

CV date	17.02.2017
---------	------------

## Part A. PERSONAL INFORMATION

First and Family name	Sònia Garcia		
Social Security, Passport, ID number	44020511Y	Age	39
Researcher numbers	Researcher ID	<a href="http://www.researcherid.com/rid/M-7460-2013">http://www.researcherid.com/rid/M-7460-2013</a>	
	Orcid code	<a href="http://orcid.org/0000-0002-3143-0527">http://orcid.org/0000-0002-3143-0527</a>	

### A.1. Current position

<b>Name of University/Institution</b>	Botanical Institute of Barcelona, Spanish National Research Council (IBB-CSIC-ICUB)		
<b>Department</b>	Biodiversity and Plant Evolution		
<b>Address and Country</b>	Passeig del Migdia s/n, 08038 Barcelona, Spain		
<b>Phone number</b>	0034932890611	<b>E-mail</b>	<a href="mailto:soniagarcia@ibb.csic.es">soniagarcia@ibb.csic.es</a>
<b>Current position</b>	Researcher "Ramón y Cajal"	<b>From</b>	16.12.2015
<b>Sp. code UNESCO</b>	2409, 2415, 2417		
<b>Keywords</b>	Evolutionary biology, plant molecular cytogenetics, ribosomal DNA, Asteraceae, genome size, transposable elements		

### A.2. Education

PhD	University	Year
Pharmacy, sp. Botany	University of Barcelona (UB)	30.07.2007

### A.3. JCR articles, h Index, thesis supervised...

<i>JCR articles</i>	<b>45</b> (and three short notes)
<i>Articles in non-indexed journals with peer review process</i>	<b>12</b>
<i>Q1 publications</i>	<b>16</b> (36.36%)
<i>h-index</i>	<b>18 (WOS-Researcher ID) (Figure 1)</b> 18 (Scopus) 20 (Google Scholar)
<i>i10 index(publications with ≥ 10 citations)</i>	35 (Google Scholar)
<i>MSc thesis</i>	1
<i>Bachelor degree works</i>	6; 1 in progress

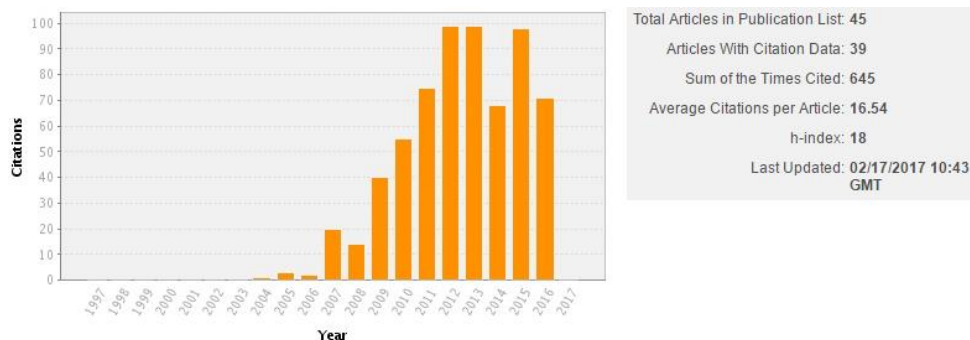


Figure 1. Citation distribution by year according to Web of Science-Researcher ID.

## Part B. CV SUMMARY (max. 3500 characters, including spaces)

**Scientific interests** My research is mainly directed towards understanding processes involved in plant genome evolution and organisation, from the sequence to the whole genome. Three areas are highlighted: the study of the evolution of genome size; the structure, organisation and function of ribosomal RNA genes (rDNA), and the role of transposable elements (TE) in genomes. I have advanced these fields by: (1) the discovery of a novel arrangement of rDNA, first in several Asteraceae and later extended to gymnosperms and (2) the launch and updating of two databases, one compiling Asteraceae genome sizes ([GSAD database](#)) and the other on the number and distribution of rDNA sites in plant chromosomes ([Plant rDNA database](#)). Currently, I am involved in a project to examine the evolution of ribosomal RNA genes in plants, another about the role of TE in the evolution of non-model plant, and in the updating and analysis of the databases, of which I am also the administrator.

**Scientific production** I have published 44 articles in JCR journals, out of which I am first author in 18 and corresponding author in 13 (see more details in Part A3). I have also authored 12 more articles in non-indexed journals. I have presented 51 contributions to national/international conferences, being first author in 20 and invited in six. I have spent 24 months in research placements abroad and participated in eight national R&D&I projects.

**Positions held and scientific track** I started my PhD studies in the University of Barcelona (UB) in 2004 thanks to a FPU fellowship (government of Spain). By 2007 I had already presented my dissertation which contained eight publications, obtaining the highest qualification (*summa cum laude*), the Extraordinary PhD Award and the mention of *European Doctor*. From 2008 to mid-2011 I was contracted to my first post-doctoral position at the Botanical Institute of Barcelona (IBB-CSIC). By the end of that year I had already started my second post-doctoral contract at the UB, supported by the *Beatriu de Pinós* program (government of Catalonia-COFUND), continuing until the end of 2012, when I joined my last post-doc, a *Juan de la Cierva* contract, (government of Spain) ending December 2015. At the same month, I obtained a *Ramón y Cajal* position (government of Spain) at the IBB-CSIC.

**National and international network of collaborators** I have established links with scientists at the IESE Business School and at the CREAM (Centre of Ecological Research and Forest Applications). My international collaborative network includes the Academy of Sciences of the Czech Republic; the CNRS (France); the Queen Mary University of London (UK); the Royal Botanic Gardens, Kew (UK); the Shahid Beheshti University in Tehran (Iran); the Range Ecology Laboratory of the Arid Lands Institute of Médenine (Tunisia); United States Department of Agriculture (USA); the University of Texas at Austin (USA) and the Tokyo University of Agriculture (Japan).

**Teaching activity, supervision of research works** I have combined scientific research with teaching duties, both for undergraduates and post-graduates. I have taught several subjects in the Bachelor's degree courses of Pharmacy, Human Nutrition and Dietetics, Food Science and Technology and in the Biodiversity MSc course (UB). I have been involved in the creation of teaching materials, including practice books. I have supervised the research work of several international, postgraduate, PhDs, one MSc, and several bachelor degree work students.

## Part C. RELEVANT MERITS

### C.1. Publications (including books). Include up to ten references.

1. **Garcia S.**; Lim, K.Y.; Chester, M.; Garnatje, T.; Pellicer, J.; Vallès, J.; Leitch, A.R.; Kovařík, A. **2009.** [Linkage of 35S and 5S rRNA genes in \*Artemisia\* \(family Asteraceae\): first evidence from angiosperms.](#) *Chromosoma* 118: 85–97.
2. **Garcia, S.**; Panero, J.L.; Siroky, J.; Kovařík, A. **2010.** [Repeated reunions and splits feature the highly dynamic evolution of 5S and 35S ribosomal RNA genes \(rDNA\) in the Asteraceae family.](#) *BMC Plant Biology* 10: 176.
3. **Garcia, S.**, McArthur, E.D.; Pellicer, J.; Sanderson, S.C.; Vallès, J.; Garnatje, T. **2011.** [A molecular phylogenetic approach to Western North America endemic \*Artemisia\* and allies \(Asteraceae\): untangling the sagebrushes.](#) *American Journal of Botany* 98: 638–653.
4. **Garcia, S.**; Garnatje, T.; Kovařík, A. **2012.** [Plant rDNA database: ribosomal DNA loci information goes online.](#) *Chromosoma* 121: 389–394.
5. **Garcia, S.**; Crhak-Khaitová, L.; Kovařík, A. **2012.** [Expression and epigenetic modification of 5S rRNA genes linked to the 35S rDNA unit in plants.](#) *BMC Plant Biology* 12: 95.
6. **Garcia, S.**; Kovařík, A. **2013.** [Dancing together and separate again: gymnosperms exhibit frequent changes of fundamental 5S and 35S rRNA gene \(rDNA\) organisation.](#) *Heredity* 111: 23–33.
7. **Garcia, S.**; Leitch, I.J.; Anadon-Rosell, A.; Canela, M.A.; Gálvez, F.; Garnatje, T.; Gras, A.; Hidalgo, O.; Johnston, E.; Mas de Xaxars, G.; Pellicer, J.; Siljak-Yakovlev, S.; Vallès; Vitales, D.; Bennett, M.D. **2014.** [Recent updates and developments to plant genome size databases.](#) *Nucleic Acids Research* 42: 1159–1166.
8. Olanj, O.; Garnatje, T.; Sonboli A.; Vallès, J.; **Garcia, S.** **2015.** [The striking and unexpected cytogenetic diversity of genus \*Tanacetum\* L. \(Asteraceae\): a cytometric and fluorescent in situ hybridization study of Iranian taxa.](#) *BMC Plant Biology* 15: 174.
9. Wang, W.; Ma, L.; Becher, H.; **Garcia, S.**; Kovaříkova, A.; Leitch, I. J.; Leitch, A. R.; Kovařík, A. **2015.** [Astonishing 35S rDNA diversity in the gymnosperm species \*Cycas revoluta\* Thunb.](#) *Chromosoma* 125: 683-699.
10. **Garcia, S.**; Kovařík, A.; Leitch, A. R.; Garnatje, T. 2017. [Cytogenetic features of rRNA genes across land plants: analysis of the Plant rDNA database.](#) *The Plant Journal* DOI: 10.1111/tpj.13442.

## C.2. Research projects and grants

---

**1. Title of the project / contract:** Plant Biodiversity and Biosystematics

**Financing Firm/administration:** *Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)*

**Number of the project / contract:** 2009SGR439 **Amount:** 58.240,00

**Duration, since:** 2009 **Until:** 2013

**Researcher/s in charge:** Julián Molero Briones

**Keywords:** Cytogenetics / Botany / Conservation / Biosystematics / Reproductive Biology

---

**2. Title of the project / contract:** Biosystematic studies in the Asteraceae, VI: cytogenetic and molecular approach to radiation phenomena and insularity in groups of genera *Cheirolophus*, *Echinops*, *Rhaponticum* (Cardueae) and *Artemisia* (Anthemideae).

**Financing Firm/administration:** *Ministerio de Ciencia e Innovación*

**Number of the project / contract:** CGL2010-22234-C02/BOS **Amount:** 140.360,00

**Duration, since:** 2010 **Until:** 2013

**Researcher/s in charge:** Teresa Garnatje Roca

**Keywords:** Cytogenetics / DNA sequencing / *Artemisia* / Molecular phylogeny / Palynology / *Cheirolophus* / Phylogeography / Evolutionary Biology

---

**3. Title of the project / contract:** Is the 5S ribosomal RNA gene, essential part of the ribosomes, an ancient retrotransposon? First approach in plants

**Financing Firm/administration:** *Dirección General de Política Científica y Técnica*

**Number of the project / contract:** BFU2011-14035-E **Amount:** 9.000,00

**Duration, since:** 2013 **Until:** 2014

**Researcher/s in charge:** Teresa Garnatje Roca

**Keywords:** 5S ribosomal DNA / Birth-and-death evolution / Concerted evolution / RNA world

---

**4. Title of the project / contract:** Expression of 5S rRNA genes linked to 35 S rDNA in plants, their epigenetic modification and regulatory element divergence

**Financing Firm/administration:** European Molecular Biology Organization

**Number of the project / contract:** ASTF300-2011 **Amount:** 2.302,00

**Duration, since:** 2012 **Until:** 2012

**Researcher/s in charge:** Aleš Kovařík

**Keywords:** 5S ribosomal DNA / 35S ribosomal DNA / Epigenetics / Concerted evolution

---

**5. Title of the project / contract:** Plant Biodiversity and Biosystematics

**Financing Firm/administration:** *Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)*

**Number of the project / contract:** 2014SGR514 **Amount:** 63.000,00

**Duration, since:** 2014 **Until:** 2016

**Researcher/s in charge:** Joan Vallès Xirau

**Keywords:** Biodiversity / climate change / databases / marine algae / molecular biology / taxonomy

---

**6. Title of the project / contract:** Transposable elements and plant evolution. A multidisciplinary approach in non-model species.

**Type of contract/Program:** National Program on Biodiversity, Earth Sciences and Global Change

**Financing Firm/administration:** *Ministerio de Economía y Competitividad*

**Number of the project / contract:** CGL2013-49097-C2-2-P **Amount:** 105.000,00

**Duration, since:** 2014 **Until:** 2016

**Researcher/s in charge:** M. Teresa Garnatje Roca

**Keywords:** *Armeria* / intergenic spacer / next-generation sequencing / repetitive DNA

---

**7. Title of the project / contract:** Structure, expression and evolution of ribosomal RNA genes in plant genomes: new approaches to old questions

**Financing Firm/administration:** Czech Science Foundation (CSF)

**Institutions participating:** Academy of Sciences of the Czech Republic (ASCR)

**Number of the project / contract:** 13-10057S **Amount:** 138.000,00

**Duration, since:** 2013 **Until:** 2016

**Researcher/s in charge:** Aleš Kovařík

**Keywords:** epigenetics / molecular evolution / next-generation sequencing / ribosomal DNA

---

**8. Title of the project / contract:** Deconstructing ribosomal DNA: from the sequence to the chromosome across the Tree-of-Life

**Type of contract/Program:** National Program on Biodiversity, Earth Sciences and Global Change

**Financing Firm/administration:** *Ministerio de Economía y Competitividad*

**Number of the project / contract:** CGL2016-75694-P **Amount:** 133.000,00

**Duration, since:** 2016 **Until:** 2019

**Researcher/s in charge:** Sònia Garcia

**Keywords:** Asteraceae / birth and death evolution / concerted evolution / epigenetics / next-generation sequencing / repetitive DNA / ribosomal DNA

---

### C.3. Contracts - C.4. Patents -

### C.5. Revision of articles and other editorial activity

I have revised papers for 40 different SCI journals since 2007 until present, including *BMC Evolutionary Biology*, *Biological Journal of the Linnean Society*, *Annals of Botany*, *Tree Genetics and Genomics* or *PLoS ONE*, among others. I have also been a member of the editorial board of the journal *Collectanea Botanica* since 2009.

### C.6. Evaluation/revision tasks

I am a project reviewer of the Czech Science Foundation since 2015 (16-04166Y) and I am listed as an expert in the ANEP database (*Agencia Nacional de Evaluación y Prospectiva, Ministerio de Economía y Competitividad*).

### C.7. Awards

**01.07.2008.** PhD extraordinary award for the best PhD thesis of 2007 (*Universitat de Barcelona*).

**30.07.2007.** European PhD mention (European Doctor).

**01.10.2005.** Award received from the SCB for the best original research project of MSc students.

### C.8. Membership of Scientific Societies

I have belonged to the Catalan Society of Biology (SCB) since 2005.

### C.9. Accreditations

I have the certificates of *Profesor Ayudante Doctor* (2009), *Professor Lector* (2009) and *Professor Agregat* (2014) from the governments of Spain and Catalonia, which credit the quality of my professional competence as university teacher as well as my scientific contributions.

### C.10. Institutional responsibilities

**01.01.2015 until present.** Member of the Education commission of the IBB.

**01.10.2013– 01.02.2016.** Member of the PhD commission of PhD students (UB).

**15.09.2013– 01.02.2016.** Member of the Academic Commission of the Master on Biodiversity (UB). **16.03.2008– 14.07.2011.** Secretary of the Advisory Board of the IBB.