

CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	ROBERTO		
Family name	SOLANO TAVIRA		
Gender (*)	Male	Birth date	10/02/1966
ID number	03092255C		
e-mail	rsolano@cnb.csic.es	URL Web	www.cnb.csic.es/index.php/es/investigacion/departamentos-de-investigacion/genetica-molecular-de-plantas/solano
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-5459-2417		

(*) Mandatory

A.1. Current position

Position	Research Professor (Profesor de Investigación CSIC)/Head of the department Plant Mol. Genetics		
Initial date	1/04/2009. Head of the department since 03/2019		
Institution	CSIC		
Department/Center	Plant Molecular Genetics	CNB	
Country	Spain	Teleph.	91 5855429
Key words			

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
15-6-05/1/04/09	Scientific Researcher (Investigador Científico)/CNB-CSIC
11-8-00/15-6-05	Research associate (Científico Titular)/CNB-CSIC
01-01-00/10-08/00	Research assistant (Científico Titular Interino)/CNB-CSIC
1999	Research assistant (Investigador Contratado)/CNB-CSIC
Feb. 1996/ Dec 1998	Post-Doctoral/ Plant Science Institute-UPenn (Ecker lab)
1995	Postdoctoral/CNB-CSIC
1990-1995	Doctorate/CIB-CSIC

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in plant biology	Alcalá de Henares. Madrid (work in CIB-CSIC)	1995

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

I have been working at the CNB for over 20 years. I am an elected EMBO member since 2016 and a leading authority on phytohormone signaling, in particular on the stress-related hormone jasmonate (JA). Work from my group has elucidated most of the core JA signaling pathway components, deciphered the molecular mechanisms underlying JA-response activation and clarified the evolutionary history of the pathway. In addition, I set up the Genomics Unit at CNB and developed functional genomics tools for the study of plant transcription factors. Major contributions of my team include, among others:

- i) identification of the bioactive form of the JA-hormone in eudicots and bryophytes (Fonseca et al Nature Chem Biol 2009; Monte et al., Nature Chem Biol 2018; PNAS 2022). This discovery also helped confirm the nature of the JA co-receptor (see (iii)) and the divergence in the bioactive hormone between bryophytes and vascular plants. It also provided a clear understanding on the evolution of the JA signaling pathway.
- ii) identification, mechanistic dissection and evolutionary conservation of transcription factors mediating JA-triggered plant responses (Lorenzo et al., Plant Cell 2003; 2004; Fernandez-



Calvo et al., *Plant Cell* 2011; Boter et al., *Plant Cell* 2015; Peñuelas et al., *Plant Cell* 2019). These TFs regulate levels of secondary metabolites relevant for plant defense (eg, glucosinolates) and for biomedicine (eg, taxol or vincristine/vinblastine drugs used for cancer treatment)

iii) identification and evolutionary conservation of the JA co-receptor, JAZ, which represses the activity of these TFs in the absence of the hormone (Chini et al., *Nature* 2007; Monte et al., *Mol. Plant* 2019). The article by Chini et al. was named as “Breakthrough of the year” in plant research and being the third “article” of the history of Spanish biology published in *Nature*.

iv) identification of the molecular components and elucidation of the mechanism of JAZ-mediated repression of the JA response; the NINJA adapter and the TOPLESS co-repressor (Pauwels et al., *Nature* 2010).

v) Development of chemical tools to modulate JA signaling (Monte et al., *Nature Chem Biol* 2014).

vi) determination of the molecular mechanisms of the JA-pathway regulation by environmental signals (Gimenez-Ibanez et al *PLoS Biol* 2014; Chico et al., *Plant Cell*, 2014).

vii) development of genomic tools and resources that have been of broad utility (Franco-Zorrilla et al *PNAS* 2014).

viii) identification of an alternative pathway for JA synthesis (Chini et al., *Nature Chem Biol* 2018)

ix) characterization of evolutionary conservation of plant defences in basal plants (Gimenez-Ibanez et al., *Current Biology* 2019)

x) identification of a new mechanism of thermotolerance in plants (Monte et al., *Current Biol* 2020).

xi) Identification of an anti-SARS-CoV-2 antiviral from *Marchantia polymorpha* (Jimenez-Alemán et al., 2021).

My group has pioneered the introduction of the novel model plant *Marchantia polymorpha*, which opened a whole new world to study bryophytes and plant evolution (Bowman et al., *Cell* 2017). My middle/long term scientific objectives include the determination of new components of the JA signaling pathway and their crosstalk with other fatty acid derived signaling molecules. Furthermore, I will continue the search for components of the JA route that could explain the regulation of several physiological processes by a single molecule, both in *Arabidopsis* and in *Marchantia*. Finally, I would like to expand the biotechnological capacities of my lab by exploring the potential of bryophytes as a source of pharmacologically relevant compounds.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. Kneeshaw, S., Soriano, G., Monte, I., et al. Solano, R. (2022). Ligand diversity contributes to the full activation of the jasmonate pathway in *Marchantia polymorpha*. **Proceedings of the National Academy of Sciences of the USA** 119(36):e2202930119
2. Monte, I., Caballero J, Zamarreño AM, et al. Solano R(2022) JAZ is essential for ligand specificity of the COI1/JAZ co-receptor. **Proceedings of the National Academy of Sciences of the USA** 119(49) e22121551
3. Monte, I., Kneeshaw, S., Franco-Zorrilla, J.M., Chini, A., Zamarreño, A.M., García-Mina, J.M., Solano, R. (2020) An Ancient COI1-Independent Function for Reactive Electrophilic Oxylipins in Thermotolerance. **Current Biology**, 30 (6), pp. 962-971.e3.
4. Chico, J.M., Lechner, E., Fernandez-Barbero, G., et al., Solano, R. (2020) CUL3BPM E3 ubiquitin ligases regulate MYC2, MYC3, and MYC4 stability and JA responses. **Proceedings National Academy of Sciences of the USA**, 117:6205-6215.
5. Monte I, Ishida S, Zamarreño AM, et al., Solano R (2018). Ligand-receptor co-evolution shaped the jasmonate pathway in land plants. **Nature Chemical Biology** 14:480–488.
6. Chini A, Monte I, Zamarreño AM, et al., Solano R (2018). An ORP3-independent pathway uses 4,5-didehydrofor jasmonate synthesis. **Nature Chemical Biology** 14:171–178.
7. Monte, I., Hamberg, M., Chini, A., et al., Solano, R. (2014). Rational design of a ligand-based antagonist of jasmonate perception. **Nature Chemical Biology** 10:671–676



8. Franco-Zorrilla JM, López-Vidriero I, Carrasco JL, Godoy M, Vera P, and Solano R (2014). DNA-binding specificities of plant transcription factors and their potential to define target genes. **Proceedings of the National Academy of Sciences of the USA** 111:2367-2372.
9. Fonseca, S., Chini, A., Hamberg, M., et al., Solano, R. (2009). (+)-7-iso-Jasmonoyl-L-iso-leucine is the endogenous bioactive jasmonate. **Nature Chemical Biology** 5, 344-350
10. Chini, A., Fonseca, S., Fernández, G., et al., Solano, R. (2007) The JAZ family of repressors is the missing link in Jasmonate signalling. **Nature**, 448, 666- 671

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

Invited Talks: More than 10 national conferences and more than 25 international conferences in 13 countries, including GORDON, KEYSTONE, etc, and invited conferences in the most prestigious international institutes such as Max-Planck, John-Innes, Leibniz, U. of Kyoto, U. of North Carolina, etc. Many of them are “Keynote Lectures”

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

1. 2020-2023: Ancestral Role of Jasmonates in Thermotolerance (JANCESTRAL). FUNDING AGENCY: MINECO. PI: ROBERTO SOLANO
2. 2017-2019: EVOFUN-JA (Evolución Evolucion y conservacion funcional de la ruta de señalizacion de JA en plantas. FUNDING AGENCY: MINECO (BIO2016-77216-R). PI: ROBERTO SOLANO
3. 2016: Obtención de plantas de tomate resistentes a *Pseudomonas syringae* por modificación de la dinámica estomática durante el proceso infeccioso. FUNDING AGENCY: FUAM (Fondo para la Ciencia y la Innovación) (Ref: 2015007). PI: Roberto Solano
4. 2014-2016: Receptor promiscuity in hormonal crosstalk and its biotechnological potential towards a sustainable agriculture. FUNDING AGENCY: MINECO (BIO2013-44407-R). PI: ROBERTO SOLANO
5. 2011-2013: MOREJAZFUN (Novel Mechanisms of Regulation and Specificity of JAZ function in Jasmonate signalling). FUNDING AGENCY: MICINN (BIO2010-21739). PI: ROBERTO SOLANO
6. 2009-2012: BALANCE (Activities of small metabolites in balancing plant responses to environmental stress and growth). FUNDING AGENCY: MICINN (KBBE; ERANET; EUI2008-03666). PI: ROBERTO SOLANO
7. 2007-2012: TRANSPLANTA (Function and Biotechnological potencial of transcription factors in plants). FUNDING AGENCY: MCYT (CONSOLIDER). PI (subproyect): ROBERTO SOLANO TAVIRA. Coordinator: JAVIER PAZ-ARES
8. 2007-2010: Identificación de nuevos componentes de la ruta de señalización de jasmónico en arabidopsis y caracterización funcional de jasmonate-insensitive 3, un represor de la ruta y probable diana de scfcoi1. FUNDING AGENCY: MCYT (BIO2007-66935). PI: R SOLANO

C.4. Contracts, technological or transfer merits, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

Patents

1. Patente: P202130016 (ES1641.1602) EXTRACT FROM A PLANT OF MARCHANTIA POLYMORPHA SUBSP. AND THEIR USES. Roberto Solano, Guillermo Jimenez-Alemán, Pablo Gastaminza, Urtzi Garaigorta
2. European priority Patent N° EP16382513, with international extension PCT/EP17/078493 filed on 07/11/2017 by CSIC. "NUCLEOTIDE SEQUENCE FOR IMPROVING RESISTANCE



AGAINST PLANT PATHOGENS”, licenced to PLANT BIOSCIENCE LIMITED. (Date of Licence 25/02/2018) Inventore: Roberto Solano, Selena Giménez Ibáñez, Andrés Ortigosa Urbieta, Marta Boter Gil, Andrea Chini y Gloria García Casado.

3. European priority Patent N° EP15382672, filed on 29/12/2015 by CSIC. ”NUCLEOTIDE SEQUENCE FOR IMPROVING RESISTANCE AGAINST PATHOGENS”, Inventors: Roberto Solano, Selena Gimenez-Ibañez; Andrea Chini; Marta Boter Gil; Gloria García.

4. International extension of European Patent PCT/EP2014/069796 (worldwide extension). Novel Compounds. USA. 17/09/2014. CSIC. Inventors: Roberto Solano, Andrea Chini; Isabel Monte; Mats Hamberg.

5. European priority Patent EP 13382362.5 filed on 18/09/2013 by CSIC and Lipidox LSD (Sweden). Novel compounds antagonizing JA-Ile perception. Inventors: Roberto Solano, Isabel Monte, Andrea Chini & Mats Hamberg. [Licensed to a British Biotech company (Plant Bioscience Limited, UK)].

6. Joseph R. Ecker & Roberto Solano. Title: Transcriptional activation in the ethylene gas signaling pathway mediated by ETHYLENE-INSENSITIVE3 and ETHYLENE-RESPONSEFACTOR1. 60/109973. Country of priority: USA. Date of priority: 25/11/1998. Owner: University of Pennsylvania. Countries to which it has been extended: All

Other merits

- 2016 to present: elected EMBO member
- 2014 to 2021: 8 years “Highly cited researcher” (Thomson-Reuters/Clarivate Analytics)
- 2019: Sexenio Tecnológico concedido

Institutional responsibilities

- 2019 to present: Head of Department of Plant Molecular Genetics, National Centre for Biotechnology (CNB-CSIC), Madrid, Spain.
- 2021: Member of the Experts Board (review panel) of the Biotechnology National program from AEI (Spanish Agency for Research), Spain
- 2017: Member of the Experts Board (review panel) of the Biotechnology program from the “Ministerio de Economía y Competitividad”, Spain
- 1999-present: Proposals Reviewer for the Spanish National Agency of Scientific Evaluation (ANEP).
- 2004: Member of the Experts Board (review panel) of the Biotechnology program from the Ministry of Education and Science, Spain.
- 2003: Member of the Reviewer commission of the Spanish National Agency of Scientific Evaluation (ANEP).
- 2002-present: International proposals Reviewer from US-Israel Binational Science Foundation and NSF. Ad hoc proposals reviewer for the Dutch FWO and UK BBRSC



CURRICULUM VITAE ABREVIADO (CVA)

Part A. PERSONAL INFORMATION

First name	Andrea		
Family name	Chini		
Gender (*)	male	Birth date	27/05/1974
NIE, ID number	X9152414R		
e-mail	achini@cnb.csic.es	URL Web	publons.com/researcher/1584408/andrea-chini/
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-5841-0254		

A.1. Current position

Position	Científico Titular		
Initial date	01/04/2017		
Institution	Centro Nacional de Biotecnología (CNB/CSIC)		
Department/Center	Plant Molecular Genetics		
Country	Spain	Teleph.	915855430
Key words	Phytohormones, Signalling pathway, plant molecular biology, jasmonates, oxylipins, stress responses, bryophytes, Marchantia, COI1		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2011-2016	Ramon y Cajal fellow (CNB-CSIC)
2010	Human Frontier fellow (University of California - Riverside)
2008-2010	Juan de la Cierva fellow (CNB-CSIC)
2006-2007	EMBO Fellow (CNB-CSIC)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Plant Science	University of Edinburgh (UK/Reino Unido)	2005
Degree in Biological Sciences	Universita di Pavia (Italia)	1998

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

My main research interest is to understand plant adaptation to the changing environment at a molecular level. It is astonishing how plants use only few signalling molecules to integrate so many endogenous and exogenous inputs to promote the best adaptive responses. Phytohormones play a crucial role in this complex signalling network.

My research focuses on the jasmonates signalling pathway at a molecular level. It was long assumed that the only bioactive jasmonate was JA-Ile; this limited vision was partially due to the 30-year-long focus of the scientific community in investigating the vascular plant model *Arabidopsis*. Therefore, in the last few years, I also engaged in studying *Marchantia polymorpha*, a new model non-vascular plant enabling to infer features of the common ancestor of extant land plants, that evolved more than 450 million years ago. In this context, a new paradigm is emerging: a larger-than-expected blend of structurally-related bioactive jasmonates occur in nature. Therefore, in the last few years, my interest expanded to understand the jasmonate homeostasis to identify novel natural bioactive jasmonates.

- Pre-doctoral (2000-2004): study of the role of resistance gene ADR1 in SA-mediated defences to biotic (Grant, Chini et al. **MPMI** 2003) and abiotic stresses (Chini et al. **Plant Journal** 2004).

- Post-doctoral (2005-2010): identification and characterization of the JAZ repressors, key regulatory elements of the JA pathway (Chini et al., **Nature** 2007); identification of the bioactive form of the JA-Ile hormone (Fonseca, Chini et al., **Nature Chemical Biology** 2009).

- Ramón y Cajal (2011-2016) The “Chemical Genomics” screen to identify JA-Ile regulators at Natasha Raikel’s lab, University of California (Human Frontier fellowship). We identified a molecule with JA-antagonistic activity (Chini* et al., **Plant Physiology** 2021) and a cross-talk between the jasmonates and auxins receptors (Chini et al., in preparation). Complementary, we designed a specific antagonist of the JA-Ile receptor complex COI1-JAZ (Monte et al., **Nature Chemical Biology** 2014). Analyses of the role of Arabidopsis, tomato and wheat JAZ in response to biotic and abiotic stress (Chini* et al., **PlosOne** 2017; Chini* et al., **JEXB** 2018; Ebel et al., Chini*, **PlosOne** 2018: * corresponding in these papers) and an invited review (Chini et al., **Current Opinion in Plant Biology**).

- Científico titular (from 2017 to date) Identification of a novel OPR3-independent pathway for JA biosynthesis (Chini et al., **Nature Chem Biol** 2018). Faculty of 1,000 recommended this paper. We recently showed that this novel pathway is the “ancestral” JA plant biosynthetic pathway and we studied its conservation in the plant lineages (Kneeshaw et al., **Current Biology** 2020; Chini et al., submitted NPH-MS-2023-42518). In collaboration with the company AtomWise, a virtual screen was carried out to identify novel ligands of COI1-JAZ (AIMS consortium, submitted to **Nature**; Chini et al., in preparation). Finally, we contribute to the rational design of agonists of jasmonate perception COI1-JAZ (Takaoka et al., **Nature Communication** 2018; Hayashi et al., submitted MOLECULAR-PLANT-D-22-00680).

Publication overview: **37 publications cited more than 5,600 times** (Scopus, Sept:23).

During my research career, I had the opportunity to supervise and advise several students and researchers in different research career stages in labs and Universities of 4 different countries (Italy, UK, Spain and US). Therefore, I could develop and widen my training capacity in multicultural environment and very different systems. A summarized list of these training activities:

- 11) CSC PhD scholarship. January 2023: student Wenting Liang (CNB-CSIC).
- 10) project PID2019-107012RB-I00. September 2022: post-doc Julia Pastor (CNB-CSIC)
- 9) project PID2019-107012RB-I00. June 2021: post-doc Antonio de la Torre (CNB-CSIC)
- 8) JAE-intro fellowship (JAEINT21_EX_1175). Student: Irene Bragado García (CNB-CSIC)
- 7) PhD training (3-month training). Student: Felipe Valenzuela Riffo (Talca, Chile)
- 6) Woman for Science (Senior research Fellowship). Visiting profesor: Chantal Ebel (Tunisia)
- 5) Chemical Genomic training (2 week, self-funded). Post-doc: Elodie Vandelle (Italia)
- 4) CSIC i-COOP B20060 (3-month training). Researcher: Chantal Ebel (Sfax, Tunisia)
- 3) Master (Tesina de fin de curso). Master student: Isabel Monte (UAM, Madrid)
- 2) DEA (2 yeras). Student: Miguel Angel Mestres (U. Complutense, Madrid)
- 1) Master thesis (9-month intership). Maser student: Maarja Laos (Tallinn Univ., Estonia)

I act as **Editor** (from May 2016) for **Frontier in Plant Science**. In addition, I frequently evaluate manuscripts as *ad hoc* **Reviewer** for several prominent Journals in the field of Plant Science, such as: The Plant Cell, Plant Journal, Plant Physiology, eLife, Molecular Plant, New Phytologist, Scientific Reports, Journal of Experimental Botany, BMC among many others.

I regularly act as **external evaluator** for several national research Agencies such as ANEP (Spain), WFO (Belgium), MUIR (Italy), FONDECYT (Chile) and Czech Science Foundation (Czech Republic). I was invited by the AEI as evaluator in the “**Comisión de Evaluación de Proyectos I+D+i**” de la Convocatoria 2019 en la Sub-área de Agricultura y Forestal in February 2020. In Dicember 2021 I was invited to **collaborate with the AEI as “gestor” in the CCAA area** and the Agricultura y Forestal sub-area.

I contribute to the **organization of several Meeting/ Symposium**, including:

- 4) Symposium Fitohormonas, Segovia (April 2023)
- 3) Innovative Strategies in Plant Research, Miraflores (May 2019)



- 2) Severo Ocha/CNB Symposium “Challenges in Life Sciences”, Madrid (Sept 2017)
- 1) Workshop “Jovenes investigadores en el Extrabjero” at the CNB Madrid from 2012 to 2016.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

- 10) Serrano-Bueno G (AC), de los Reyes P, **Chini A**, et al., Valverde F (CA) (2021) “Regulation of floral senescence in Arabidopsis by coordinated action of CONSTANS and jasmonate signaling” **Molecular Plant** 15,1710-1724.
- 9) **Chini A (CA)**, Monte I, Fernández G, Boter M, Hicks G, Raikhel N, Solano R (2021) “A small molecule antagonizes jasmonic acid perception and auxin responses in vascular and nonvascular plants” **Plant Physiology** 187: 1399-1413.
- 8) **Chini A**, Monte I, Zamarreño AM, et al., Solano R (CA) (2018) “An ORP3-independent pathway uses 4,5-didehydro-jasmonate for jasmonate synthesis” **Nature Chemical Biology** 14,171-178.
- 7) Takaoka, Iwahashi, **Chini**, et al., Ueda (CA) (2018) A rationally designed JAZ subtype-selective agonist of jasmonate perception. **Nature Communication** 9:3654
- 6) **Chini (CA)**, Cimmino, Masi, Reveglia, Evidente (CA) (2018) The fungal phytotoxin lasiojasmonate A acts as an activator of the jasmonic acid pathway” **Journal of Exp. Botany** 69:3095-3102
- 5) Ebel, BenFeki, Hanin, Solano, **Chini (CA)** (2018) Characterization of wheat TIFY family and role of triticum durum TdTIFY11a in salt stress tolerance. **PLoS ONE** 13(7),e0200566
- 4) **Chini (CA)**, Romdhane, Hassairi, Aboul-Soud (CA) (2017) Identification of JAZ family genes in *Solanum lycopersicum* and their regulation in response to stress **PLoS One** 12(6).
- 3) **Chini**, Gimenez-Ibanez, Goossens, Solano (CA) (2016) Redundancy and specificity in jasmonate signalling. **Current Opinion in Plant Biology** 33, 147-156
- 2) Monte, Hamberg, **Chini**, Boter and Solano (CA) (2014) Rational design of a ligand-based antagonist of jasmonate perception. **Nature Chemical Biology**
- 1) **Chini A**, Fonseca S, Fernández G et al., Solano R (CA) (2007) The JAZ family of repressors is the missing link in jasmonate signalling **Nature** 448:666-671

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)

- 10) Malaga University departmental seminar, invited seminar. Malaga (May 2022).
- 9) University of Pisa internal seminar, invited seminar. Pisa, Italy (Feb 2022).
- 8) Small Molecules in Plant Research Symposium, Invited Speaker. Valencia (Dic 2019)
- 7) Shanghai Center for Plant Stress Biology, invited seminar. Shanghai, China (Nov 2019)
- 6) Zhejiang University departmental seminar, invited seminar. Hangzhou, China (Oct 2019)
- 5) Plant Biotechnology Meeting, Talca University, Invited Speaker. Talca, Chile (July 2019)
- 4) University of Edinburgh internal seminar, invited seminar. Edinburgh, UK (May 2019)
- 3) XIV Meeting of Plant Molecular Biology, Invited Speaker. Salamanca, Spain (July 2018)
- 2) Irish Plant Scientist Association Meeting, Invited Speaker. Dublin, Ireland (June 2018)
- 1) XXII SEFV annual meeting, Invited Speaker. Barcelona (Jun 2017)

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

- 10) “Exploring natural chemical diversity to regulate jasmonate defense-grow trade-off” (TED2021-129735B-I00) **PI1: A Chini**. PI2: R Solano. 01/12/2022-31/12/2024.
- 9) “Ancestral Role of Jasmonates in Thermotolerance” (PID2019-107012RB-I00). PI1: Roberto Solano; **PI2: A Chini**. (CNB). 01/06/2020-31/05/2023.

- 8) "Identification of small-molecule inhibitors of coronatine-insensitive protein 1 (COI1)" AIMS Award Project Program (**PI: A Chini**). Project ID: A19-935 - customized small molecule virtual screen using Atomwise's AI technology, and 72 compounds predicted to bind to your specific target protein. Funding Period: Jan 2021 to Jan 2022 (12 months)
- 7) "Synthetic plant ligand-receptor complex triggering JA-regulated defences" Bayer Grants 4 Targets - Focus Grant Programme; **PI A Chini**. Funding ID: 2018-01-016. Funding Period: July 2018 to July 2019 (12 months)
- 6) "Analysis of the mode-of-action of the fungal phytotoxin Lasiojasmonates" (Proyecto Intramurales CSIC); **PI A Chini**. Funding ID: 201740I018. Funding Period: Dic 2017 to Dic 2018 (12 months)
- 5) EVOFUN "Evolution and functional conservation of the JA-signalling pathway in plants" (BIO2016-77216-R). PI1: Roberto Solano; **PI2: A Chini**. (CNB). 01/01/2017 - 31/12/2019.
- 4) Promiscuidad de receptores en interacciones hormonales y evaluacion de su potencial biotecnologico (BIO2013-44407-R). PI1: Roberto Solano; **PI2: A Chini**. (CNB). 01/01/2014-31/12/2016.
- 3) Identification and molecular characterization of JAZ proteins in Tunisian durum wheat varieties. **PI1: A Chini** (CNB). PI2: Chantal Ebel (Centre de Biotechnologie de Sfax-Tunisia). 01/02/2014- 31/05/2016.
- 2) Agricultural Biotechnology for Enhancement of Tomato Tolerance under Salinity and Drought Conditions (11-BIO2119-02). PI1: Mourad Aboul-Soud. (King Saud University, Saudi Arabia) **PI2: A Chini** (CNB) 30/07/2013-30/07/2016.
- 1) Dehidrinas vegetales y tolerancia a estrés (Acción Preparatoria AP/040886/11). AECID (Programas de Cooperacion Interuniversitaria e Investigacion Cientifica). **PI1: A Chini**. PI2: M Hanin (Centre de Biotechnologie de Sfax- Tunisia).13/12/2011-12/03/13.

C.4. Contracts, technological or transfer merits, Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

- 1) European priority Patent N° EP16382513, with international extension PCT/EP17/078493 filed on 07/11/2017 by CSIC. "NUCLEOTIDE SEQUENCE FOR IMPROVING RESISTANCE AGAINST PLANT PATHOGENS", licenced to PLANT BIOSCIENCE LIMITED. (Date of Licence 25/02/2018) Inventore: Solano R, Giménez, Ortigosa A, Boter M, **Chini A**, García G.
- 2) European priority Patent N° EP15382672, filed on 29/12/2015 by CSIC. "NUCLEOTIDE SEQUENCE FOR IMPROVING RESISTANCE AGAINST PATHOGENS", Inventors: Solano R, Gimenez-Ibañez S, **Chini A**, Boter M, García G.
- 3) International extension of European Patent PCT/EP2014/069796 (worldwide extension). Novel Compounds. USA. 17/09/2014. CSIC. Inventors: Solano R, Chini A, Monte I, Hamberg.
- 4) European priority Patent EP 13382362.5 filed on 18/09/2013 by CSIC and Lipidox LSD (Sweden). Novel compounds antagonizing JA-Ile perception. Inventors: Solano, Monte, **Chini A** & Hamberg. [Licensed to a British Biotech company (Plant Bioscience Limited, UK)].