**CURRICULUM VITAE (CVA)**

***IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.***

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| **CV date** |   20-08-2023 |

**Part A. PERSONAL INFORMATION**

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| --- | --- |
| First name | José Antonio |
| Family name | Jarillo Quiroga |
| Gender (\*) | Male |  Birth date (22/12/1965) |   |
| ID number | 05400586W |  |  |
| e-mail | **jarillo@inia.csic.es** | URL Web **http://www.cbgp.upm.es/phase\_transitions.php** |
| Open Research and Contributor ID (ORCID)(\*) | **0000-0002-2963-7641** |

**A.1. Current position**

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| --- | --- |
| Position | Profesor de Investigación de OPI |
| Initial date | 2018  |
| Institution | Centro Nacional INIA-CSIC  |
| Departament/Center | Centro de Biotecnología y Genómica de Plantas (CBGP) (UPM-INIA/CSIC) |
| Country | Spain | Teleph. number |  (+34) 910679173 |
| Key words | Arabidopsis, oilseed rape, flowering, temperature, floral repressors, chromatin remodelling, H2A.Z, histone acetylation, NuA4-C |

**A.3. Education**

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| PhD, Licensed, Graduate | University/Country | Year |
| **Lic. Ciencias Biológicas** | Univ. Autónoma de Madrid | 1988 |
| **Doctor en Ciencias Biológicas** | Univ. Autónoma de Madrid | 1994 |

**Part B. CV SUMMARY** *(max. 5000 characters, including spaces)*

J.A. Jarillo got a BS degree (1988) and a PhD degree (1994) in Biology at the Universidad Autónoma de Madrid. After that, he moved as post-doc to the Univ. of Pennsylvania (Prof. A. Cashmore lab) (1995-1999). He came back to Spain (1999) and joined the group of Prof. Martinez-Zapater at Centro Nacional de Biotecnología (CNB) (Madrid), and since Nov 2001, he is Principal Investigator at Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), Madrid (currently CNINIA-CSIC), first as Científico Titular, with later promotions to Investigador (2017) and Profesor de Investigación de OPI (2018) positions. In 2008, his group moved to Centro de Biotecnología y Genómica de Plantas (CBGP) (UPM-INIA, Madrid), where he is co-leading the Molecular Bases of Plant Developmental Phase Transitions Laboratory until now. In the period 2008-2016 he was Deputy Director at CBGP.

Along his career, he has been interested in different aspects of the regulation of plant responses to changing environmental conditions (light, temperature) as well as in the study of the genetic control of the floral transition, a developmental process with a high impact on the yield and quality of several crops species. In his PhD Thesis at INIA, he studied the physiological, genetic and molecular responses to low temperatures in *A. thaliana*, unveiling a collection of genes that are induced during the cold acclimation process in plants. In his postdoc stay at Univ. of Pennsylvania, his work was focused in studies involving the light signal transduction pathways and made seminal contributions to this research field identifying a new Arabidopsis circadian clock component and unveiling the long-sought photoreceptor implicated in the chloroplast avoidance response induced by blue light in plants. He came back to Spain in 1999 and until he achieved a permanent position at INIA in 2001, he was working at the CNB in different projects related to the study of the floral transition response, where he participates in the characterization of novel components of the autonomous pathway of flowering. Once fully established at INIA as an independent staff scientist, the main interest of his research group has been to delve in the understanding of the molecular mechanisms that regulate phase developmental transitions. In particular, they are interested in flowering and germination, phases transitions with adaptive value for plant species as well as a significant impact on crop yield.

The floral transition marks the opening of the reproductive development and the timing of this developmental switch is essential to determine the reproductive success of plant species. For that reason plants tune very precisely the time of flowering initiation in response to both endogenous and environmental factors, ensuring that the production of flowers and fruits take place under optimal conditions. Using the model plant species Arabidopsis thaliana, and related Brassicaceae species, they are focused on studying the mechanisms that work to repress flowering until plants reach a particular developmental stage or are under optimal environmental conditions. To do this, they have pursued a combination of genetic, molecular and functional genomics techniques to analyse different molecular mechanisms that control this developmental phase transition and unveil the regulatory circuits involved in this regulation. Currently, his research interest is focused in the role of epigenetic regulation in the control of different plant developmental processes, having revealed different chromatin remodellers involved in. His group is now contributing to unravel the role of histone variant H2A.Z and histone acetylation in mediating different aspects of chromatin function and modulating flowering responses. They are also pursuing the molecular mechanisms involved in Brasicaceae adaptation to high ambient temperature. During his scientific career, he has being author in more than 60 scientific publications, most of them belonging to Q1. Besides, he has supervised 11 PhD Doctoral Thesis (seven of them in the last 10 years), with 4 more currently in progress, plus 5 Master Thesis. In addition, he has led 10 projects from National Calls and 1 EU MC-IEF grant, and maintains several international collaborations (MSC-ITN, CEPEI, PRIMA) that have enhanced the visibility of the group. He has been awarded 5 sexenios and 5 quinquenios. Since sept 2020, he is the coordinator of the Biotechnology subarea of the Bioscience and Biotechnology area from AEI (Spanish Research Agency).

**Part C. RELEVANT MERITS** *(sorted by typology)*

**C.1. Publications** *(see instructions) (selected ones since 2012)*

1. Abelenda JA, Trabanco N, Del Olmo I…, **Jarillo, JA\***, Piñeiro M \* (2023). High ambient temperature impacts on flowering time in *Brassica napus* through both H2A.Z-dependent and independent mechanisms. **Plant Cell Environ.** doi: 10.1111/pce.14526. Q1, D1, IF: 7,94\* Corresponding authors.

2. Boter, M., Pozas, J. **Jarillo, JA**, Piñeiro M, Pernas M. (2023). *Brassica napus* roots use different strategies to respond to warm temperatures. **Int. J. Mol. Sci.**, 24, 1143. doi.org/10.3390/ijms24021143 Q1, IF: 6.208

3. Barrero-Gil J, Bouza-Morcilla, L, Espinosa-Cores L, Piñeiro M\*, **Jarillo JA**\*. (2022). H4 acetylation by the NuA4 complex is required for plastid transcription and chloroplast biogenesis. **Nature Plants** 8:1052-1063. doi: 10.1038/s41477-022-01229-4. Q1, D1 IF: 15,79 \* Corresponding authors

4. Poza-Viejo L, Payá-Milans M, San Martín-Uriz P, … **Jarillo JA**, Crevillén P (2022). Conserved and distinct roles of H3K27me3 demethylases regulating flowering time in *Brassica rapa.* **Plant Cell Environment**. 45:1428-1441. doi: 10.1111/pce.14258. Q1, D1, IF: 7,94.

5. Barrero-Gil J, Mouriz A, Piqueras R, Salinas J, **Jarillo JA**\*, Piñeiro M\*. (2021). A MRG-operated chromatin switch at *SOC1* attenuates abiotic stress responses during the floral transition. **Plant Physiology** 187:462-471. doi: 10.1093/plphys/kiab275, Q1, D1 IF: 8,34\* Senior authors

6. Espinosa-Cores L, Bouza-Morcillo L, Barrero-Gil J, Jiménez-Suárez V, Lázaro A, Piqueras R, **Jarillo JA**\*, Piñeiro M\*. (2020). Insights into the function of the NuA4 Complex in plants. **Frontiers in Plant Sciencies**. doi: 10.3389/fpls.2020.00125, Q1, IF:4,4. \* Corresponding authors

* 7. del Olmo, I, Poza‐Viejo, L. Piñeiro M, **Jarillo JA**, Crevillén, P. (2019). High ambient temperature leads to reduced *FT* expression and delayed flowering in *Brassica rapa* via a mechanism associated with H2A.Z dynamics. **Plant Journal**. 100:343-356. doi: 10.1111/tpj.14446, Q1, D1, IF: 5,726.
* 8. Crevillén P, Gómez-Zambrano Á, López JA, Vázquez J, Piñeiro M, **Jarillo JA** (2019). Arabidopsis YAF9 histone readers modulate flowering time through NuA4-complex-dependent H4 and H2A.Z histone acetylation at *FLC* chromatin. **New Phytol.** 222:1893-1908. doi:10.1111/nph.15737, Q1, D1, IF:7,30.
* 9. Huertas R, Catalá R, Jiménez-Gómez JM, Mar Castellano M, Crevillén P, Piñeiro M, **Jarillo JA**, Salinas J. (2019). Arabidopsis SME1 Regulates Plant Development and Response to Abiotic Stress by Determining Spliceosome Activity Specificity. **Plant Cell** 31:537-554. doi:10.1105/tpc.18.00689, Q1, D1, IF: 8,631.
* 10. Pérez-Martín F, Yuste-Lisbona FJ, Pineda B, …, Lozano R. (2018). Developmental role of the tomato Mediator complex subunit MED18 in pollen ontogeny. **Plant Journal.** 96, 300-315. doi:10.1111/tpj.14031, Q1, D1, IF: 5,726.
* 11. Gómez-Zambrano Á, Crevillén P, Franco-Zorrilla JM, …, **Jarillo JA**. (2018). Arabidopsis SWC4 Binds DNA and Recruits the SWR1 Complex to Modulate Histone H2A.Z Deposition at Key Regulatory Genes. **Molecular Plant** 11:815-832. doi: 10.1016/j.molp.2018.03.014, Q1, D1, IF: 9,3268.

12.Díaz-Manzano FE, Cabrera J, Ripoll JJ, …, Escobar C. (2018). A role for the gene regulatory module *microRNA172/TARGET OF EARLY ACTIVATION TAGGED 1/FLOWERING LOCUS T* (*miRNA172/TOE1/FT*) in the feeding sites induced by *Meloidogyne javanica* in *Arabidopsis thaliana*. **New Phytol** 217:813-827. doi: 10.1111/nph.14839, Q1, D1, IF: 7,433.

* 13. Narro-Diego L, López-González L, **Jarillo JA**, Piñeiro M. (2017). The PHD-containing protein EARLY BOLTING IN SHORT DAYS regulates seed dormancy in Arabidopsis. **Plant Cell Environ**. 40:2393-2405. doi: 10.1111/pce.13046, Q1, D1, IF: 5,415.
* 14. Pedroza-García JA, Mazubert C, Del Olmo I, …, Raynaud C .(2017) Function of the Plant DNA Polymerase Epsilon in Replicative Stress Sensing, a Genetic Analysis. **Plant Physiology**. 173:1735-1749. doi: 10.1104/pp.17.00031, Q1, D1, IF: 5,949.
* 15. Pedroza-Garcia, JA Domenichini,S., Mazubert,C…, Raynaud, C. (2016). Role of the Polymerase ϵ sub-unit DPB2 in DNA replication, cell cycle regulation and DNA damage response in Arabidopsis. **Nucleic Acids Research**. 44: 7251-7266. doi: 10.1093/nar/gkw449, Q1, D1, IF: 10,162.
* 16. Del Olmo I, López JA, Vázquez J, Raynaud C, Piñeiro M, (2016). Arabidopsis DNA polymerase ϵ recruits components of Polycomb repressor complex to mediate epigenetic gene silencing. **Nucleic Acids Research**. 44: 5597-5614. doi: 10.1093/nar/gkw156, Q1, D1, IF: 10,162.
* 17.Komar DN, Mouriz A, **Jarillo JA**, Piñeiro M. (2016). Chromatin Immunoprecipitation Assay for the Identification of Arabidopsis Protein-DNA Interactions In Vivo. **Journal of Visualized Experiments**. 2016 Jan 14;(107). doi: 10.3791/53422, Q3 IF:1,05.
* 18. Lázaro, A., Mouriz, A., Piñeiro, M., **Jarillo, J.A** (2015). Red Light-Mediated Degradation of CONSTANS by the E3 Ubiquitin Ligase HOS1 Regulates Photoperiodic Flowering in Arabidopsis. **Plant Cell** 27:2437-2454. doi: 10.1105/tpc.15.00529, Q1, D1, IF: 8,538.
* 19. Mouriz, A. López-González, L., **Jarillo J.A**., Piñeiro M (2015). PHDs govern plant development. **Plant Signaling Behavior** 10: e993253. doi: 10.4161/15592324.2014.993253, Q2 IF: 1,644.
* 20. **Jarillo JA**, Piñeiro M. (2015). H2A.Z mediates different aspects of chromatin function and modulates flowering responses in Arabidopsis. **Plant Journal** 83: 96-109. doi: 10.1111/tpj.12873. Q1, D1 IF: 5,466
* 21. López-González L, Mouriz A, Narro-Diego L, Bustos R, Martínez-Zapater JM, **Jarillo JA**, Piñeiro M. (2014). Chromatin-dependent repression of the Arabidopsis floral integrator genes involves plant specific PHD-containing proteins. **Plant Cell** 26: 3922-3938. doi: 10.1105/tpc.114.130781, Q1, D1, IF: 9,338
* 22. Coego, A., Brizuela, E., Castillejo, P.,…, **Jarillo, J.A**., Paz-Ares, J., León, J and TRANSPLANTA Cons. (2014). The TRANSPLANTA Collection of Arabidopsis Lines: A resource for Functional Analysis of Transcription Factors based on their conditional overexpression. **Plant Journal** 25:2944-2957. doi: 10.1111/tpj.12443, Q1, D1 IF: 5,972.
* 23. Castrillo G, Sánchez-Bermejo E, de Lorenzo L,…, Paz-Ares J, Leyva A. (2013). WRKY6 transcription factor restricts arsenate uptake and transposon activation in Arabidopsis. **Plant Cell** 25:2944- 2957. doi: 10.1105/tpc.113.114009, Q1, D1, IF: 9,575.
* 24. Piñeiro, M., **Jarillo, J.A.** (2013). Ubiquitination in the control of photoperiodic flowering. **Plant Science** 198:98- 109. doi: 10.1016/j.plantsci.2012.10.005, Q1, D1, IF:4,114.

25. Lázaro, A., Valverde, F., Piñeiro, M., **Jarillo, J.A** (2012).The Arabidopsis E3 Ubiquitin Ligase HOS1 negatively regulates CONSTANS abundance in the photoperiodic control of flowering. **Plant Cell** 24:982 – 999. doi: 10.1105/tpc.110.081885, Q1, D1, IF: 9,251.

**C.2. Congress**

**Number of communications to congresses** (only since 2016) National= 21, International= 16.

**Most Relevant Invited Conferences** (only since 2016):- XVI Reunión Biología Molecular de Plantas, Sevilla, España Sept 2022- 6th European Workshop on Plant Chromatin, MPIPZ Cologne, Germany, June 2019- Institute of Plant Science and Resources (IPSR), Okayama Univ, Kurasiki, Japan, March 2019- Instituto Biología Molecular y Celular de Plantas IBMCP, Valencia, Spain, December 2016- Centro de Investigaciones Biológicas CIB, Madrid, Spain, May 2016- Institut of Plant Sciences Paris-Saclay, IPSP2, Orsay Cedex France, April 2016

**C.3. Research projects** *(selected ones since 2012)*

1. **THERMOFLOWER**: Novel insights in the low ambient temperature-responsive flowering pathway (PID2022-137131NB-I00). PI: **J.A. Jarillo** & M. Piñeiro. Funding agency: MICIN Plan Estatal I+D+I, PID 01/09/2023-31/08/2026.

2. **EPIGENCROPADAPT**: Deciphering the role of MBD4 chromatin factor in oilseed rape adaptation to high ambient temperature (TED2021-132137B-C21) PI:M. Piñeiro & **J.A. Jarillo**. Funding agency: MICIN Plan Estatal I+D+I, TED 2022 01/12/2022-30/11/2024.

3. **EPISEEDLINK**: From seed to seedling: Epigenetic mechanisms of priming to design strategies for crop improvement. (MSCA-2021-DN-01101073476); PI M. Piñeiro. Coordinator Vicente Rubio (CNB, CSIC) Funding agency: EU HORIZON 01/10/2022-30/09/2026.

4. **BrasExplor**: Wide exploration of genetic diversity in Brassica species for sustainable crop production (IMP2020-001). PI: M. Piñeiro. Funding agency: PRIMA call 2019 S2. 01/09/20 - 31/08/23.

5. **AcEPICODE**: Acetilación de la variante histónica H2A.Z: un nuevo símbolo en el código epigenético de plantas (PID2019-104899GB-I00). PI: **J.A. Jarillo** & M. Piñeiro. Funding agency: MICIN Plan Estatal I+D+I, PGC. 01/06/20 - 31/05/23. .

6. **CHROMYIELD**: Caracteres de desarrollo regulados por cromatina con influencia en el rendimiento de cultivos (BIO2016-77559-R); PI: **J. A. Jarillo** & M Piñeiro Funding agency: MINECO 29/12/2016-29/12/2019

7. **BrassiCHROM**: Regulación mediada por cromatina de caracteres del desarrollo que afectan al rendimiento de cultivos de Brassicaceae (BIO2013-43098-R); PI: **J.A. Jarillo** & M. Piñeiro. Funding agency: MINECO. 01/01/2014-31/12/2016.

8. **SYBRACLIM**: Securing yield stability of Brassica crops in changing climate conditions. (ERA46-SYBRACLIM) PI: Mónica Pernas. Colaborators **J.A. Jarillo** & M Piñeiro Funding agency: UE FACCE-JPI-ERA-NET+ CLIMATE SMART AGRICULTURE. 31/12/2014-31/12/2017.

9. **EpiTRAITS** Epigenetic regulation of economically important plant traits (ITN-SP3-PEOPLE-316965); PI INIA subproject: M. Piñeiro Funding agency: UE 7FP. 01/10/2012-01/10/2016.

10. **FLOWERING CHROMATIN** (298790 SP3). PI: **J. A. Jarillo** Funding agency: Unión Europea 7FP. 16/07/2012-16/07/2014.

11. **FLOWERING REPRESSION**: BIO2010-15589 Diseccion genética y molecular de mecanismos implicados en la represión de la floracion. PI**: J. A. Jarillo** Funding agency: MICINN. 01/01/2011-31/12/2013.