedical Research Park (PRBB) is one of the largest hubs of biomedical research in southern Europe, celebrating its 10th anniversary in 2016. The PRBB has a critical mass of 1,500 people hailing from 50 different countries, an accumulated R&D budget of approximately 90 M€ per year and cutting-edge scientific equipment. The governing council is the board of rectors which includes representatives from the Government of Catalonia, Barcelona City Council and Pompeu Fabra University and is chaired by the Catalan Minister for Economy and Knowledge. The PRBB Consortium is headed by the General Director, Jordi Cami, and General Administrator, Marga Sala.

The PRBB Consortium manages and maintains the park and its facilities. It also manages the animal facility as a scientific service. The research centres pay for the rent of space in relation to area and type, as well as for various services in the park. The park receives no structural subsidies.

**Vision:** The Consortium PRBB provides an open scientific infrastructure so that the institutions of the park can perform biomedical research that is internationally competitive.

[www.prbb.org](http://www.prbb.org)

## Highlights

### Tenth anniversary of the PRBB

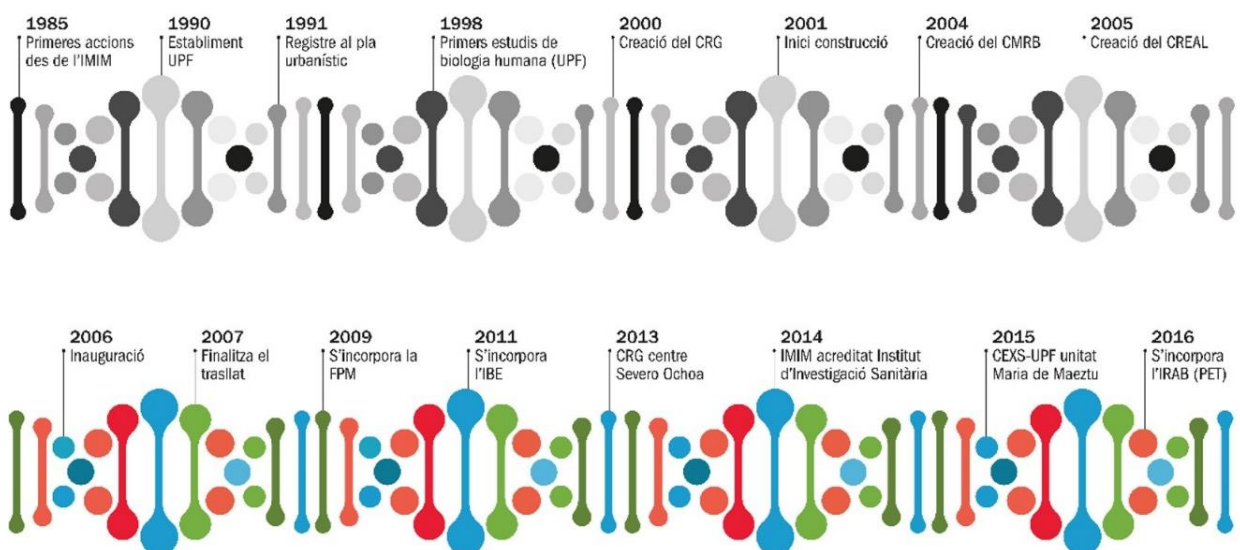
On March 15, 2006, the Barcelona Biomedical Research Park (PRBB) was inaugurated with the promise of becoming the main player in biomedical research in southern Europe. Over the last 10 years, this initiative of the Catalan Government, the City Council of Barcelona and Pompeu Fabra University has succeeded in providing an open scientific infrastructure that allows the institutes at the park to perform internationally competitive biomedical research. The figures for scientific activity including 1,200 publications and 300 conferences per year or EU funding are outstanding, and the PRBB ranks alongside some of Europe's top universities and research institutes. In just ten years the park has proven itself worthy of its place in this biomedical "Champions League", competing for and attracting promising talent from all over the globe, and consolidating itself on the world map of biomedical research.

The six independent research organisations located in the PRBB form an inter-institutional coalition and are connected to one another via the open-plan layout with shared spaces. They represent a critical mass of 1,500 people from 50 countries, cutting-edge technical and scientific services, an incredible diversity of research perspectives ranging from molecules to populations, and internationally recognised scientists.

Jordi Camí, General Director, sees the PRBB in the future "with a reputation equal to or better than it is today, and the desire to adapt to future technological changes. Staying the same would be a failure. Maybe the centres will be different, and the distribution may alter, but it will remain an international framework for excellent research."

Commemorative video: [#10PRBB in Youtube](#)

PDF: [Special publication #10PRBB](#)



## The celebration

On Thursday May 5, the PRBB celebrated its 10th anniversary. In a moving ceremony attended by numerous figures from the political and scientific arenas, Ian Mattaj, director of the European Molecular Biology Laboratory (EMBL), stressed that the PRBB has been at the forefront of biomedical research in Europe, attracting international talent and increasing the sum of knowledge facilitated by interdisciplinary research. "The new Francis Crick Institute which will open this year in London is the British answer to the PRBB", joked the Scottish scientist.

Jordi Camí, general director of the park looked back over the past decade at the PRBB "the best place for biomedical research in Spain, and possibly in southern Europe". Arcadi Navarro, Secretary of Universities and Research from the Catalan government, highlighted the role of Camí in the creation of this great project. Jaume Casals, director of the University Pompeu Fabra, and Malmusi Davide, Director of Health at Barcelona City Council, closed the event held in the PRBB Auditorium with 250 attendees.

Then it was time for the birthday party in the PRBB's inner square. The park's orchestra and choir entertained everyone in an emotional afternoon for all involved, topped off by cake and champagne to celebrate ten years of successes.

Flickr: [Images of the celebration](#)

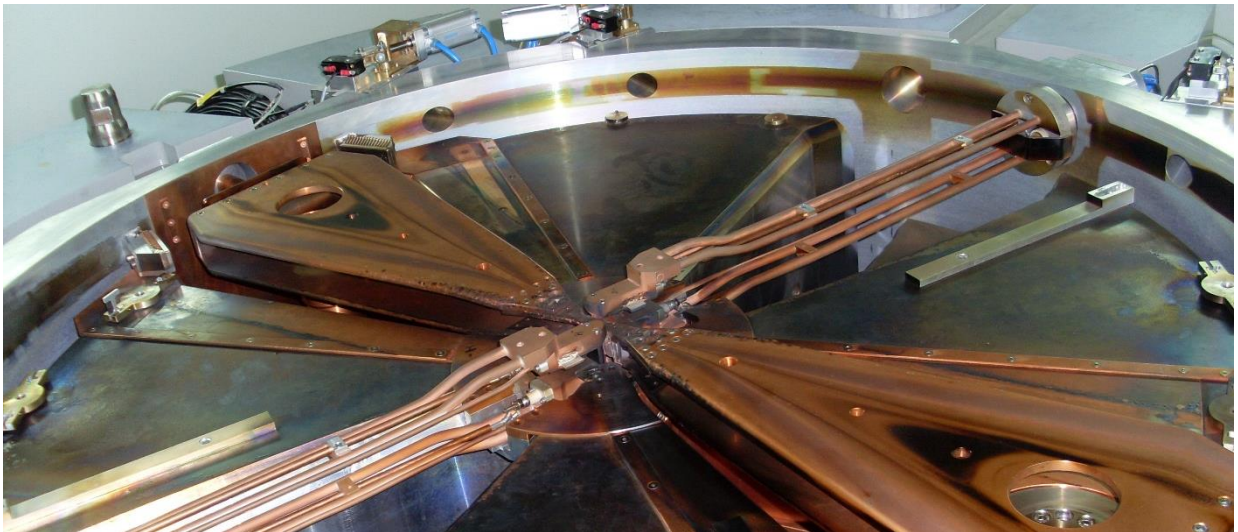


### **The IRAB joins the PRBB on floor -1**

During 2016, the new Barcelona Institute of Applied Radiopharmacy, IRAB, has been established at the PRBB. This laboratory was recently set up as a radiopharmaceutical production and supply company for PET (Positron Emission Tomography) using the cyclotron facility already installed on the park's lower ground floor.

The new centre consists of three laboratories dedicated to the production of radiotracers with high-tech equipment: a quality-control laboratory, a production lab, and the cyclotron area. The eight-person team has been setting up laboratories for the synthesis of PET radiopharmaceuticals. These radiopharmaceuticals for molecular imaging diagnostics are used for detecting and monitoring cancer and the evolution of neurological processes, but they are also employed in clinical trials for the development of new drugs.

The IRAB will have its own FDG production, a glucose analogue labelled with F-18. FDG is widely used in oncology to study cancer cells, which are characterised by their abnormally high consumption of glucose. "Our goal is to get the first marketing authorisation for the autumn of 2017", says the director of IRAB, Mireia Alabart.



## Granting of ERDF funds

The PRBB Consortium adjudged a public tender for the construction works and remodelling of the research areas at the PRBB building for the new "outstation" of EMBL and the expansion of the department CEXS-UPF. This "Operation PRBB-EMBL-UPF" is financed by the European Regional Development Fund of the European Union under the ERDF Operational Program of Catalonia 2014-2020 with a grant of € 687,500.

The aim of the operation PRBB-EMBL-UPF is the incorporation of an EMBL outstation at the PRBB building and the remodelling of new spaces for the research groups in bioengineering at the department CEXS-UPF, in accordance with the "Maria de Maeztu" distinction. The location of the EMBL outstations at PRBB also involves the creation of a joint unit of additional technical services in mesoscopy between EMBL and the CRG. Several visits of EMBL delegates have allowed to define, with satisfaction, the space requirements needed both for the outstation and the joint EMBL-CRG unit joint. The CMRB moving towards a research centre accredited as a Health Research Institute by the ISC III frees spaces that facilitate these changes.



**Generalitat  
de Catalunya**



**Unió Europea  
Fons Europeu  
de Desenvolupament Regional**

## Mobility Survey of the PRBB residents

To improve the situation of bicycle parking at the park, a working group with the participation of some users was created. One of the first tasks of this group was to find out the reality regarding mobility needs of residents.

The mobility survey received 546 responses. The data were most useful for planning a new parking for bicycles at the PRBB building.

PDF: [Complete results of the survey](#)



How long does it take to get to work?

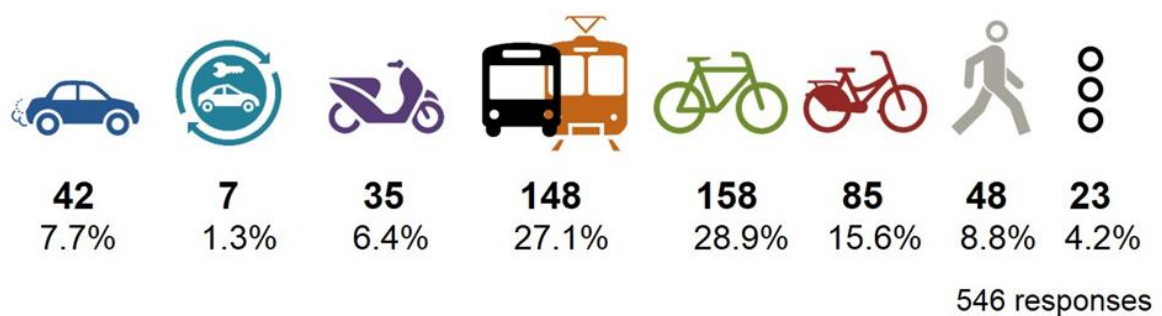
<b>0-30 min</b>	290	<b>53%</b>
30-45 min	141	26%
45 min – 1 h	89	16%
More	26	5%

**“More than half of the residents get to work in less than half an hour.”**

Which means do you normally use to reach the PRBB?

Individual car	42	8%
Shared car	7	1%
Motorbike	35	6%
Public transport	148	27%
<b>Bicycle (own)</b>	158	<b>29%</b>
<b>Bicing</b>	85	<b>16%</b>
Walking	48	9%
Others	23	4%

**“45% of the residents come by bicycle (own or Bicing) to the park.”**



### Visit of the Mayor of Barcelona

On Saturday 1st October, for the ninth consecutive year, Barcelonians were able to visit the PRBB facilities. On this occasion, the Mayor of the city, Ada Colau, joined in the traditional science festival to experience first-hand the research conducted in the park. As first vice president of the PRBB's Governing Council, Colau visited two laboratories. In the first she observed fluorescent zebrafish and learned about embryonic development from Laura Taberner and Ivan Belzunce, from UPF laboratories led by Berta Alsina and Cristina Pujades, respectively. At the second stop along the route, the group was received by Samuel Miravet, who explained how researchers from the Luis Serrano laboratory at the CRG use computers to design bacteria with desired functions. Eva Yus then showed the mayor some bacteria down the microscope. Colau also had the opportunity to observe the family workshops that were held in the inner square of the building, where she greeted the participants.

The Mayor was accompanied by Gemma Tarafa, the City Health Commissioner, and other members of the Governing Council, as well as the directors and managers of the centres at the PRBB. At the end of the visit, Colau thanked all the researchers for their involvement in the leading research carried out at the park, and said she was very "proud".



## **Energy savings**

The Department of General Services at the PRBB Consortium has achieved through several measures significant energy savings in 2016. Gas consumption was reduced by 30%, electricity by 3% and 5% water.

The actions include the elimination of hot sanitary water, the replacement of the steam central of the animal facility and the installation of LED lighting (300) in receptions, lobbies and other areas of the building. Water consumption was reduced because a new facility for the re-use of waste water from the filtration system Millipore was launched.

## **Scientific excellence of the centres of the park**

In 2016, the scientists at the PRBB centres once again produced an excellent crop of high impact research articles. Of the more than 1,200 original articles in indexed journals, 11 were published in *Nature*, 4 in *Science*, 30 in other Nature group journals and 5 in *Cell*. This is very similar to the previous year and certainly outstanding in an international context.

Also outstanding is the scientific exchange with international researchers at the PRBB. Last year, 268 scientific conferences were held with 43 speakers from centres in Spain and 139 from abroad, from 25 different countries. The rest were internal conferences. The countries providing the most speakers were the USA (43), UK (16), France (10) and Germany (10).

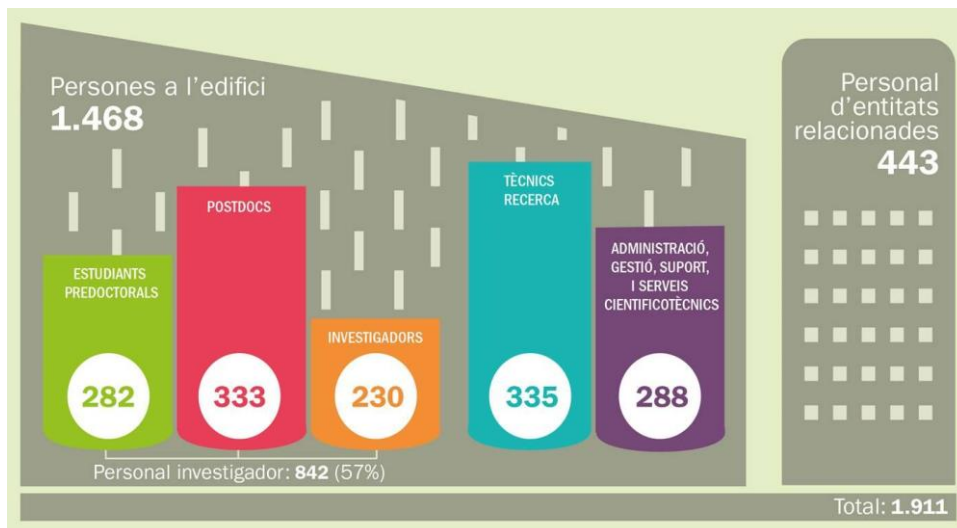
Especially encouraging is the increasing trend in the percentage of female invited speakers. In 2016, 60 (33%) of the external speakers were women. Just 2 years ago this quota was not even 10%.

## **Demography**

The PRBB is still growing, now beyond the building itself. Although the number of residents is similar to that of other years (1468), a further 443 are working in closely-related organisations.

The park has been nearly at capacity since its beginnings, which is why some institutions have provided themselves with new spaces (IBE-CSIC), and others have not been able to relocate or deploy fully within the building (CNAG, FPM). Some centres have evolved into larger structures (CREAL into ISGlobal), and two companies have established themselves in the building (Acellera, IRAB). So including the building residents themselves and the people who are linked to it, the PRBB family is now almost 2000 strong.

The demographics of the residents have not changed much in recent years: the PRBB is still young (46% of staff is aged under 36 and 33% between 36 and 45) and female, with 57% being women, a percentage which drops among senior researchers to 36%. The number of foreigners has stayed fairly constant: 356 people, making up 24% of the total or 31% of researchers, from 51 countries like Italy (80) Germany (42), France (36) and India (18).



## Data & facts 2016

### Scientific publications from researchers at the park

	2016	2015*
<b>Total</b>	<b>1.208</b>	<b>1.228</b>
<i>Nature</i>	11	12
<i>Science</i>	4	6
<i>The Lancet</i>	0	1
<i>The New Engl J Med</i>	0	1
<i>Cell</i>	5	1
Other Nature group journals	30	21
Other Lancet group journals	2	7

(\*) There fluctuations during the year in the total number of publications that are in press at the end of the year. For this reason, the numbers do not coincide with the report of 2015.

### Scientific conferences

	2016	Yearly change	2015
<b>Total</b>	<b>268</b>	-3%	<b>277</b>
Internal conferences	86 (32%)		81
External conferences* <sup>1</sup>	182 (68%)		196
“PRBB CRG Conferences”* <sup>2</sup>	<b>55</b>	-14%	<b>63</b>

(\*1) Most representative locations of the research centres of the speakers: USA (43), Spain (43), UK (16), France (14), Germany (10), Switzerland (8)

(\*2) In 2016, 19 of the speakers were women (35%). In 2015 there were only 12 (19%).

## The demography of the residents

	2016	% of the total	2015
<b>Residents</b>	<b>1.468</b>		<b>1.512</b>
Senior researchers	230	16%	206
Postdocs	333	22%	330
PhD students	282	19%	291
Research technicians	335	23%	357
Support, service and administrative staff	288	20%	328
Foreign scientists	264	31%	258
Foreign residents	365	24%	369
Men	644	43%	663
Women	835	57%	849

PDF: [Demography of the residents of the PRBB \(in Catalan\)](#)

## Personnel / Centres

	2016	2015
Total	<b>1.468</b>	<b>1.512</b>
IMIM (Hospital del Mar Medical Research Institute)	372	349
UPF (CEXS + IBE)	413	296
Centre for Genomic Regulation (CRG)	447	522
Centre of Regenerative Medicine in Barcelona (CMRB)	50	35
ISGlobal (Mar Campus )	136	118
PRBB Consortium	34	36
IRAB	10	0
Acellera S.L.	6	2

## Personnel / Associated centres

	2016
Total	<b>443</b>
CRG-CNAG	74
Pasqual Maragall Foundation	49
IBE-CSIC	58
ISGlobal (Clínic Campus )	262
+ Building	1.468
Total personnel of PRBB family	<b>1.911</b>

## Outreach, visits and external relations

	2016	Yearly change	2015
<b>PRBB Open Day</b>			
Visitors	<b>&gt;3.500</b>		<b>&gt;3.500</b>
Evaluation "Very good"	88%		80%
Volunteers	290	<b>+2%</b>	283
<b>Outreach</b>			
Activities for high school students	30		26
Participants	2.256	<b>+16%</b>	1.949
Visitors 48h BCN Open House	489	-4%	510
General visiting groups	269	-100%	556
<b>External relations</b>			
Delegations	27		30
Delegates	601	<b>+20%</b>	>500
<b>Total visitors*</b>	<b>7.115</b>	<b>+1%</b>	<b>7.015</b>
*without visits to the centres			

Storify: [PRBB Open Day 2016](#)

PDF: [Report of the PRBB Open Day \(in Catalan\)](#)

PDF: [Interview of a scientist \(in Catalan\)](#)

PDF: [Science talks for students \(in Catalan\)](#)

## Websites and social networks

	2016	Yearly change	2015
<b>Social networks</b>			
Twitter @the_prbb	7.692	<b>+35%</b>	5.700
Fans in Facebook	3.085	<b>+27%</b>	2.436
Linkedin	5.151	<b>+55%</b>	3.321
Visits to the blog Redcedar	10.834	+3%	10.556
<b>External website</b>			
Visits	82.067	-1%	82.614
Users	47.479	+1%	47.169
<b>Portal PRBB Inside</b>			
Visits	39.403	<b>+6%</b>	37.085
Users	13.672	-1%	13.782

PDF: [Press clippings of the PRBB](#)

## Data for consumption and maintenance

	2016	Yearly change	2015
Electricity	13.570.698 kWh	-2,86%	13.969.971 kWh
Natural gas	4.548.500 kWh	-28,26%	6.340.442 kWh
Water	30.713 m <sup>3</sup>	-4,7%	32.229 m <sup>3</sup>
Liquid nitrogen	267.810 litres	<b>+5,74%</b>	253.277 litres
Nitrogen gas	91.171 litres	<b>+10,22%</b>	82.719 litres
Carbon dioxide	28.308 kg	<b>+25,65%</b>	22.530 kg
Residues/waste	258.700 kg	+4,05%	248.635 kg
Cleaning hours	1.075 h/week	0%	1.075 h/week



### Auditorium and conference rooms

	2016	Yearly change	2015
<b>Auditorium</b>			
Occupied days	109	+17%	93
Events	87		78
Participants	9.826	+26%	7.823
External	7%		13%
Internal	93%		87%
<b>Rooms Marie Curie, Charles Darwin, Ramón y Cajal</b>			
Hours of occupation	4.577	+15%	3.967

### PRBB Intervals: Continued professional training

Courses: **38**

Participants	2016	2015
Sci/Med PhD students	159 (35%)	181 (43%)
Sci/Med Postdocs	151 (33%)	105 (25%)
Sci/Med Senior researchers	34 (8%)	25 (6%)
Sci/Med Clinicians	6 (1%)	9 (2%)
Technical staff	42 (9%)	32 (8%)
Administration & services	17 (4%)	16 (4%)
Management	26 (6%)	36 (9%)
Others	17 (4%)	19 (4%)
<b>TOTAL</b>	<b>452 (100%)</b>	<b>423 (100%)</b>

### Subject / Number of courses

Topic	Nombre
Leadership and career development	13
Oral and writing presentation skills	18
Citizen science skills	2
Good science, Honest science	5
<b>Total</b>	<b>38</b>

PDF: [Annual Report PRBB Intervals](#)

### Data from the animal facility

	2016
Exports and imports of animals worldwide	700
Mouse biopsies for genotyping	25.000
Blood tests carried out	1.000
Gamma radiation carried out on cells and mice	800
Participants in accreditation courses for researchers in the use of experimental animals	35

### Contracting (Public tenders)

	2016
New contracts	13
Average savings	19%

### General budget

	2016
Total budget	>13M€
Income	
Rent	57,5%
Animal facility	11,3%
General services	9,2%
Others	22%

## Chronogram of actions of the PRBB Consortium departments



### January to February 2016

Five days' workshop on "[Record keeping and data management campaign for PRBB scientists](#)" organized by the working group PRBB Good Scientific Practice.

Change of the PRBB WIFI or wireless system (Huawei)

New installation that re-uses waste water of the pure water production system, Millipore.

Improved climate system for the Data Centre

### March to April 2016

#EllipseViatgera: Instagram contest ([Storify](#))

FPM relocating to the Campus of the UPF

New distribution of spaces on floor 4 for the PRBB Consortium

Installation of 300 low energy downlights

Implementation of new Government regulations with regard to procedures with animal experimentation

The IRAB moves in on floor -1

Second Edition of BioJúnior with the ceremony of the XI PRBB Prize ([News](#) and [Flickr](#))

Granting of ERDF funds (EMBL, UPF)

## May to June 2016

10th Anniversary of the PRBB with an institutional event (Iain Mattaj), a concert of the PRBB choir and orchestra and a party for the residents

Event for the PRBB runners: "10 years 10 Km" ([Flickr](#))

New entrance door to the main reception from the inner square

Mock evacuation of the building

First "[Family Day](#)" for the employees of the PRBB Consortium and contracted companies (Veolia, Clece, Trablisa)

Biomedical Wikimarathon at the PRBB

Ergonomic study for caregivers and technicians working in an animal facility

Summer concert of the PRBB Choir and Orchestra ([Youtube](#))



## July to September 2016

Mobility survey of the PRBB residents ([web](#))

Summer party of the PRBB ([Flickr](#))

Improved communication System of the air conditioning

New protocol for the transport of biological samples within the building

Publication of an article of the animal facility in the journal *Veterinary Pathology*

Asset inventory of the PRBB

Migration and upgrade of all the web servers

Update of the video surveillance system

Works to improve the electrical connection at the park

Implementation of the new crisis communication plan

*PRBB Intervals* participates in the “Vitae Conference” in Manchester and presents a poster

### October to November 2016

Open day at the PRBB and visit of the Mayor of Barcelona, Ada Colau ([Flickr](#))

Improvements at the inner square conference rooms (HDMI)

Improvements of the installations of the aquatic animal facility

New contracting of the Cafeteria-Restaurant of the PRBB

Favourable reports of the audits of maintenance and of the Catalan Data Protection Authority

Granting of a SUMA 2 fund from CERCA for the PCB-PRBB Animal Facility Alliance

Contracting the construction works for EMBL-UPF (after a public tender)

Installation of a new lighting at the terrace of the auditorium

Implementation of management software CAE

Article about animal welfare at *ALN Magazine* ([Link](#))

Participation in the SECAL Conference: scientific session and poster

Design of the “Handbook of Experimentation with frogs”

Approval of the training policy of the PRBB Consortium



## December 2016

Christmas concert of the PRBB choir and orchestra ([Flickr](#) and [Youtube](#))

Publication of the Demography 2016 of the PRBB ([PDF in Catalan](#))



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