



**José Luis Villanueva Cañas**

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## Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

I am currently the bioinformatics specialist within the Hospital Clínic de Barcelona, a world renowned institution. My main research goal in the medium-long term is to make full use of the wealth of genomic data available these days and contribute to the data analysis and automatization in clinical diagnostics.

I have accumulated over ten years of experience in research, including two internships in the world-renowned institutions of Duke University (with Prof. Anne Yoder) and University College Dublin (with Prof. Emma Teeling). Throughout my PhD training I have accrued advanced programming skills (Python, bash, R), ample experience in NGS data analysis for model and non-model species, and expertise in techniques applied at genome-wide level.

So far I have made several contributions to the cutting edge field of genomics, working in first tier research institutions. Over the past years I have published fourteen scientific articles and one review, all in first quartile peer reviewed journals; in all of them I am either first author or made a substantial contribution. I have disseminated my research attending to many congresses and symposiums, both at the national and international level, giving talks or poster presentations.

I've been part of the teaching mentoring programme of the UPF, obtaining mentor skills and teaching experience in several subjects. I am currently directing bioinformatics MSc projects at the UOC and teaching in the MSc for bioinformatics in the UPF. In addition, I have also made contributions to science outreach in the form of articles, talks, and workshops in very different fields and institutions.



## General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

All the published research articles belong to the first quartile of their category, and most of them to the first decile. My PhD thesis was awarded by the members of the examination board in the UPF with the special PhD prize in the academic year 2015-2016.



## José Luis Villanueva Cañas

Surname(s): **Villanueva Cañas**  
 Name: **José Luis**  
 ORCID: **0000-0001-7445-1267**  
 Contact aut. region/reg.: **Catalonia**

### Current professional situation

**Employing entity:** HOSPITAL CLINICO Y PROVINCIAL DE BARCELONA  
**Department:** CORE biología molecular, Centro de diagnóstico biomédico (CDB)  
**Professional category:** Specialist  
**Start date:** 22/11/2019  
**Type of contract:** Permanent employment contract      **Dedication regime:** Full time

**Employing entity:** Universidad Pompeu Fabra      **Type of entity:** University  
**Department:** Facultad de Ciencias de la Salud y de la Vida  
**Professional category:** Adjunt associate professor  
**Start date:** 01/10/2019  
**Type of contract:** Temporary      **Dedication regime:** Part time  
**Performed tasks:** Teaching Principles of genome bioinformatics in the MsC in bioinformatics for health sciences

**Employing entity:** Universitat Oberta de Catalunya      **Type of entity:** University  
**Professional category:** Adjunt associate professor  
**Start date:** 01/09/2018  
**Type of contract:** Temporary employment contract  
**Performed tasks:** Directing and evaluating MsC thesis in the Bioinformatics Master. Tutor.

### Previous positions and activities

	Employing entity	Professional category	Start date
1	INSTITUTO DE BIOLOGIA EVOLUTIVA	Postdoctoral scientist	01/03/2016
2	Centro de Regulación Genómica	Postdoc / technician	01/04/2018
3	INSTITUTO MUNICIPAL DE INVESTIGACION MEDICA	Predocctoral scientist	01/09/2010
4	Centre de Recursos de Biodiversitat Animal	Database management	01/02/2010
5	Parc Científic de Barcelona	Undergraduate internship	05/2009



- 1** **Employing entity:** INSTITUTO DE BIOLOGIA EVOLUTIVA **Type of entity:** State agency  
**Professional category:** Postdoctoral scientist  
**Start-End date:** 01/03/2016 - 31/12/2107  
**Dedication regime:** Full time
- 2** **Employing entity:** Centro de Regulación Genómica **Type of entity:** University Centres and Structures and Associated Bodies  
**Department:** 4DGenome unit (Chromatin and Gene Expression Group), Centro de Regulación Genómica  
**Professional category:** Postdoc / technician  
**Start-End date:** 01/04/2018 - 15/11/2019  
**Type of contract:** Temporary employment contract
- 3** **Employing entity:** INSTITUTO MUNICIPAL DE INVESTIGACION MEDICA **Department:** Evolutionary genomics (Mar Albà), CONSORCI PARC DE RECERCA BIOMÈDICA DE BARCELONA  
**Professional category:** Predoctoral scientist  
**Start-End date:** 01/09/2010 - 31/12/2015  
**Type of contract:** Grant-assisted student (pre or post-doctoral, others)  
**Dedication regime:** Full time
- 4** **Employing entity:** Centre de Recursos de Biodiversitat Animal **Type of entity:** University  
**Department:** Universitat de Barcelona  
**City employing entity:** Barcelona, Catalonia, Spain  
**Professional category:** Database management  
**Start-End date:** 01/02/2010 - 28/05/2010 **Duration:** 4 months  
**Type of contract:** Temporary employment contract  
**Dedication regime:** Part time  
**Performed tasks:** Mejora y actualización de la base de datos de la colección del Centre de Recursos de Biodiversitat Animal (CRBA)  
**Field of management activity:** University
- 5** **Employing entity:** Parc Científic de Barcelona **Type of entity:** R&D Centre  
**Department:** Structural Bioinformatics (Patrick Aloy), Institut Recerca Biomèdica  
**City employing entity:** Barcelona, Catalonia, Spain  
**Professional category:** Undergraduate internship  
**Start-End date:** 05/2009 - 09/2009 **Duration:** 4 months  
**Type of contract:** Grant-assisted student (pre or post-doctoral, others)  
**Dedication regime:** Full time  
**Identify key words:** Structural biology



## Education

### University education

#### 1st and 2nd cycle studies and pre-Bologna degrees

- 1 **University degree:** Master  
**Name of qualification:** Master in Bioinformatics for Health Sciences  
**City degree awarding entity:** Barcelona, Catalonia, Spain  
**Degree awarding entity:** Universidad Pompeu Fabra **Type of entity:** University  
**Date of qualification:** 2012
- 2 **University degree:** Higher degree  
**Name of qualification:** Licenciado en Biología Opción Biología Fundamental y Biotecnología.  
**Degree awarding entity:** Universitat de Barcelona **Type of entity:** University  
**Date of qualification:** 2010

#### Doctorates

**Doctorate programme:** Programa Oficial de Doctorado en Biomedicina  
**Degree awarding entity:** Universidad Pompeu Fabra **Type of entity:** University  
**City degree awarding entity:** Barcelona, Catalonia, Spain  
**Date of degree:** 20/11/2015  
**European doctorate:** Yes **Date of certificate:** 20/11/2015  
**Thesis title:** Insights into mammalian adaptive evolution through genomics data  
**Thesis director:** Mar Albà Soler  
**Obtained qualification:** Excelent cum laude  
**Recognition of quality:** Yes  
**Special doctorate award:** Yes **Date of award:** 04/04/2017  
**Standardised degree:** No

### Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

- 1 **Training title:** Flipped classroom  
**Awarding entity:** Universidad Pompeu Fabra **Type of entity:** University  
**End date:** 25/03/2020 **Duration in hours:** 10 hours
- 2 **Training title:** Science communication  
**Awarding entity:** Centro de Regulación Genómica **Type of entity:** CIBER  
**End date:** 30/05/2018 **Duration in hours:** 18 hours



- 3 Training title:** Introduction to scientific data visualization  
**Awarding entity:** FUNDACIO PARC DE RECERCA BIOMEDICA DE BARCELONA  
**End date:** 26/10/2017 **Duration in hours:** 10 hours
- 4 Training title:** Teaching mentoring programme  
**Awarding entity:** Universidad Pompeu Fabra **Type of entity:** University  
**End date:** 2017 **Duration in hours:** 80 hours
- 5 Training title:** Say it so it stays: Oral presentations skills training for scientists  
**Awarding entity:** FUNDACIO PARC DE RECERCA BIOMEDICA DE BARCELONA  
**End date:** 14/04/2016 **Duration in hours:** 24 hours
- 6 Training title:** III Jornades d'energia, eficiència energètica i producció d'energies per a l'autoconsum  
**Awarding entity:** Universitat de Girona **Type of entity:** University  
**End date:** 13/03/2016 **Duration in hours:** 10 hours
- 7 Training title:** Write it clearly: fundamentals of good scientific writing  
**Awarding entity:** FUNDACIO PARC DE RECERCA BIOMEDICA DE BARCELONA  
**End date:** 03/03/2016 **Duration in hours:** 12 hours
- 8 Training title:** Técnicas actorales para la comunicación científica  
**Awarding entity:** FUNDACIO PARC DE RECERCA BIOMEDICA DE BARCELONA  
**End date:** 21/01/2016 **Duration in hours:** 8 hours
- 9 Training title:** Popular science writing  
**Awarding entity:** FUNDACIO PARC DE RECERCA BIOMEDICA DE BARCELONA  
**End date:** 15/04/2015 **Duration in hours:** 14 hours
- 10 Type of training:** Course  
**Training title:** Analysis and manipulation of phylogenomic data using ETE python toolkit and treeKO  
**Awarding entity:** Centro de Regulación Genómica **Type of entity:** University Centres and Structures and Associated Bodies  
**End date:** 08/04/2011 **Duration in hours:** 18 hours

## Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Catalan		C1	C1	C1	C1
Spanish		C1	C1	C1	C1
English		C1	C1	C1	C1



## Teaching experience

### General teaching experience

- 1 Name of the course:** Introduction to Bioinformatics  
**University degree:** PhD Biomedicine  
**Start date:** 25/01/2019  
**Entity:** Centro de Regulación Genómica  
**End date:** 12/04/2019  
**Type of entity:** University Centres and Structures and Associated Bodies
- 2 Name of the course:** Basics Bioinformatic course  
**University degree:** Graduado o Graduada en Biología  
**Start date:** 11/01/2019  
**Entity:** Centro de Regulación Genómica  
**End date:** 22/03/2019  
**Type of entity:** University Centres and Structures and Associated Bodies
- 3 Name of the course:** Wrokshop in Differential Expression analyses  
**University degree:** Bioinformatics  
**Start date:** 10/03/2017  
**Entity:** University of Valencia  
**End date:** 10/03/2017  
**Type of entity:** University Research Institute
- 4 Name of the course:** MEDICINA/BIOMEDICINA INTEGRADA I  
**University degree:** Graduado o Graduada en Biología Humana  
**Start date:** 01/2016  
**Entity:** Universidad Pompeu Fabra  
**End date:** 04/2016  
**Type of entity:** University
- 5 Name of the course:** Workshop Inform Animation  
**Professional category:** Scientific advisor  
**University degree:** Erasmus Intensive Programme  
**Start date:** 01/07/2013  
**Entity:** University of Alghero  
**End date:** 31/07/2013  
**Type of entity:** University
- 6 Name of the course:** Principles of genome bioinformatics  
**University degree:** MsC bioinformatics for health sciences  
**Start date:** 01/10/2019  
**Entity:** Universidad Pompeu Fabra  
**Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias de la Salud y de la Vida
- 7 Name of the course:** MEDICINA/BIOMEDICINA INTEGRADA III  
**University degree:** Graduado o Graduada en Biología Humana  
**Start date:** 03/2016  
**Entity:** Universidad Pompeu Fabra  
**Type of entity:** University
- 8 Name of the course:** Biomedicina integrada III  
**University degree:** Graduado o Graduada en Biología Humana  
**Entity:** Universidad Pompeu Fabra  
**Type of entity:** University  
**Faculty, institute or centre:** Facultad de Ciencias de la Salud y de la Vida





- 9** **Name of the course:** bioinformatica  
**University degree:** Graduado o Graduada en Biología Humana  
**Entity:** Universidad Pompeu Fabra **Type of entity:** University
- 10** **Name of the course:** Data management for research  
**University degree:** Graduado o Graduada en Biología  
**Entity:** Centro de Regulación Genómica **Type of entity:** University Centres and Structures and Associated Bodies

### Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** MsC Thesis: Analysis of the human microbiome bacterial diversity based on the GTDB taxonomy  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Manuel Jesus Dominguez Becerra  
**Date of reading:** 01/07/2020
- 2** **Project title:** MsC Thesis: Impacto en la clínica del uso de diferentes genomas de referencia en la llamada de variantes.  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Pedro Salvador Escribano  
**Date of reading:** 01/07/2020
- 3** **Project title:** MsC Thesis: Búsqueda de genes expresados diferencialmente en el tejido adiposo de Cheirogaleus medius durante la hibernación utilizando su genoma de referencia  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Israel Blasco Ruano  
**Date of reading:** 10/01/2020
- 4** **Project title:** MsC Thesis: Deciphering host-pathogen interactions at the biomembrane interface, key to target therapeutical approaches against Mycoplasma genitalium  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Guillem Macip Sancho  
**Date of reading:** 26/06/2019
- 5** **Project title:** MsC Thesis: Estudio pan-genómico de los géneros Escherichia y Shigella.  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Lucía Chacón Vargas  
**Date of reading:** 26/06/2019
- 6** **Project title:** MsC Thesis: Expresión diferencial de miRNAs y mRNAs a partir de datos de NGS en enfermedades tiroideas autoinmunes  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Alberto Pérez Gómez  
**Date of reading:** 26/06/2019
- 7** **Project title:** MsC Thesis: Análisis del patrón de expresión de la tolerancia a endotoxinas en un modelo de monocitos humanos mediante RNA-seq  
**Entity:** Universitat Oberta de Catalunya **Type of entity:** University  
**Student:** Victor Manuel Toledano Real

Date of reading: 14/01/2019

## Scientific and technological experience

### Scientific or technological activities

#### R&D projects funded through competitive calls of public or private entities

- 1** **Name of the project:** Dynamics of genome architecture in stable and transient changes in gene expression  
**Entity where project took place:** Centro de Regulación Genómica  
**City of entity:** Barcelona,  
**Funding entity or bodies:**  
European Research Council **Type of entity:** State agency  
**Start-End date:** 01/06/2014 - 31/05/2019  
**Total amount:** 12.272.645 €
- 2** **Name of the project:** Evolución de nuevas funciones génicas en genomas de mamíferos  
**Type of project:** Basic research (including archaeological digs, etc)  
**Degree of contribution:** Researcher  
**Entity where project took place:** IMIM Hospital del Mar Research Institute **Type of entity:** Foundation  
**City of entity:** Barcelona, Catalonia, Spain  
**Name principal investigator (PI, Co-PI....):** Mar Albà  
**Nº of researchers:** 8  
**Funding entity or bodies:**  
Ministerio de Economía y Competitividad **Type of entity:** State agency  
**City funding entity:** Spain  
**Start-End date:** 01/01/2013 - 31/12/2015 **Duration:** 2 years - 11 months  
**Total amount:** 182.000 €  
**Dedication regime:** Full time
- 3** **Name of the project:** Origin, diversification and diversity of metazoans, fungi and their unicellular relatives; an ecological and evolutionary approach  
**Type of project:** Basic research (including archaeological digs, etc)  
**Degree of contribution:** Researcher  
**Entity where project took place:** Institut biologia evolutiva (IBE)  
**City of entity:** Barcelona, Catalonia, Spain  
**Name principal investigator (PI, Co-PI....):** Iñaki Ruiz Trillo; Josefa González  
**Nº of researchers:** 2  
**Funding entity or bodies:**  
Ministerio de Economía y Hacienda **Type of entity:** Plan Nacional  
**City funding entity:** Madrid, Community of Madrid, Spain  
**Type of participation:** Team member  
**Start-End date:** 01/01/2015 - 31/12/2012  
**Total amount:** 484 €  
**Dedication regime:** Full time



- 4 Name of the project:** Análisis a escala genómica de los patrones de selección natural en los genes de mamíferos  
**Type of project:** Basic research (including archaeological digs, etc)  
**Degree of contribution:** Researcher  
**Entity where project took place:** IMIM Hospital del Mar Research Institute  
**Type of entity:** Foundation  
**City of entity:** Barcelona, Catalonia, Spain  
**Name principal investigator (PI, Co-PI....):** Mar Albà  
**Nº of researchers:** 7  
**Funding entity or bodies:** MINISTERIO DE EDUCACION Y CIENCIA  
**City funding entity:** Spain  
**Start-End date:** 01/01/2010 - 31/12/2012  
**Total amount:** 203.000 €  
**Dedication regime:** Full time

## Scientific and technological activities

### Scientific production

#### Publications, scientific and technical documents

- 1** José Luis Villanueva Cañas; Sheena Faherty; Marina Blanco; Anne Yoder; Mar Albà. Transcriptomics in the wild: Hibernation physiology in free-ranging dwarf lemurs. *Molecular Ecology*. 10/01/2018.  
**Type of production:** Scientific paper  
**Position of signature:** 1  
**Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Total no. authors:** 5  
**Relevant publication:** Yes
- 2** New genes and functional innovation in mammals. *Genome biology and evolution*. 9 - 7, Oxford academic, 01/07/2017. Available on-line at: <<http://biorxiv.org/content/early/2016/12/01/090860>>.  
**Type of production:** Scientific paper  
**Position of signature:** 1  
**Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Total no. authors:** 6  
**Relevant publication:** Yes
- 3** André Corvelo; Fernando Cruz; Federico Abascal; José Luis Villanueva Cañas; et al. Extreme genomic erosion in the highly endangered Iberian lynx. *Genome Biology*. Springer Nature, 14/12/2016.  
**Type of production:** Scientific paper  
**Position of signature:** 2  
**Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Total no. authors:** 50  
**Relevant publication:** Yes

- 4** José Luis Villanueva Cañas; Sheena Faherty; Peter Klopfer; Mar Albà; Anne Yoder. Gene expression profiling in the hibernating primate, *Cheirogaleus medius*. *Genome Biology and Evolution*. 8 - 8, 08/07/2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Position of signature:** 1 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Total no. authors:** 5 **Corresponding author:** Yes  
**Relevant results:** This is the first study to date where the RNAseq technique was used to study the changes in gene expression in the white adipose tissue in a unique genus of primate species capable of hibernation (non-model species). The fat tailed dwarf lemurs are endemic of Madagascar and under threat of extinction. This study was minimally invasive.  
**Relevant publication:** Yes
- 5** Salla Vartia; José Luis Villanueva Cañas; Jens Carlsson. A novel method of microsatellite genotyping-by-sequencing using individual combinatorial barcoding. *Royal Society Open Science*. 3 - 1, Royal Society Publishing, 20/01/2016.  
**DOI:** 10.1098/rsos.150565  
**Type of production:** Scientific paper **Format:** Journal  
**Position of signature:** 2 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Total no. authors:** 15  
**Relevant publication:** Yes
- 6** José Luis Villanueva Cañas; Steve Laurie; Mar Albà. Improving Genome-Wide Scans of Positive Selection by Using Protein Isoforms of Similar Length. *Genome Biology and Evolution*. 5 - 2, pp. 457 - 467. Oxford Journals, 25/01/2013. Available on-line at: <<http://gbe.oxfordjournals.org/content/5/2/457>>. ISSN 1759-6653  
**Type of production:** Scientific paper **Format:** Journal  
**Position of signature:** 1 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Relevant publication:** Yes
- 7** Evolution of new proteins from translated sORFs in long non-coding RNAs. *Experimental Cell Research*. Academic Press, 07/03/2020.  
**Type of production:** Scientific paper **Format:** Journal  
**Position of signature:** 2  
**Total no. authors:** 3 **Corresponding author:** No
- 8** Expression of Oncogenic Drivers in 3D Cell Culture Depends on Nuclear ATP Synthesis by NUDT5. *Cancers*. 01/09/2019.  
**Type of production:** Scientific paper **Format:** Journal  
**Position of signature:** 5 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Total no. authors:** 7 **Corresponding author:** No
- 9** José Luis Villanueva Cañas; Laura Aguilera; Vivien Horvath; Josefa González. Diverse families of transposable elements affect the transcriptional regulation of stress-response genes in *Drosophila melanogaster*. *Nucleic Acids Research*. Oxford University Press, 30/05/2019.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 10** Stress response, behavior, and development are shaped by transposable element-induced mutations in *Drosophila*. *PLOS genetics*. 16/12/2018.  
**DOI:** <https://doi.org/10.1371/journal.pgen.1007900>  
**Type of production:** Scientific paper **Format:** Journal



**Position of signature:** 5

**Total no. authors:** 12

**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

**Corresponding author:** No

- 11** Hormone-control regions mediate steroid receptor-dependent genome organization. *Genome research*. 15/11/2018.

**DOI:** <http://www.genome.org/cgi/doi/10.1101/gr.243824.118>.

**Type of production:** Scientific paper

**Position of signature:** 8

**Total no. authors:** 14

**Format:** Journal

**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

**Corresponding author:** No

- 12** Jorge Ruiz Orera; Pol Verdaguer; José Luis Villanueva Cañas; Xavier Messeguer; M. Mar Albà. Translation of neutrally evolving peptides provides a basis for de novo gene evolution. *Nature Ecology & Evolution*. 19/03/2018.

**Type of production:** Scientific paper

**Position of signature:** 3

**Total no. authors:** 5

**Format:** Journal

**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee

- 13** José Luis Villanueva Cañas; Sheena Faherty; Anne Yoder; Maria del Mar Albà Soler. Comparative genomics of mammalian hibernators using networks. *Integrative and Comparative Biology*. In press, 01/05/2014.

**Type of production:** Scientific paper

**Format:** Journal

- 14** José Luis Villanueva Cañas; Sara Díez Santidrián. Hibernación humana: ciencia y ficción. «Ciència i ficció. L'exploració creativa dels mons reals i dels irreal». 2016.

**Type of production:** Popular science article

**Format:** Book

**Corresponding author:** Yes

- 15** José Luis Villanueva Cañas; Gabriel E. Rech; M.A. Rodríguez de Cara; Josefa González. Beyond SNPs: How to detect selection on transposable element insertions. *Methods in Ecology and Evolution*. 2017.

**Type of production:** Review

**Format:** Journal

## Works submitted to national or international conferences

- 1** **Title of the work:** Transposable elements affect the transcriptional regulation of stress response genes in *Drosophila* and humans

**Name of the conference:** II Joint Congress on Evolutionary Biology

**Type of event:** Conference

**Corresponding author:** No

**City of event:** Montpellier, France

**Date of event:** 19/09/2018

**End date:** 22/09/2018

**Organising entity:** ESEB

**With external admission assessment committee:** Yes

José Luis Villanueva Cañas; Vivien Horvath; Josefa González.

- 2** **Title of the work:** Using transcriptomics to study hibernation in a natural primate population.

**Name of the conference:** SMBE 2018

**Type of participation:** Participatory - oral communication

**City of event:** Yokohama, Japan

**Date of event:** 08/07/2018



**End date:** 12/07/2018

**Organising entity:** SMBE

**Type of entity:** Associations and Groups

- 3** **Title of the work:** New genes and evolutionary innovation in mammals  
**Name of the conference:** SMBE symposium: Evolution of gene families + Quest for Orthologs 2017 meeting  
**Type of event:** Conference  
**Corresponding author:** Yes  
**City of event:** Los Angeles, United States of America  
**Date of event:** 08/06/2017  
**End date:** 10/06/2017  
**Organising entity:** SMBE **Type of entity:** Associations and Groups
- 4** **Title of the work:** The role of transposable element insertions in environmental adaptation in *Drosophila melanogaster*  
**Name of the conference:** XXI Seminario de Genética de Poblaciones y Evolución  
**Corresponding author:** No  
**City of event:** Sitges, Spain  
**Date of event:** 03/10/2016  
**End date:** 05/10/2016  
**Organising entity:** Sociedad española de genética
- 5** **Title of the work:** New genes and functional innovation in mammals  
**Name of the conference:** XVI Jornades de Biologia Evolutiva  
**Corresponding author:** Yes  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 27/06/2016  
**Organising entity:** Societat Catalana de Biologia **Type of entity:** Associations and Groups  
José Luis Villanueva Cañas; Maria del Mar Albà Soler.
- 6** **Title of the work:** Characterization of de novo gene evolution across the mammalian phylogeny.  
**Name of the conference:** Annual meeting of the Society for Molecular Biology and Evolution  
**Type of event:** Conference  
**Corresponding author:** Yes  
**City of event:** Vienna, Austria  
**Date of event:** 13/07/2015  
**End date:** 16/07/2015  
**Organising entity:** Society for Molecular Biology and Evolution (SMBE) **Type of entity:** Associations and Groups  
José Luis Villanueva Cañas; Mar Albà Soler.
- 7** **Title of the work:** Exploring hibernation in mammals through transcriptomics: the case of the hibernating lemur  
**Name of the conference:** Jornada de Biologia Evolutiva  
**Type of event:** Workshop  
**Type of participation:** Participatory - oral communication **Reasons for participation:** Review before acceptance  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 01/07/2015  
**Organising entity:** Societat Catalana de Biologia



- 8** **Title of the work:** Exploring hibernation in mammals through transcriptomics: the case of the hibernating lemur  
**Name of the conference:** XII symposium on bioinformatics  
**Type of event:** Conference **Geographical area:** European Union  
**Type of participation:** 'Participatory - poster **Reasons for participation:** Review before acceptance  
**City of event:** Sevilla, Andalusia, Spain  
**Date of event:** 21/09/2014  
**End date:** 24/09/2014  
**Organising entity:** International society for computational biology
- 9** **Title of the work:** Insights into mammalian adaptation through genome-wide analysis  
**Name of the conference:** SBES seminar day  
**Type of event:** Seminar  
**Type of participation:** Participatory - oral communication  
**City of event:** Dublin, Southern and Eastern, Ireland  
**Date of event:** 05/12/2013  
**Organising entity:** University College Dublin **Type of entity:** University  
José Luis Villanueva Cañas.
- 10** **Title of the work:** Incorporating protein isoform information into genome-wide studies. Impact on positive selection  
**Name of the conference:** XIII Jornada de Biología Evolutiva  
**Type of event:** Workshop **Geographical area:** National  
**Type of participation:** Participatory - oral communication  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 02/07/2013  
**Organising entity:** Societat Catalana de Biologia **Type of entity:** Associations and Groups  
**With external admission assessment committee:** Yes  
José Luis Villanueva Cañas. En: Incorporating protein isoform information into genome-wide studies. Impact on positive selection. 02/07/2013.
- 11** **Title of the work:** Not another alignment program paper: How to improve multiple alignments by selecting the appropriate isoform combination.  
**Name of the conference:** Society for Molecular Biology & Evolution Conference 2012  
**Type of event:** Conference **Geographical area:** Non EU International  
**Type of participation:** 'Participatory - poster  
**City of event:** Dublin, Border, Midland and Western, Ireland  
**Date of event:** 23/06/2012  
**End date:** 26/06/2012  
**Organising entity:** SMBE **Type of entity:** Associations and Groups  
José Luis Villanueva Cañas; Mar Albà. En: Not another alignment program paper: How to improve multiple alignments by selecting the appropriate isoform combination..
- 12** **Title of the work:** Transcript selection in multiple alignments: how to mitigate this major source of error  
**Name of the conference:** GRIB expo  
**Geographical area:** Regional  
**Type of participation:** 'Participatory - poster  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 26/04/2012  
**Organising entity:** Grup Recerca Informàtica Biomèdica



José Luis Villanueva Cañas; Mar Albà.

- 13** **Title of the work:** Why do we have bad multiple alignments: transcript selection as a major source of errors.  
**Name of the conference:** XI Jornadas de Bioinformática  
**Type of event:** Workshop **Geographical area:** National  
**Type of participation:** 'Participatory - poster  
**City of event:** Barcelona,  
**Date of event:** 23/01/2012  
**End date:** 25/12/2013  
**Organising entity:** PRBB, UPF, CNAG  
José Luis Villanueva Cañas; Mar Albà.
- 14** **Title of the work:** Which protein isoform to use when making multiple alignments of orthologous genes  
**Name of the conference:** III Congreso de la Sociedad Española de Biología Evolutiva  
**Geographical area:** National  
**Type of participation:** 'Participatory - poster  
**City of event:** Madrid, Community of Madrid, Spain  
**Date of event:** 21/11/2011  
**End date:** 25/11/2011  
**Organising entity:** Sociedad Española de Biología Evolutiva  
José Luis Villanueva Cañas; Mar Albà.
- 15** **Title of the work:** Which protein isoform to use when making multiple alignments of orthologous genes  
**Name of the conference:** X CRG Annual Symposium  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 10/11/2011  
**End date:** 11/11/2011  
**Organising entity:** Centro de Regulación Genómica **Type of entity:** University Centres and Structures and Associated Bodies  
José Luis Villanueva Cañas; Mar Albà.

### Other dissemination activities

- 1** **Title of the work:** Ada Lovelace workshop 2019  
**City of event:** Barcelona, Spain  
**Date of event:** 08/10/2019  
**Organising entity:** Centro de Regulación Genómica **Type of entity:** University Centres and Structures and Associated Bodies
- 2** **Title of the work:** Open Day 2019  
**Type of event:** Fairs and exhibitions  
**City of event:** Barcelona, Spain  
**Date of event:** 05/10/2019  
**Organising entity:** CONSORCI PARC DE RECERCA BIOMÈDICA DE BARCELONA
- 3** **Title of the work:** Beyond Jurassic Park: Frontiers of science and science fiction  
**Name of the event:** Pint of Science 2019  
**Type of event:** Conferences given  
**City of event:** Barcelona, Spain  
**Date of event:** 22/05/2019





**Organising entity:** Pint of Science Spain

**Type of entity:** Associations and Groups

**4 Title of the work:** El sueño de la hibernación humana

**Name of the event:** BCNSPIRACY 2018

**Type of event:** Conferences given

**Corresponding author:** Yes

**City of event:** Barcelona,

**Date of event:** 27/10/2018

**Organising entity:** BCNSPIRACY - Cosmocaixa

**Type of entity:** Associations and Groups

**5 Title of the work:** Lemurs are cool

**Name of the event:** Science Slam

**Type of event:** Conferences given

**City of event:** Barcelona, Catalonia, Spain

**Date of event:** 31/05/2018

**Organising entity:** BIST

**Type of entity:** Public Research Body

**6 Title of the work:** Dogs, genomes, and machine learning

**Name of the event:** YoMo: Youth mobile festival

**Type of event:** Fairs and exhibitions

**City of event:** Barcelona, Catalonia, Spain

**Date of event:** 01/03/2018

**Organising entity:** Mobile world congress

**7 Title of the work:** Open Day PRBB

**Name of the event:** Open Day

**Type of event:** Fairs and exhibitions

**Corresponding author:** Yes

**City of event:** Barcelona, Spain

**Date of event:** 07/10/2017

**Organising entity:** PARC DE RECERCA  
BIOMEDICA DE BARCELONA

**Type of entity:** R&D Centre

**8 Title of the work:** Explorando los genomas de mamíferos: Lémures que hibernan

**Name of the event:** Ciència a les escoles 2016

**Type of event:** Conferences given

**Corresponding author:** Yes

**City of event:** Mollet, Catalonia, Spain

**Date of event:** 16/11/2016

**Organising entity:** Fundació Catalana per a la  
Recerca i la Innovació

**Type of entity:** Foundation

**City organizing entity:** Catalonia, Spain

**9 Title of the work:** Beyond Jurassic Park: Frontiers of science and science fiction

**Name of the event:** Eurocon2016

**Type of event:** Conferences given

**Corresponding author:** Yes

**City of event:** Barcelona,

**Date of event:** 06/11/2016

**Organising entity:** European science fiction society

**Type of entity:** Associations and Groups



- 10** **Title of the work:** Open Day PRBB  
**Name of the event:** Open Day  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Spain  
**Date of event:** 01/10/2016  
**Organising entity:** PARC DE RECERCA BIOMEDICA DE BARCELONA  
**Type of entity:** R&D Centre
- 11** **Title of the work:** ¿Hibernación humana? El secreto está en los genes de este lémur  
**Name of the event:** press article  
**Type of event:** Media interviews  
**Date of event:** 11/09/2016  
**Organising entity:** El periódico  
"<http://www.elperiodico.com/es/noticias/ciencia/genes-lemur-acercan-sueno-hibernacion-humana-5370752>".
- 12** **Title of the work:** Per a què serveix la bioinformàtica?  
**Name of the event:** Saló de l'ensenyament  
**Type of event:** Fairs and exhibitions  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 10/03/2016  
**Organising entity:** Fundació Catalana per a la Recerca i Innovació  
**Type of entity:** Foundation
- 13** **Title of the work:** Melanogaster: catch the fly  
**Type of event:** Citizen science project  
**City of event:** Spain  
**Date of event:** 2016  
**Organising entity:** LCATM  
**Type of entity:** Associations and Groups  
"<http://melanogaster.eu/>".
- 14** **Title of the work:** Explorando los genomas de mamíferos: Lémures que hibernan  
**Name of the event:** Ciència a les escoles 2015  
**Type of event:** Conferences given  
**Corresponding author:** Yes  
**City of event:** Cardedeu, Catalonia, Spain  
**Date of event:** 18/11/2015  
**Organising entity:** Fundació Catalana per a la Recerca i la Innovació  
**Type of entity:** Foundation  
**City organizing entity:** Catalonia, Spain
- 15** **Title of the work:** Laboratorio de genómica evolutiva  
**Name of the event:** Open Day  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Spain  
**Date of event:** 03/10/2015  
**Organising entity:** PARC DE RECERCA BIOMEDICA DE BARCELONA  
**Type of entity:** R&D Centre



- 16** **Title of the work:** Historias de la genómica  
**Name of the event:** Ciència a les escoles 2014  
**Type of event:** Conferences given  
**Corresponding author:** Yes  
**City of event:** Granollers, Catalonia, Spain  
**Date of event:** 19/11/2014  
**Organising entity:** Fundació Catalana per a la Recerca i la Innovació **Type of entity:** Foundation
- 17** **Title of the work:** Laboratorio de genómica evolutiva  
**Name of the event:** Open Day  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Spain  
**Date of event:** 04/10/2014  
**Organising entity:** PARC DE RECERCA BIOMEDICA DE BARCELONA **Type of entity:** R&D Centre
- 18** **Title of the work:** Open Day PRBB  
**Name of the event:** Open Day  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Spain  
**Date of event:** 01/10/2011  
**Organising entity:** PARC DE RECERCA BIOMEDICA DE BARCELONA **Type of entity:** R&D Centre
- 19** **Title of the work:** Introducción a la biomedicina  
**Name of the event:** Talleres de biomedicina (semanales)  
**Type of event:** Fairs and exhibitions  
**Corresponding author:** Yes  
**City of event:** Barcelona, Catalonia, Spain  
**Date of event:** 2009  
**Organising entity:** Fun science
- 20** **Title of the work:** Monitor naturaleza / Guía  
**Type of event:** Monitor naturaleza / Guía / Talleres  
**Date of event:** 2008  
**Organising entity:** Varias (ACCAC, Eix estels, Pere Tarrés) **Type of entity:** Business



## Other achievements

### Stays in public or private R&D centres

- 1** **Entity:** University College Dublin  
**Faculty, institute or centre:** School of biology and environmental sciences  
**City of entity:** Dublin, Southern and Eastern, Ireland  
**Start-End date:** 09/09/2013 - 11/12/2013 **Duration:** 3 months - 3 days  
**Funding entity:** Ministerio de Ciencia e Innovación. **Type of entity:** Ministerio de economía y competitividad  
**Goals of the stay:** Doctorate  
**Provable tasks:** Comparative genomics, NGS, RNA-seq
- 2** **Entity:** Duke University **Type of entity:** University  
**Faculty, institute or centre:** Biology  
**City of entity:** Durham, United States of America  
**Primary (UNESCO code):** 240900 - Genetics  
**Secondary (UNESCO code):** 240113 - Animal physiology  
**Start-End date:** 17/09/2012 - 19/12/2012 **Duration:** 3 months  
**Funding entity:** Ministerio de Ciencia e Innovación. **Type of entity:** Ministerio Investigación  
**Name of programme:** FPI  
**Goals of the stay:** Doctorate  
**Provable tasks:** Genómica comparativa, RNAseq, hibernación  
**Acquired skills developed:** RNA-seq

### Obtained grants and scholarships

- 1** **Name of the grant:** Formación Personal Investigador (FPI)  
**City awarding entity:** Spain  
**Aims:** Pre-doctoral  
**Awarding entity:** MINISTERIO DE EDUCACION Y CIENCIA  
**Amount of the grant:** 70.408 €  
**Conferral date:** 01/09/2010 **Duration:** 4 years  
**End date:** 01/09/2014  
**Entity where activity was carried out:** IMIM Hospital del Mar Research Institute  
**Faculty, institute or centre:** GRIB
- 2** **Name of the grant:** Young investigator travel award  
**Aims:** Post-doctoral  
**Awarding entity:** SMBE **Type of entity:** Associations and Groups  
**Conferral date:** 16/03/2018
- 3** **Name of the grant:** EMBL travel grant  
**Aims:** Post-doctoral  
**Awarding entity:** EMBL **Type of entity:** Public Research Body  
**Conferral date:** 11/10/2017



**Entity where activity was carried out:** EMBL Heidelberg

- 4** **Name of the grant:** SMBE travel grant  
**City awarding entity:** United States of America  
**Aims:** Post-doctoral  
**Awarding entity:** SMBE **Type of entity:** Associations and Groups  
**Amount of the grant:** 850 €  
**Conferral date:** 09/05/2017 **Duration:** 4 days
- 5** **Name of the grant:** Estancia FPI  
**Aims:** Estancia predoctoral  
**Awarding entity:** Ministerio de Economía y Competitividad  
**Amount of the grant:** 6.000 €  
**Conferral date:** 2012 **Duration:** 3 months - 3 days
- 6** **Name of the grant:** Estancia FPI  
**City awarding entity:** Spain  
**Aims:** Estancia predoctoral  
**Awarding entity:** MINISTERIO DE EDUCACION Y CIENCIA  
**Amount of the grant:** 6.000 €  
**Conferral date:** 2011
- 7** **Name of the grant:** Summer at the Park  
**Aims:** Beca prácticas  
**Awarding entity:** Parc Científic de Barcelona **Type of entity:** R&D Centre  
**Conferral date:** 2009 **Duration:** 4 months

### Scientific societies and professional associations

- 1** **Name of the society:** Quadrivium  
**City affiliation entity:** Barcelona,  
**Start date:** 2017
- 2** **Name of the society:** Societat Catalana de Biologia  
**Start date:** 2012
- 3** **Name of the society:** Society for Molecular Biology and Evolution  
**Start date:** 2012
- 4** **Name of the society:** Sociedad Española de Biología evolutiva  
**Start date:** 2011



## Co-operation networks

**1 Name of the network:** 4DGenome**Start date:** 01/04/2018**2 Name of the network:** Adaptnet**Identification of the network:** Genomics of adaptation: <https://adaptnet.es/>**Participating entity/entities:** CONSORCI CSIC-IRTA-UAB CENTRE DE RECERCA EN AGRIGENOMICA (CRAG); Universidad Complutense de Madrid; Universitat de Barcelona; universidad vigo; IBE; Estación Biológica de Doñana; Real Jardín Botánico; museo nacional ciencias naturales; Centro de Regulación Genómica**Type of entity:** ; University; University; University; Foundation; State agency; State agency; Public Research Body; CIBER**Start date:** 2016**3 Name of the network:** DrosEU**Identification of the network:** Genomics**Nº of researchers:** 60**Participating entity/entities:** INSTITUTO DE BIOLOGIA EVOLUTIVA**Type of entity:** State agency**Tasks carried out:** Bioinformatics, genomics, TE research**Start date:** 2016**4 Name of the network:** Lynx genomics**Nº of researchers:** 50**Participating entity/entities:** Universidad Pompeu Fabra; Universidad de Oviedo; Universitat Autònoma de Barcelona; Centro Nacional de Análisis Genómico (CNAG); Centro de Regulación Genómica; Consejo Superior de Investigaciones Científicas; Centro Nacional de Investigaciones Oncológicas**Type of entity:** University; University; University; University Centres and Structures and Associated Bodies; University Centres and Structures and Associated Bodies; State agency; Healthcare Institutions**Tasks carried out:** Analysis of RNAseq data, analysis of signatures of natural selection, identification of lineage-specific genes**Start date:** 2012**Duration:** 3 years**5 Name of the network:** Instituto Nacional Bioinformática (INB)**Participating entity/entities:** IMIM-UPF, Research Programme on Biomedical Informatics (IMIM-UPF)**Type of entity:** University Department

## Summary of other achievements

**1 Description of the achievement:** Finalist in RIN4 competition**Accrediting entity:** Facultad de Ciencias de la Salud y de la Vida**Type of entity:** University Centres and Structures and Associated Bodies**Conferral date:** 20/05/2016**2 Description of the achievement:** Active member in the biostars community**Accrediting entity:** <https://www.biostars.org/u/3742/>**Type of entity:** Associations and Groups