November 2026

CURRICULUM VITAE

# ANA I. CAÑO-DELGADO, PHD

ICREA RESEARCH PROFESSOR | EMBO MEMBER

CRAG DIRECTOR

## CURRENT POSITIONS

- ICREA Research Professor at CRAG
- Member of the Scientific Advisory Board, INVAIO Sciences
- Founder and CEO, PLANeT BIOTECH
- Director at Center for Research in Agricultural Genomics, CRAG, since Nov. 2026

## SCIENTIFIC AND INSTITUTIONAL LEADERSHIP

- EMBO Member
- ERC Consolidator Grant, ERC Proof of Concept and EIC Pathfinder awardee
- Guarantor PI of the three Severo Ochoa distinctions awarded to CRAG
- CRAG Programme Coordinator, Plant Development and Signal Transduction (2019–2023)
- More than 22 years contributing to CRAG through IRTA, CSIC, UAB, CRAG and ICREA

## INNOVATION LEADERSHIP

- Founder of PLANeT BIOTECH, the first CRAG spin-off
- Co-founder of INVAIO Sciences Spain, established at the Eureka UAB Campus
- Inventor of patented technologies licensed for agricultural biotechnology
- Recipient of awards in both science and entrepreneurship

## RESEARCH AND LEADERSHIP METRICS

- >80 peer-reviewed publications
- >60 Web of Science-indexed articles
- 18 PhD researchers supervised
- >€8M competitive research funding attracted as PI
- ERC → EIC → technology transfer → company creation

## SHORT BIOGRAPHY

Ana I. Caño-Delgado is an ICREA Research Professor at the Centre for Research in Agricultural Genomics (CRAG), elected member of the European Molecular Biology Organization (EMBO), entrepreneur and internationally recognised scientific leader in plant biology. Her career combines frontier research, institutional commitment and innovation to address major societal challenges, including climate resilience, food security and sustainable agriculture.

After obtaining her PhD at the John Innes Centre (UK) and completing postdoctoral training at the Salk Institute (USA) as a Human Frontier Science Program Fellow, she established her independent research programme at CRAG with the support of a Human Frontier Science Program Career Development Award. Since then, she has pioneered the study of cell-specific brassinosteroid signalling and its role in plant development and environmental adaptation, generating fundamental discoveries with translational potential for crop improvement. Her work has been recognised

through scientific awards and highly competitive European funding, including ERC and EIC grants, and has led to patents, technology transfer and biotechnology ventures.

For more than twenty-two years, Ana I. Caño-Delgado has contributed to the development of CRAG through its successive institutional frameworks: IRTA, CSIC, CRAG and, currently, ICREA. During this period, she has combined scientific excellence with programme coordination, institutional responsibilities, talent development and strategic initiatives, contributing to the international visibility, scientific excellence and innovation capacity of the centre, including its three Severo Ochoa distinctions.

Beyond her own scientific achievements, Ana I. Caño-Delgado has consistently invested in building people, programmes and institutions, creating interdisciplinary teams, mentoring future scientific leaders and strengthening connections between academia, industry and society. She founded PLANeT BIOTECH, the first CRAG spin-off, and co-founded INVAIO Sciences Spain within the Eureka innovation ecosystem of the UAB campus. Her career reflects a leadership model based on building enduring scientific, innovation and talent ecosystems that continue generating impact beyond individual projects, empowering people, fostering excellence and translating knowledge into societal benefit.

## EDUCATION AND PROFESSIONAL TRAINING

| | |
|---|---|
| 2026 | Advanced First Aid (ICREA) |
| 2014 | Executive Programme in Entrepreneurship and Start-up Management ("EcoEmprenedor XXI"), ESADE Business & Law School, Barcelona, Spain. |
| 2001 | PhD in Biology, John Innes Centre, University of East Anglia, United Kingdom (degree homologated by Universitat Autònoma de Barcelona). |
| 2001–2004 | Human Frontier Science Program (HFSP) Long-Term Postdoctoral Fellow, The Salk Institute, La Jolla, California, USA. |
| 2000–2001 | Postdoctoral Researcher, John Innes Centre, Norwich, United Kingdom. |
| 1996 | BSc (Licenciatura) in Biology, Universidad de Alcalá, Madrid, Spain. |
| 1996–1997 | ERASMUS Fellow, University of East Anglia, Norwich, United Kingdom. |
| 1995 | Undergraduate Research Fellow, Royal Botanical Garden, Universidad de Alcalá, Madrid, Spain. |

**Languages**: Fluent in English, Spanish, Catalan and Italian; working knowledge of Portuguese and French.

## INSTITUTIONAL LEADERSHIP AND INTERNATIONAL RESPONSIBILITIES

Throughout her career, Ana I. Caño-Delgado has combined scientific excellence with institutional leadership, strategic programme development, international scientific advisory roles and innovation. Her contributions span research organizations, funding agencies, scientific societies and biotechnology companies, reflecting a long-standing commitment to strengthening research institutions, supporting scientific excellence, fostering talent and promoting innovation at both national and international levels:

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| Nov. 2026-present | Director, Centre for Research in Agricultural Genomics (CRAG), Spain. |
| 2026–present | ICREA Research Professor, Centre for Research in Agricultural Genomics (CRAG), Spain. |

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| 2026–present | Member of the Scientific Advisory Board, INVAIO Sciences (Flagship Pioneering, USA). |
| 2023–present | Founder and CEO, PLANeT BIOTECH S.L., the first CRAG spin-off (Eureka UAB Campus). |
| 2022–2025 | Co-founder and Director, INVAIO Sciences Spain (Eureka UAB Campus). |
| 2022–2024 | Panel Member, European Research Council (ERC Consolidator Grant, LS9). |
| 2021–present | Member of the Scientific Advisory Board, European Federation of Biotechnology (EFB) |
| 2020–2022 | Member of the Scientific Advisory Board, INVAIO Sciences (Flagship Pioneering, Boston, USA). |
| 2019–2023 | Programme Coordinator, Plant Development and Signal Transduction Programme, CRAG. |
| 2017–2025 | Distinguished Investigator, CRAG, Spain. |
| 2015–2016 | Visiting Professor, Genetics Institute, University of Florida, Gainesville, USA. |
| 2014–2022 | Spanish representative, Multinational Arabidopsis Steering Committee (MASC). |
| 2013–2025 | Coordinator, Plant Biology Section, Catalan Society of Biology (SCB). |
| 2012–2014 | Founder, Business Development Committee, CRAG. |
| 2009–present | Member, Spanish Society of Plant Physiology (SEFV). |
| 2009 | CSIC Investigator (permanent position; currently on leave). |
| 2004–2009 | “Ramón y Cajal” Junior Group Leader, IRTA, Barcelona. |

## RESEARCH ASSESSMENT, ADVISORY AND EVALUATION ROLES

| | |
|---|---|
| 2004–present | International evaluator of research projects and programmes for ERC, ANEP (Spain), ANR (France), FWO (Belgium), BBSRC (UK), LABEX, German–Israel Foundation and VIB (Belgium). |
| 2023–2026 | Mock interviews and mentoring for ERC applicants (FECYT, Spain). |
| 2023 | Mentor for ERC Consolidator Grant applicants (FECYT and AGAUR). |
| 2019–2020 | Lecturer for research managers and institute directors on ERC proposal strategy (FEUGA–Xunta de Galicia). |
| 2016 | Evaluator, Juan de la Cierva Programme (Spanish Ministry of Science). |
| 2010 | Evaluator, Ramón y Cajal Programme (Spanish Ministry of Science). |

## ACADEMIC LEADERSHIP AND TRAINING

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|---|---|
| 2025-present | Editorial Board Member of Current Opinion in Plant Biology (COPLBI), Elsevier, England. |
| 2014–2024 | Lecturer, Career Paths in Science, Master's in Advanced Genetics, Universitat Autònoma de Barcelona. |
| 2023 | Lecturer, Master's in Biotechnology, Universidad de Córdoba. |
| 2018–2020 | Lecturer, Master's in Advanced Biotechnology, Universidad Internacional de Andalucía. |
| 2025 | Coordinator of the Overseas Internship Programme at CRAG (Taiwan) |
| 2020 | Topic Editor, Frontiers in Plant Science – Plant Science's Contribution to Fighting Viral Pandemics: COVID-19 as a Case Study (>150,000 views). |

## HONOURS, AWARDS AND INTERNATIONAL LEADERSHIP RECOGNITION

Internationally recognized for scientific excellence, innovation and entrepreneurship, Ana I. Caño-Delgado has received distinctions spanning frontier research, technology transfer, leadership, entrepreneurship and public engagement.

### SCIENTIFIC HONOURS

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| 2016 | Elected Member of the European Molecular Biology Organization (EMBO). |
| 2022 | Recipient of the International Science Award, Scandinavian Society of Plant Physiology. |
| 2018 | Faculty Member, Faculty Opinions (formerly Faculty1000), recognising internationally leading researchers in biology and medicine. |
| 2006 | Recipient of the J.M. Sala-Trepat Young Biologist National Award, Catalan Society of Biology, Spain. |

### INNOVATION AND ENTREPRENEURSHIP AWARDS

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| 2026 | Winner of the Catalonia Exponential Leaders Award (ACCIÓ, Government of Catalonia), recognising PLANeT BIOTECH as one of the most disruptive innovation companies in Catalonia. |
| 2026 | Recognised by EAE Business School as one of the Top 10 Women Entrepreneurs of the Year in Catalonia, with PLANeT BIOTECH. |
| 2023 | PLANeT BIOTECH selected as one of the two most innovative start-ups at the Universitat Autònoma de Barcelona (UAB) Campus. |
| 2023 | Finalist, Catalonia Exponential Leaders (ACCIÓ, Government of Catalonia). |
| 2014 | Third Prize, EcoEmprenedor XXI Programme for Biotechnology Entrepreneurship, organised by Barcelona Activa, CaixaBank and ESADE Business School. |
| 2014 | Finalist, Generació d'Idees Entrepreneurship Programme, Universitat Autònoma de Barcelona. |

### INTERNATIONAL LEADERSHIP RECOGNITION

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|---|---|
| 2026 | Chair and Discussion Leader, Gordon Research Conference, Switzerland. |
| 2026 | Chair and Invited Speaker, Global Sorghum Conference, Texas, USA. |
| 2026 | Organising Committee Member, 5th International Brassinosteroid Conference, Guangzhou, China. |
| 2026 | Invited Speaker, Plant Biology Lecture Series, Buenos Aires, Argentina. |

## COMPETITIVE FELLOWSHIPS AND CAREER AWARDS

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|---|---|
| 2021–2027 | Selected for the Thousand Talents of China Programme. |
| 2005–2008 | Recipient of the Human Frontier Science Program (HFSP) Career Development Award, supporting the establishment of her independent research programme at CRAG. |
| 2004–2009 | Recipient of the Ramón y Cajal Research Fellowship, Spanish Ministry of Science. |
| 2001–2004 | Recipient of the Human Frontier Science Program (HFSP) Long-Term Postdoctoral Fellowship, The Salk Institute, USA. |
| 1997–2000 | Recipient of the John Innes Foundation PhD Fellowship, John Innes Centre, University of East Anglia, United Kingdom. |

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|---|---|
| 1996–1997 | Recipient of the ERASMUS Undergraduate Fellowship, University of East Anglia, United Kingdom. |

These distinctions reflect international recognition not only of scientific excellence, but also of a leadership model that integrates frontier research, talent development, innovation and the translation of knowledge into societal impact.

## PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED JOURNALS

Ana I. Caño-Delgado has authored more than 80 scientific publications including over 60 Web of Science-indexed articles, such as Science, Nature, Nature Chemical Biology, Nature Communications, PNAS, Development, The Plant Cell, Current Biology, Plant Biotechnology Journal and Annual Review of Cell and Developmental Biology. Most publications have been led as corresponding or senior author, reflecting the sustained development of an independent research programme over more than two decades. Several publications have been co-authored with senior members of her laboratory as part of her commitment to developing the next generation of independent scientific leaders.

The selected publications illustrate the evolution of her research programme from fundamental discoveries in plant signalling to translational research addressing crop resilience, climate adaptation and agricultural biotechnology.

A selection of the 40 most representative publications from the last 15 years is presented below.

### COMPLETE PUBLICATION LIST

https://pubmed.ncbi.nlm.nih.gov/?term=Cano-Delgado+AI

(*Corresponding/senior author. Co-senior authorship is indicated where applicable.)

Rico-Medina, A., Melià-Picornell, L., Gupta, A., Lozano-Elena, F., Fàbregas, N., Alseekh, S., Fernie, A.R., Conesa, A., Caño-Delgado, A.I.* (2026). Brassinosteroid receptor BRL3 role in carbon metabolism and phloem transport in Arabidopsis thaliana. Journal of Experimental Botany (in press). IF:6.5

Mercadal, J., Ferreira-Guerra, M., Caño-Delgado, A.I., Ibañes, M. (2026). Cell-type specification at criticality underlies rhizoid patterning in the liverwort Marchantia polymorpha. Cell Reports 45(1), 116728. https://doi.org/10.1016/j.celrep.2025.116728. IF: 7.5.

López-Jiménez, A., Herrero-García, I., Caño-Delgado, A.I.* (2026). BRL3: A vascular perspective on brassinosteroid signalling and stress resilience. Philosophical Transactions of the Royal Society B: Biological Sciences. (in press). IF: 6

Herrero-García, I., Pistillo, S., Gupta, A., Lozano-Elena, F., Blasco-Escámez, D., Karampelias, M., Fàbregas, N., Strotmann, V. I., Stahl, Y., Marquès-Bueno, M. M*., Caño-Delgado, A.I.* (2025). The Arabidopsis dehydrin ERD14 chaperones the BRL3 receptor to confer drought resistance. bioRxiv. https://doi.org/10.1101/2025.01.15.633155. Preprint

Coleto-Alcudia, V., Lozano-Elena, F., Vera, G., Betegón-Putze, I., Gupta, A., Efroni, I., Caño-Delgado, A.I.* (2024). TOTEM: A web TOol for Tissue-EnrichMent analysis on gene lists. bioRxiv. https://doi.org/10.1101/2024.04.04.588116. Preprint.

Rico-Medina, A., Lozano-Elena, F., Marqués-Bueno, M., Fontanet-Manzaneque, J.B., Gupta, A*., Caño-Delgado A.I.* (2025). The brassinosteroid receptor BRL3 triggers acclimation to elevated temperature from phloem companion cells in Arabidopsis. Plant Physiology, 2025, kiaf548. IF: 8.2

Rico-Medina, A., Laibach, N., Fontanet-Manzaneque, J.B., Blasco-Escámez, D., Lozano-Elena, F., Martignago, D., Caño-Delgado A.I.*. (2025). Molecular and physiological characterization of brassinosteroid receptor BRI1 mutants in Sorghum bicolor. New Phytologist, 246, 1113–1127. IF:_10.4

Fontanet-Manzaneque, J.B., Laibach, N., Herrero-García, I., Coleto-Alcudia, V., Blasco-Escámez, D., Zhang, C., Orduña, L., Alseekh, S., Miller, S., Bjarnholt, N., Fernie, A.R., Matus, J.T., Caño-Delgado, A.I.* (2024). Untargeted mutagenesis of brassinosteroid receptor SbBRI1 confers drought tolerance by altering phenylpropanoid metabolism in Sorghum bicolor. Plant Biotechnology Journal . 22(12), 3406–3423. . https://doi.org/10.1111/pbi.14461. IF: 13.2

Yan, Y., Mellüh, J., Mecchia, M.A., Jeon, H.-W., Melkonian, K., Holzberger, C., Harzen, A., Stolze, S.C., Neuman, U., Franzen, R., Hirakawa, Y., Caño-Delgado, A.I., Nakagami, H. (2025). Conserved role of the SERK–BIR module in development and immunity across land plants. Current Biology 35(9), 2202–2211. https://doi.org/10.1016/j.cub.2025.03.072. IF:9.5

Fontanet-Manzaneque, J.B., Hernández, D.M., Giordano, A., Caño-Delgado A.I.* (2025).Sorghum as a monocot model for drought research. Frontiers in Plant Science, 16, 1665967.

Miller, S., Rønager, A., Holm R., Fontanet-Manzaneque JB., Caño-Delgado, A.I., Bjarnholt,, N.(2023), New methods for sorghum transformation in temperate climates. AoB Plants. Jun 3;15(3):plad030. doi: 10.1093/aobpla/plad030.

Mercadal J, Betegón-Putze I, Bosch N, Caño-Delgado AI, Ibañes M.BRAVO self-confined expression through WOX5 in the Arabidopsis root stem-cell niche. (2022) Development 1;149(15):dev200510. doi: 10.1242/dev.200510. IF:6.1

Benítez-Alfonso, Y., Caño-Delgado A.I.* (2023). Brassinosteroids en route. Nature Chemical Biology, 19, pages 1294–1295. Article Accesses: 880. https://doi.org/10.1038/s41589-023-01367-6.- IF: 14.8.

Lozano-Elena, F, Coleto V., Fàbregas, N and Caño-Delgado, A.I*. (2022) Analysis of metabolic dynamics during drought stress in Arabidopsis plants. Scientific data,. doi: 10.1038/s41597-022-01161-4. IF:9.

Caño-Delgado, A. I., Ponz, F., Avesani, L.,eds. (2022). Plant Science's Contribution to Fighting Viral Pandemics: COVID-19 as a Case Study. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88974-157-1.

Mecchia, M., García-Hourquet, M., Lozano-Elena, F., Planas-Riverola, A., Blasco-Escamez, D., Marquès Bueno, M., Mora-García, S., Caño-Delgado A.I.* (2021). TheBES1/BZR1-family transcription factor MpBES1 regulates cell division and differentiation in Marchantia polymorpha. Current Biology 31 (21), 4860-4869. e8. https://doi.org/10.1016/j.cub.2021.08.050. IF:10.9.

Betegón-Putze I., Mercadal J., Bosch N., Planas-Riverola A., Marquès-Bueno M., Vilarrasa-Blasi J., Frigola D., Burkart RC., Martínez C., Conesa A., Sozzani R., Stahl Y, Prat S., Ibañes M., Caño-

Delgado A.I.* (2021). Precise transcriptional control of cellular quiescence by BRAVO/WOX5 complex in Arabidopsis roots. Mol Syst Biol. 17(6): e9864. doi: 10.15252/msb.20209864. IF:11.4.

Gupta A., Rico-Medina A. and Caño-Delgado A.I.* (2020). The Physiology of Plant Responses to Drought. Science, 368(6488):266-269. doi: 10.1126/science.aaz7614. Downloads: 18.144. IF: 41.6.

Ferreira G., Marqués-Bueno B., Mora García, S., and Caño-Delgado A.I.* (2020). Delving into the evolutionary origin of steroid sensing in plants. Curr Opin Plant Biol.; 57:87-95. doi: 10.1016/j.pbi.2020.06.005. IF:7.5

Martignago D, Rico-Medina A, Blasco-Escámez D, Fontanet-Manzaneque JB, Caño-Delgado A.I.* (2020) Drought Resistance by Engineering Plant Tissue-Specific Responses. Front Plant Sci. Jan 22;10:1676. doi: 10.3389/fpls.2019.01676. Review. IF: 4.1.

Lozano-Elena F, Caño-Delgado AI.* (2019) Emerging roles of vascular brassinosteroid receptors of the BRI1-like family. Curr Opin Plant Biol. 51:105-113. doi: 10.1016/j.pbi.2019.06.006. IF:7.4

Betegón-Putze I, González A, Sevillano X, Blasco-Escámez D, Caño-Delgado AI. *(2019) MyROOT: a method and software for the semiautomatic measurement of primary root length in Arabidopsis seedlings. Plant Journal 98(6):1145-1156. doi: 10.1111/tpj.14297. IF:5.8

Planas-Riverola A, Gupta A, Betegón-Putze I, Bosch N, Ibañes M, Caño-Delgado AI.* (2019). Brassinosteroid signaling in plant development and adaptation to stress. Development. 146(5). pii: dev151894. doi: 10.1242/dev.151894. IF:5.8.

Fàbregas, N.*, Lozano-Elena, F.*, Blasco-Escámez, D., Tohge, T., Martínez-Andújar, C., Osorio, S., Bustamante, M., Riechmann, J.L., Conesa A., Pérez-Alfocea, F., Fernie, A.R., Caño-Delgado, A.I*. (2018). Overexpression of vascular receptor BRL3 confers drought resistance without penalizing growth. Nature Comms. 9, 4680. Nature Comms. 9, 4680. (doi: 10.1038/s41467-018-06861-3). IF: 12.35.

Pavelescu, I., Vilarrasa-Blasi, J., Planas-Riverola, A., González-García, M.P., Caño-Delgado, A.I.*, Ibañes, M.* (2018) A Sizer model for cell differentiation in Arabidopsis thaliana root growth. Mol. Syst. Biol. Jan 10;14(1):e7687. (doi: 10.15252/msb.20177687). IF: 10.87

Lozano-Elena, F., Planas-Riverola, A., Vilarrasa-Blasi, J., Schwab, R., Caño-Delgado, A.I* (2017) Paracrine brassinosteroid signaling at the stem cell niche controls cellular regeneration. J Cell Sci. 29;131(2). pii: jcs204065. ( doi: 10.1242/jcs.204065). IF: 4.6

Espinosa-Ruiz, A., Martínez, C., de Lucas, M., Fàbregas, N., Bosch, N., Caño-Delgado, A.I., Prat, S. (2017) TOPLESS mediates brassinosteroid control of shoot boundaries and root meristem development in Arabidopsis thaliana. Development 144, 1619-1628 (doi: 10.1242/dev.14321) IF:5.4.

Blasco-Escámez D, Lozano-Elena F, Fàbregas N, Caño-Delgado A.I.* (2017) The Primary Root of Sorghum bicolor (L. Moench) as a Model System to Study Brassinosteroid Signaling in Crops. Methods Mol Biol. 1564:181-192. (doi: 10.1007/978-1-4939-6813-8_15).

Fàbregas N, Formosa-Jordan P, Ibañes M, Caño-Delgado A.I*. (2017) Experimental and Theoretical Methods to Approach the Study of Vascular Patterning in the Plant Shoot. Methods Mol Biol. 1544:3-19. (doi: 10.1007/978-1-4939-6722-3_1).

Salazar-Henao JE1, Lehner R, Betegón-Putze I, Vilarrasa-Blasi J, Caño-Delgado AI*. BES1 regulates the localization of the brassinosteroid receptor BRL3 within the provascular tissue of the Arabidopsis primary root. (2016) J Exp Bot. Sep;67(17):4951-61. (doi: 10.1093/jxb/erw258). IF:5.8

González-García, M.P., Pavelescu, I., Canela, A., Sevillano, J., Leehy, K., Nelson, A, Shippen D., Blasco, M. and Caño-Delgado, A.I*. Telomere length gradients preserve the meristematic potential and stem cell function in the root of Arabidopsis thaliana. (2015) Cell Reports (11(6):977-89. doi: 10.1016/j.celrep.2015.04.013. 2. IF:7.8.

Fàbregas, N., Formosa-Jordan, P., Confraria, A., Caño-Delgado, A.I.* and Ibañes, M*. Auxin influx carriers control vascular development in Arabidopsis. (2015) Plos Genetics (11(4): e1005183. doi: 10.1371/journal.pgen.1005183. IF:6.8.

Vilarrasa-Blasi J., González-García M.P, Frigola D., Fàbregas. N., Alexiou K, López-Bigas N., Rivas, S., Jauneau A., Lohmann J U., Benfey P., Ibañes M. and Caño-Delgado, A.I.*(2014) Developmental Cell 'Regulation of plant stem cell quiescence by a Brassinosteroid signaling module'. 30(1):36-47. IF: 14.49

Monforte AJ, Diaz A, Caño-Delgado A, van der Knaap E. The genetic basis of fruit morphology in horticultural crops: lessons from tomato and melon. (2014) J. Exp. Bot. Aug;65(16):4625-37. doi: 10.1093/jxb/eru017. Review. IF: 5.8

Fabregas, N, Li, N, Boeren, S., Nash, T.E., Goshe, M.B., Clouse S.D., de Vries S. and Caño-Delgado, A.I*.(2013). "Specific roles for BRL3 signalosome complex in Arabidopsis root development". Plant Cell . IF: 10.9.

Caño-Delgado, A.I. *. Blázquez MA. (2013) Spatial control of plant steroid signaling. Trends Plant Sci. (5):235-6. doi: 10.1016/j.tplants.2013.01.005. Epub 2013 Feb 4. Citation: 10. IF: 12.9

Irani, N. G., Di Rubbo, S., Mylle, E., Pizon, J., Van den Begin, J., Hniliková,J., Šíša, M., Szatmári, A., Vilarrasa Blasi, J., Van Damme,D., Kohout, L., Strnad, M., Caño-Delgado, A.I., Madder, A., Friml,J., Russinova E. (2011) 'Control of brassinosteroid signalling from the plasma membrane by clathrin- and ARF GEF-dependent endocytosis'. Nature Chemical Biology. 8(6):583-9. IF: 14.690.

González-García, M. P., Vilarrasa-Blasi, J., Zhiponova, M., Divol, F., Mora-Garcia, S., Russinova, E. and Caño-Delgado, A. I. * (2011) 'Brassinosteroids control meristem size by promoting cell cycle progression in Arabidopsis roots', Development 138(5): 849-59. (COVER) IF:7.476.

Caño-Delgado, A. I. *, Lee JY, Demura T. Regulatory mechanisms for specification and patterning of plant vascular tissues. Annu Rev Cell Dev Biol. 26:605-37. doi: 10.1146/annurev-cellbio-100109-104107. Review.. IF: 18.65.

Ibañes M, Fàbregas N, Chory J, Caño-Delgado, A. I. * (2009) Brassinosteroid signaling and auxin transport are required to establish the periodic pattern of Arabidopsis shoot vascular bundles. Proc Natl Acad Sci USA. 106(32):13630-5. doi: 10.1073/pnas.0906416106. IF: 11.78

## PATENTS

Ana I. Caño-Delgado is the inventor of proprietary technologies from CRAG translating fundamental discoveries in plant signalling into innovative solutions for climate-resilient agriculture. Her inventions have supported technology transfer activities, the creation of PLANeT BIOTECH, and the development of bioactive molecules for sustainable agriculture.

P6049951EP -Inventors: Caño-Delgado, A.I., Fàbregas, N.

Title: Method for Improving Water-Use Efficiency and Drought Tolerance in Plants.

European Patent Application: P6049951EP (Priority: May 2014).

PCT/EP2022/065072 -Inventors: Caño-Delgado, A.I., Gupta, A., Lozano-Elena, F.

Title: Method for Modulating Plant Adaptation Traits.

PCT/European Patent Application: PCT/EP2022/065072 (Priority: 2022).

Technology transfer: Generated at CRAG and transferred to PLANeT BIOTECH through a technology transfer agreement.

EP25382015.3- Inventors: Caño-Delgado, A.I., Giordano, A., Morral, J., Lozano-Elena, F.

European Patent Application: (Priority: 2024).

Subject: First family of proprietary bioactive small molecules for promoting plant growth and enhancing tolerance to abiotic and biotic stress.

Technology transfer: Co-owned by CRAG and PLANeT BIOTECH.

EP24382797.9. - Inventors: Caño-Delgado, A.I., Giordano, A., Morral, J.

European Patent Application: (Priority: 2025).

Subject: Second family of proprietary bioactive small molecules for promoting plant growth and enhancing tolerance to abiotic and biotic stress.

Technology transfer: Technology proprietary of PLANeT Biotech

## COMPETITIVE RESEARCH PROJECTS

Since establishing her independent research programme, Ana I. Caño-Delgado has secured more than €8 million in competitive funding as Principal Investigator, including an ERC Consolidator Grant, an ERC Proof of Concept Grant and an EIC Pathfinder Project. She also served as Guarantor Principal Investigator for the three Severo Ochoa awards granted to CRAG.

### SELECTED PROJECTS AS PI

EIC Pathfinder Challenge Grant 2026- Title: INNOVATIVE RATIONAL PROMOTER BREEDING FOR CLIMATE RESILIENT CROPS (INPROBED). Funding agency: European Commission (European Innovation Council-Consolidator Grant). Dates: 09/2026-08/2029. Awarded with: 4.000.000 €. Project Coordinator: KeyGene (Netherlands)- Participation as: P.I.

ERC PoC Grant 2022- Title: “Products for pLant AdaptatioN to Elevated Temperatures: mitigating crop losses caused by climate change”)”. Funding agency: European Commission (European

Research Council-Consolidator Grant). Dates: 11/2023-11/2024. Awarded with: 150.000,00€. Participation as: P.I.

BIO2020-( PID2020-118218RB-I00) Ministerio de Economía y Competitividad, Spain (Programa de Excelencia). Title: Decoding Brassinosteroids signaling in single stem cells of Arabidopsis. Evolutive implications in plant development (Awarded: 200.000 Euro +indirect cost) Period: 09/2021-08/2023.

INNNVAL20/34. Anti-fibrotic treatment for SARS-CoV2 infected lungs. Financing entity: Cantabria Regional Collaborative Project. PIs: A.V. Vilar-Ramos (CSIC), M. Blasco (CNIO) and Ana I. Caño-Delgado (CRAG) Awarded 25,000 Euro. Period: 11/2020-10/2021.

H2020 INVITE: INnovations in plant Variety Testing in Europe to foster the introduction of new varieties better adapted to varying biotic and abiotic conditions and to more sustainable crop management practices. Project coordinator: INRA- CRAG PI: Ana I. Caño-Delgado. Financing entity: H2020-SFS-2018-2020. Period: 2019-2024. SEP-210492810. Funding: 639,000€ (approx. 47K Euro to A.C.-D. lab).

ERC Consolidator Grant-683163 (H2020). Title: IDRICA: “Improving plant resistant to DRought In Crops and Arabidopsis”. Funding agency: European Commission (European Research Council-Consolidator Grant). Dates: 11/2016-4/2022. Awarded with: 2.000.000,00€. Participation as: P.I.

EX2019-000902-S - SO2 «Centros de Excelencia Severo Ochoa» to CRAG – Funding agency: Ministerio de Economía y Competitividad. Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates: 01/2020 to 12/2023. Awarded with: 4.000.000,00€. Participation as: guarantor P.I

EU FRAMEWORK PROGRAM FP7. Developing an European American NGS Network (DEANN). FP7-PEOPLE-2013-IRSES (Awarded 87000 Euros to A.C-D lab) 2015-2017,

BIO2016-78955. Title: “BASES MOLECULARES DE LA SEÑALIZACION MEDIADA POR BRASSINOSTEROIDES EN LAS CELULAS MADRE DE ARABIDOPSIS”. Funding agency: Ministerio de Economía y Competitividad (Programa de Excelencia). Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates: 01/01/2017-31/12/2020. Awarded with: 220.000,00€. Participation as: P.I.

BIO2013-43873-P. Title “REGULACIÓN ESPACIOTEMPORAL DE LA RUTA DE BRASINOSTEROIDES EN LAS CÉLULAS MADRE”. Funding agency: Ministerio de Ciencia e Innovación. Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates: 01/01/2014-31/12/2016. Awarded with: 254.100,00€. Participation as: P.I.

BIO2010-16673. Title: “SEÑALIZACION DE BRASINOSTEROIDES DURANTE EL DESARROLLO VASCULAR DE ARABIDOPSIS THALIANA”. Funding agency: Ministerio de Ciencia e Innovación. Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates: 01/01/2011-31/12/2013. Awarded with: 229.900,00 €. Participation as: P.I.

BIO2008-00505. Title “SEÑALIZACIÓN POR BRASSINOSTEROIDES DURANTE EL DESARROLLO VASCULAR EN ARABIDOPSIS THALIANA”. Funding agency: MINISTERIO DE EDUCACIÓN Y CIENCIA. Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates:01/01/2009-31/12/2010. Awarded with: 145.200,00€. Participation as: P.I.

PITN-GA-2008-215118. Title: “BRAVISSIMO: BRAssinosteroid Venture Increasing StudentS’ International MObility”. Funding agency: European Commission: Marie Curie Initial Training Networks (ITN). Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates: 01/09/2008-31/08/2012. Awarded with: 1.950.000,00 €. Participation as: P.I.

SEV-2015-0533. Title: Centros de excelencia "Severo Ochoa". Funding agency: Ministerio de Economía y Competitividad. P.I.: José Luis Riechmann. Affiliation: CENTRE DE RECERCA EN AGRIGENOMICA CSIC-IRTA-UAB-UB (CRAG). Dates: 01/01/16-31/12/19. Awarded with: 4.000.000,00€. Participation as: guarantor P.I.

EU FRAMEWORK PROGRAM FP7-PEOPLE-ITN-2008-215118-“BRAssinosteroid Venture Increasing StudentS'International Mobility” European Commission 2008-2012. (150.000 Euros)

EU FRAMEWORK PROGRAM FP6-ERCG-CT-2006-038335 MOBSIV "Modelling Brassinosteroid Signalling in Vascular development" European Commission 2006-2007.

Contrato de Investigator "Ramón y Cajal"- Junior Group Leader Position: "Ramón y Cajal" 2003 MICINN, Spain 2004-2009.

Human Frontiers Science Program Career Development Award HFSP CDA-007/2004 HFSP 2005-2008, (Awarded: 180.000 US $).

## TECHNOLOGY TRANSFER CONTRACTS AND PHILANTHROPIC PROJECTS

### PROJECTS AS PI

Research Contract with INVAIO Sciences at CRAG (2024-2026): Uptake and Biodistribution analysis of Lipid Nano particles in Plants (Awarded: 600.000 €.).

AGAUR-PRODUCTE 2022. Generatitat de Catalunya (Awarded: 100.000 €). Project: EARTH 2.0 “Enable Agricultural Resilience when Temperatures are High”.

Caixa Impulse Validate 2021 ´. Project: EARTH “Enable Agricultural Resilience when Temperatures are Hight”. (Awarded: 100.000 €).

Philanthropic Project: “Fundación RENTA Corporation”, from a company that builds luxury buildings. Project: “Biotechnological Applications of kinase receptors in Agriculture” (Awarded: 268.000 €).

(2013-2015). This funding was key to set the scientific and technological bases from later ERC CoG IDRICA.

(2013-2015) Several contract Services to National Biostimulant Companies: Fertiberia (CDTI), Bioiberica, Arvensis Agro. Seed project to set a CRAG Facility. Expertise: Efficacy using Root analysis. Key revenue to maintain team members contracts when there was no public funding available due to Spanish economic crisis. Seed project for transference collaborative project with IRTA funded by the Spanish Ministry in 2016.

## INVITED SCIENTIFIC SEMINARS

Below selected representative conferences in the last 15 years.

| | | |
|---|---|---|
| nov-26 | Invited Speaker | International Brassinosteroid Hormone Conference, Guangzhou, China |
| oct-26 | Invited Speaker | Plant Biology Series, Buenos Aires, Argentina. |
| sep-26 | Invited Speaker | International Sorghum Meeting, Texas, USA. |
| may-26 | Discussion Leader | Gordon Research Conference, LesDiablerets, Switzerand |
| oct-25 | Invited Seminar | Salk Institute for Biological Studies, La Jolla, USA. |
| jul-25 | Keynote Speaker | International Society of Plant Hormones Conference, Colorado, USA |
| abr-25 | Invited Seminar | Dep. of Plant and Environmental Sciences, Univ, Copehangen, Denmark |
| jun-24 | Chair and invited speaker | ISPMB conference, Queensland, Australia. |
| may-24 | Invited seminar | FHNW, Basel, Switzerland, Host: Sebastian Wendeborn |
| may-24 | Invited seminar | KAUST, Saudi Arabia. Host: Brande Wulf. |
| dic-23 | Invited seminar | “Casa de la Ciencia CSIC”, Valencia. Host: Jose Pio Beltrán |
| oct-23 | | Regulation of New Genomic Techniques in Agriculture, SDG, Brussels, European Commission. |
| ago-23 | Organizer and Invited Speaker | IV International Brassinosteroid Conference, Ghent, Belgium. |
| | | |
| jun-23 | Speaker | (seminar by Juan Fontanet). Global Soghum Conference, Montpellier (France) |
| | | |
| abr-23 | Invited speaker | SFN23 Conference (Freising, Germany) |
| jun-22 | Organizer and Chair | EMBO workshop “Molecular Responses of Plants Facing Climate Change”. Montpellier, France. |
| sep-21 | Speaker | XXXIII Argentinian meeting of Plant Physiology, (RAFV2021), Mendoza, Argentina. (online) |
| ago-21 | Speaker | “Cono Sur” seminar series, Chile. (online) |
| jun-21 | Lecturer | IHSM La Mayora, Malaga, Spain. |
| jun-21 | Speaker | Systems Biology CPSBB meeting, Bulgaria. (online) |
| jun-21 | Speaker | "Plant Science for Climate Emergency", VIB, Ghent, Belgium. (online) |
| feb-20 | Lecturer | Univ. Helsinki, Finland. |
| ene-20 | Speaker | “Plant hormones” meeting, VISCEA, Vienna, Austria. |
| dic-19 | Lecturer | John Innes Centre, Norwich, UK. |
| sep-19 | Speaker | “R&I Days” Horizon Europe, ERC STOA event ‘Empowering scientists to dream the future–the ERC’, Brussels, Belgium. |
| nov-18 | Speaker | EMBO Workshop in Plant Evolution, Lisbon, Portugal. |
| oct-18 | Speaker | Florida Genetics Symposium, UF, Gainesville, USA. |
| ago-18 | Chair and Speaker | Brassinosteroid Conference, San Diego, USA. |

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| jul-17 | Chair | Hormone Session at the ICAR 2017, Arabidopsis Meeting, Missouri USA. |
| dic-16 | Speaker | CSHL Asia Conference, Japan. |
| oct-16 | Speaker | EMBO Members meeting, Heidelberg, Germany. |
| sep-15 | Speaker | Cancer and Genetics Institute, Univ. Florida, UF, USA. |
| may-15 | Speaker and Chair | International Brassinosteroid Conference, Wuhan, China. |
| jun-15 | Lecturer | INRAE, Montpellier, France. |
| oct-14 | Speaker | PhenoDays Conference for Plant Phenotyping, Dijon, France. |
| oct-14 | Lectures | Techniche Univ. Munchen, Munich and Univ. Regensburg, Germany. |
| dic-14 | Lecture | Max Plank Institute for Plant Breeding, Cologne, Germany. |
| jun-14 | Lecture | CPIC, Nottingham, UK. |
| abr-14 | Speaker | Genetics Symposium, Iowa State Univ., Iowa, USA. |
| abr-14 | Invited Speaker | D. Danforth Centre, St. Louis, USA. |
| jul-13 | Speaker | international Plant Vascular meeting, Helsinki, Finland. |
| may-11 | Lecture | CBGP, Madrid, Spain. |
| abr-13 | Speaker | International Brazilian Society of Plant Genetics meeting, Brasil. |
| nov-13 | Seminar | College Station, Texas University, USA |
| dic-13 | Lecturer | Univ. Autónoma de Mexico DF, Mexico. |
| jun-13 | Lecture | Univ. Heidelberg and Univ. Tubingen, Germany. |
| may-13 | Lecture | IBMCP, Valencia, Spain. |
| jun-12 | Speaker and Chair | International Brassinosteroid Conference, Barcelona, |
| dic-11 | Lecture | GMI, Vienna, Austria. |
| dic-11 | Lecture | Univ. of Edinburg, United Kingdom. |
| nov-11 | Invited Lecture | Gregor Mendel Institute, Vienna, Austria. |
| jul-11 | Speaker | International Plant Growth Biology and Modelling workshop, Spain. |
| jun-10 | Chair | Systems Biology Session, International Plant Hormone Meeting, Tarragona, Spain. |

## PHD SUPERVISION, POSTDOCTORAL MENTORING AND TALENT DEVELOPMENT

Ana I. Caño-Delgado has supervised 18 PhD researchers, including 16 completed doctoral theses and 2 currently in progress, together with more than 12 postdoctoral researchers and over 30 Bachelor's (TFG) and Master's (TFM) research projects. Five of her former PhD students received the Extraordinary Doctoral Award, reflecting the scientific excellence fostered within the laboratory.

Talent development has been a defining component of her research programme. Researchers in her laboratory have been encouraged to undertake research stays at leading international institutions, including Stanford University, the Max Planck Institute, VIB and other world-leading research centres, fostering scientific independence, international collaborations and long-term

career development. Many of the group's most influential publications have emerged from these collaborative efforts.

Former trainees have successfully established independent careers across academia and industry. Alumni now leading research groups include Josep Vilarrasa (Max Planck Institute), Aditi Gupta (National Botanical Research Institute, India), Norma Fàbregas (IQS) and Fidel Lozano-Elena (IBEC). Others, including Mar Marquès-Bueno, Damiano Martignago and Andrea Giordano, have progressed to leadership positions in the biotechnology sector.

To sustain these relationships beyond the laboratory, she established the CañoLab Alumni Network, whose members meet monthly to strengthen scientific collaborations, support career development and mentor early-career researchers. The network has become an active community connecting former and current laboratory members across academia, industry and entrepreneurship.

This long-term commitment reflects her conviction that the lasting impact of a research group is measured not only by its scientific discoveries, but also by the people it develops and the professional communities it helps to build.

## ORGANISATION OF SCIENTIFIC MEETINGS

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| oct-26 | Organization Committee Member of the “5th International Brassinosteroid Conference”, Guangzhou, China). |
| ago-23 | Organization Committee Member of the “4rd International Brassinosteroid Conference”, Ghent, Belgium (>150 attendants). |
| jun-22 | Member of the Organizing Committee at the EMBO Workshop ¨ PLANT MOLECULAR RESPONSES TO FACE CLIMATE CHANGE, Montpellier, France. |
| jul-18 | Organization Committee Member of the “3rd International Brassinosteroid Conference”, San Diego, US (>250 attendants). |
| may-15 | Organization Committee Member of the “2nd International Brassinosteroid Conference”, Wuhan, China (>200 attendants). |
| dic-13 | Organizer of the “1st Meeting Plant Scientist with Industry” at the Catalan Society of Biology, Barcelona, Spain, (80 attendants). |
| jul-12 | Organizer of the “1st International Brassinosteroid Conference¨, Barcelona, Spain (140 attendants) |

## COLLABORATIONS

Ana I. Caño-Delgado has established an extensive interdisciplinary network spanning plant biology, computational biology, structural biology, systems biology, biotechnology and crop innovation, fostering long-term collaborations across academia, research organisations and industry.

National collaborations include long-standing partnerships with Prof. Xavier Sevillano (La Salle – Universitat Ramon Llull), Prof. Baldo Oliva (Universitat Pompeu Fabra), Prof. Ana Conesa (I2SysBio-CSIC), Prof. María Blasco (CNIO) and Dr. Ana V. Villar Ramos (IBBTEC-CSIC).

Within CRAG and its partner institutions (IRTA, CSIC and UAB), she has developed multidisciplinary collaborations with José Luis Riechmann, Salomé Prat, Jordi Garcia-Mas, Maria José Aranzana, María Lois, Nicolás Bologna and many other colleagues, contributing to CRAG's scientific excellence and collaborative research environment.

She has maintained a long-standing collaboration with Prof. Marta Ibañes (Universitat de Barcelona) since 2004, integrating quantitative modelling and theoretical biology into plant developmental research.

International collaborations include leading scientists such as Alisdair Fernie (Max Planck Institute), Eugenia Russinova (VIB), Rosangela Sozzani (North Carolina State University), Idan Efroni (Hebrew University of Jerusalem), Yvonne Stahl (Heinrich Heine University Düsseldorf), Blake Meyers (Donald Danforth Plant Science Center) and Sebastián Mora-García (Fundación Instituto Leloir). She is currently part of the European Innovation Council (EIC) Pathfinder consortium INPROBED, together with KeyGene (coordinator), the Weizmann Institute of Science and Heinrich Heine University Düsseldorf.

Industrial and translational collaborations include strategic partnerships with Invaio Sciences (USA), KeyGene (The Netherlands), Casa Ametller, CTAEX, Lainco and other national and international agri-food companies, accelerating the translation of fundamental discoveries into sustainable agricultural solutions.

During her appointment at INVAIO Sciences, Ana I. Caño-Delgado became co-inventor of several international patent applications, including Natural Lipid Particle Formulations for Agricultural Applications (PCT/US2024/015064; WO2024/168193), covering nature-derived lipid nanoparticle (NLP) delivery technologies for sustainable agriculture.

## PUBLIC LEADERSHIP, SCIENCE COMMUNICATION AND INSTITUTIONAL REPRESENTATION

Ana I. Caño-Delgado is one of CRAG's most visible scientific ambassadors, regularly representing the institute before policy-makers, industry, investors and the general public. Over the last fifteen years, she has delivered more than 100 invited lectures, media interviews, policy events and outreach activities, contributing to the public understanding of plant science, climate resilience, food security and New Genomic Techniques (NGTs). Through these activities, she has strengthened CRAG's international visibility while fostering dialogue between science, society, industry and policy-makers.

### POLICY, INSTITUTIONAL AND INTERNATIONAL REPRESENTATION

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| 2026 | CRAG Agritech Industry Event. Round Table on Innovation and Sustainable Agriculture. |
| 2026 | 4YFN – Mobile World Congress, Barcelona. Invited speaker representing PLANeT BIOTECH and CRAG. |
| 2026 | World Agri-Tech South America Summit, São Paulo, Brazil. Invited speaker on climate-resilient agriculture. |
| 2026 | II Cumbre Agroalimentaria, Alimentaria, Barcelona. Invited speaker on agricultural innovation. |
| 2019 | Science Meets Parliament, European Parliament, Brussels. Invited by the European Research Council (ERC) and STOA to present genome editing technologies for drought-resilient crops. |
| 2019 | European Research and Innovation Days, Horizon Europe, Brussels. Invited presentation of the ERC-funded IDRICA project. |
| 2019 | "300 ERC" Celebration, CCCB, Barcelona. Science policy event organised by the Government of Catalonia celebrating ERC awardees. |

## NATIONAL AND INTERNATIONAL MEDIA

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|---|---|
| 2026 | Featured by CDTI Innovación (Ministry of Science, Innovation and Universities, Spain) as a national success story in science-based entrepreneurship and agricultural biotechnology. |
| 2025 | TV3 News. Feature on sorghum as an emerging crop for sustainable food systems. |
| 2024 | Corporate video for the FITA Investor Initiative, Government of Catalonia. |
| 2024 | Cadena SER, La Ventana. Interview with Carlos Francino and Pipo Serrano. |
| 2024 | Cuatro TV, Planeta Calleja. Interview with Jesús Calleja on New Genomic Techniques and climate-resilient agriculture. |
| 2024 | La Sexta, La Gran Sequía. Interview on drought, climate change and New Genomic Techniques. |
| 2020 | ProSieben (Germany), Galileo. Featured in a documentary on the Astroland Mars analogue station. |
| 2019 | Danish Television, Sunday KLIMA. Feature on climate change and agriculture. |
| 2019 | Movistar+, Cuando ya no esté. Monographic interview with Iñaki Gabilondo on the future of food. |
| 2015 | La Ciencia en Nuestra Vida. National television documentary on plant development and plant science. |

## PUBLIC ENGAGEMENT, EDUCATION AND WOMEN IN SCIENCE:

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|---|---|
| 2024 | Jury member for National Research Awards (Spain). |
| 2023 | ISGlobal/CERCA. Round Table on Women's Leadership in Science. |
| 2023 | UAB Science Week. Invited lecture on Women in Science and Entrepreneurship. |
| 2021 | Global Plant Council. International webinar on science communication. |
| 2021 | International Day of Women and Girls in Science. Outreach lecture for secondary school students. |
| 2020 | Jury Member, Mothers of Science Awards, Barcelona Institute of Science and Technology (BIST). |
| 2020 | Universitat de Vic–Universitat Central de Catalunya. Webinar for the International Year of Plant Health. |
| 2019 | Casa de la Ciencia (CSIC), Valencia. Public lecture: The Future of Food. |
| 2019 | World Plant Fascination Day, Science Fair, Seville. |
| 2018 | Congrés de les Dones del Baix Llobregat. Invited speaker on Women in Science and Technology. |
| 2015 | Spanish Society of Plant Physiology. Round Table on Women in Science. |
| 2012–2013 | Organiser of Fascination of Plants Day in Catalonia (EPSO). |
| 2011–present | Jury Member, Young Scientist Awards, Exporecerca Jove (CosmoCaixa, Barcelona). |