



CURRICULUM VITAE (CVA)

Part A. PERSONAL INFORMATION

		CV date	11/06/2026
First name	José Tomás		
Family name	Matus Picero		
Gender	Male	Birth date (dd/mm/yyyy)	21/12/1979
Social Security, Passport, ID number	DNI: 30313330C		
e-mail	tomas.matus@uv.es	URL Web	https://tomsbiolab.com/
Open Researcher and Contributor ID (ORCID) (*)	ResearcherID: G-3195-2016 ORCID: 0000-0002-9196-1813		

A.1. Current position

Position	Tenured Scientist (CSIC), Director of Systems Biotech Program		
Initial date	2026		
Institution	Institute for Integrative Systems Biology (I ² SysBio)		
Department/Center	Systems Biotechnology Program		
Country	Spain	Teleph. number	963 544 177
Key words	Genetics; omics technologies; viticulture; fruits; secondary metabolism		

A.2. Previous positions (research activity interruptions, see call)

Period	Position/Institution/Country/Interruption cause
2024-2025	Post Ramón y Cajal Researcher. University of Valencia (adscribed to I ² SysBio).
2019-2024	Ramón y Cajal Researcher Program. University of Valencia (adscribed to I ² SysBio).
2015-2019	Postdoctoral Researcher / Consorci CSIC-IRTA-UAB-UB Centre de Recerca En Agrigenomica (CRAG) / Cerdanyola del Valles, Spain
2014-2015	Scientific Consultant / Center for Research and Innovation (CII) Viña Concha y Toro
2009-2013	Postdoctoral Researcher (long-term EMBO fellow, 2010-2012) / Consorci CSIC-IRTA-UAB-UB Centre de Recerca En Agrigenomica (CRAG) / Cerdanyola del Valles, Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Agricultural Sciences	Pontificia Universidad Católica de Chile Maximum Degree. PhD Equivalence by Universidad Autónoma de Barcelona (19/07/2016)	2008
Degree in Biological Sciences	Pontificia Universidad Católica de Chile Extraordinary undergraduate award for best thesis	2003

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

I am a plant biologist with a PhD in Agricultural Sciences and expertise in integrative omics approaches to study plant development and metabolism. After a 10-year postdoctoral period at the Centre for Research in Agricultural Genomics (CRAG), including a Long-Term EMBO Fellowship (2010–2012), I was awarded a Ramón y Cajal fellowship and joined the Institute for Integrative Systems Biology (I²SysBio) as a Principal Investigator in 2019. Throughout my career, I have published 79 ISI-WoS-indexed articles, achieving an h-index of 29 and 3,478 citations (WoS). My research focuses on genome-wide analyses and the integration of multi-omics data to investigate regulatory networks controlling specialised metabolism in crop species of agricultural and pharmaceutical interest. Among my professional activities, I highlight project coordination, scientific dissemination, event organisation, and research evaluation. I currently serve as Chair of the COST GRAPEDIA Initiative (<https://grapedia.org>). I have served as Associate Editor for Frontiers in Plant Science (Research Topic: *Omics and systems approaches in grapevine fruit composition to understand responses to environmental factors and agronomical practices*) and as Guest Editor for the Biomolecules Special Issue *Gene Regulatory Networks Controlling Secondary Metabolism in Plants*. I have participated in international scientific committees, including the INTEGRAPEDIA COST Action, and in several international symposia on grapevine physiology, biotechnology, genetics, and breeding. I have also contributed to the evaluation of competitive research programmes, including Spain's National R&D Plan (2021–2023 and 2026), Juan de la Cierva fellowships (2021), the Fondazione Cassa di Risparmio di Cuneo programme (Italy, 2018), and FONDECYT (Chile,



2017). I would also like to highlight the following achievements, including the supervision of several doctoral theses:

Awards/Appointments:

1. R3-Established Researcher Certificate. Granted 20/12/23. Agencia Estatal de Investigación.
2. 'Sexenios': 2 (awarded 01/01/23). Periods: 2004-2012; 2013-2020 (Panel CNEAI: CC 05).
3. Ramon y Cajal contract (Program RyC-2017 Call; 2019-2024).
4. Postdoc fellowships: Long-term Fellowship / Marie Curie/European Molecular Biology Organization- EMBO, awarded 2010-2012 (ALTF 406-2010).
5. PhD fellowships: 4 during period of PhD in Agricultural Sciences. U. Católica de Chile (2004-2008): DIPUC-Congress, CONICYT AT-24060171, CONICYT-Congress and MECESUP.

PhD Thesis supervision:

1. Luka Van Wyk (ongoing): Deciphering Hormonal Control of Grape Berry Resistance to *Botrytis cinerea* by Integrating Cell Suspension Models and Whole-Plant Resistance via New Breeding Technologies. University of Valencia. **Started 2026 (FPI)**.
2. Jone Echeverría (ongoing): Use of cell suspension cultures to understand regulation of plant specialized metabolism in several plant species. University of Valencia. **Started 2023**.
3. Antonio Santiago Pajuelo: Developing pipelines for improving genome assemblies and their annotations and generating omics data visualization tools for plant crops biotechnological purposes. Polytechnic University of Valencia. **Started 2022**.
4. Alvaro Vidal Valenzuela (co-supervision): Use of systems biology and New Breeding Technology (NBT) approaches to develop biotic and abiotic stress-resistant grapevine plants. University of Trento. (Funding: C3A Program from Fondazione Edmund Mach and Center for Agriculture, Food and Environment). **Defended 2025**.
5. Luis Orduña: Genome-wide identification of the grape R2R3-MYB cistrome for discovering novel regulators of secondary metabolism in grape. University of Valencia. **(FPI). Defended 2024, Cum Laude**.
6. Raquel Alvarez (co-supervision): Proteome/peptidome and transcriptome interactions during the early flower developmental program in *Arabidopsis thaliana*. Autonomous University of Barcelona. **(FPI). Defended 2023, Cum Laude**.
7. Chen Zhang: Topology and evolution of gene regulatory networks controlling terpene synthesis in fleshy fruits. University of Valencia. **(Funded: China Scholarship Council). Defended 2023, Cum Laude**.

Master's Thesis supervision: last 10:

1. Iñigo de Martín Aguirre. **Master in Bioinformatics UOC**. Reensamblaje y anotación del megagenoma del pino chileno *Araucaria araucana*. Defended January 2025.
2. Julián García del Pozo. **Master in Molecular and Cellular Plant Biotechnology UPV**. Caracterización de receptores PYL involucrados en la ruta de señalización del Ácido Abscísico (ABA) en *Cannabis sativa*. Defended December 2024.
3. Vanessa Silvestre Duarte. **Master in Plant Biotechnology and Functional Biology UniPorto**. Understanding early and late ABA Responses in Grapevine and Characterizing the ABA-induced MYB30A Transcription Factor. Defended December 2024.
4. Chaimae Bakkali. **Master Universitario en Investigación y Desarrollo en Biotecnología y Biomedicina UV**. Estudios de criopreservación y crecimiento de cultivos celulares vegetales para la producción biotecnológica de metabolitos de interés. Defended September 2024.
5. David Martín de los Reyes. **Master in Marine Biotechnology UCV**. Improvement in the specialised metabolism of *Chlorella vulgaris* via hormone treatments. Defended July 2024.
6. Paula Catalá Román. **Master in Bioinformatics UV**. Desarrollo de una plataforma web de análisis y visualización de datos ómicos para tomate (*Solanum lycopersicum* L.). Defended September 2023
7. Arnau Peris. **Master in Bioinformatics Uni Bologna**. Transcriptomic profiling to study the role of MYBA1 and MYB24 in the *Vitis vinifera* variegation. Defended 01/03/2022.
8. Jone Echeverría. **Máster Universitario En I+D En Biotecnología Y Biomedicina UV**. Caracterización fisiológica de suspensiones celulares de *Artemisia annua* y estudios de elicitación hormonal para la producción de artemisinina. Defended September 2021
9. Alberto Pérez Tejeda. **Master in Bioinformatics UV**. Title. Defended month year.
10. Antonio Santiago. **Master in Bioinformatics UV in Bioinformatics**. *De Novo* Transcriptome Assembly Of Mulberry (*Morus Alba*) For The Identification Of Its Complete Stilbenoid Biosynthesis Pathway. Defended September 2021



Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications/book chapters. 10 most relevant (*corresponding author, CA; 2023 JCR IF)

1. Zenoni S, ***Matus JT** (2026). Dissecting gene regulatory networks driving grape berry ripening using comparative systems biology across non-climacteric fleshy fruits: the NAC-centered hierarchy revisited, *Horticulture Research*, <https://doi.org/10.1093/hr/uhag176>
2. Santiago A, Pizzio GA, ..., Bru-Martínez R, ***Matus JT**. (2026). Integrated multi-omics analyses reveal that p-coumaroyl-CoA 2'-hydroxylases act upstream of stilbene synthases to mediate oxyresveratrol biosynthesis in mulberry (*Morus alba*). *Plant Commun.* 101751. doi: 10.1016/j.xplc.2026.101751
3. Álvarez-Urdiola R, Matus JT, González-Miguel V., Bernardo-Faura M., Riechmann J.L. (2025). Chronology of transcriptome and proteome expression during early *Arabidopsis* flower development, *Journal of Experimental Botany*, eraf005.
4. Foresti C, Orduña L, **Matus JT**, Vandelle E, Danzi, D., Bellon, O., Torielli, G.B., *Amato, A., Zenoni, S. (2024). NAC61 regulates late- and post-ripening osmotic, oxidative, and biotic stress responses in grapevine. *J Exp Bot.*, erad507. doi: 10.1093/jxb/erad507. IF: 6.9
5. Orduña, L., Santiago, A., Navarro-Payá, D., Zhang, C., *Wong, D.C.J., ***Matus, J.T.** (2023). Aggregated gene co-expression networks predict transcription factor regulatory landscapes in grapevine. *J Exp Bot.*, 74(21): 6522–6540. doi: 10.1093/jxb/erad344. IF: 6.9
6. Zhang, C., Dai, Z., Ferrier, T., ...*Barrieu, F., ***Matus, J.T.** (2023). MYB24 orchestrates terpene and flavonol metabolism as light responses to anthocyanin depletion in variegated grape berries. *Plant Cell*, 35(12): 4238–4265. doi:10.1093/plcell/koad228. IF: 12.085
7. Shi, X., Cao, S., Wang, X., ..., **Matus, J.T.**, ..., *Rustenholz, C., *Cheng, Z., *Xiao, H., *Zhou, Y. (23/31) (2023). The complete reference genome for grapevine (*Vitis vinifera* L.) genetics and breeding. *Hortic. Res.*, 10(5): uhad061. doi: 10.1093/hr/uhad061. IF: 8.7
8. D'Inca, E., Foresti, C., Orduña, L., ..., ***Matus, J.T.**, *Torielli, G. B., *Zenoni, S. (13/15) (2023). The transcription factor VviNAC60 regulates senescence- and ripening-related processes in grapevine. *Plant Physiol.*, 192(3): 1928–1946. doi: 10.1093/plphys/kiad050. IF: 7.4
9. Savoi, S., Santiago, A., Orduña, L., ***Matus, J.T.** (2022). Transcriptomic and metabolomic integration as a resource in grapevine to study fruit metabolite quality traits. *Front. Plant Sci.* 13: 937927. doi: 10.3389/fpls.2022.937927. IF: 6.627
10. Orduña, L., Li, M., Navarro-Payá, D., ..., ***Matus, J.T.** (2022). Direct regulation of shikimate, early phenylpropanoid and stilbenoid pathways by Subgroup 2 R2R3-MYBs in grapevine. *Plant J.* 110: 529–547. doi: 10.1111/tpj.15686. IF: 7.091

C.2. Conferences/Congresses (*corresponding author)

1. ***Matus, J.T.** Herramientas biotecnológicas para la biofortificación de alimentos y la producción via cultivos celulares de compuestos beneficiosos para la salud. *IV WORKSHOP de jóvenes investigadores en ciencias agronómicas*. Termas de Chillán, Chile. **Oral. 2023 (keynote speaker)**
2. ***Matus, J.T.** Integrating genetics, omics, and literature-based data for grapevine improvement: GRAPEDIA. *10th International Table Grape Symposium (ITGS)*. Stellenbosch, South Africa. **Oral. 2023 (keynote speaker)**
3. ***Matus, J.T.** What can we learn from expression data to understand grape biology? Gene networks and visualization tools for exploring co-expression. *II International Congress on Grapevine and Wine Sciences (2ICGWS)*. Logroño, Spain. **Oral. 2023 (keynote speaker)**
4. ***Matus, J.T.** Gene functional characterization assisted by genome-wide TF-binding site interrogation. *XIII International Symposium on Grapevine Breeding and Genetics*. Landau, Germany. **Oral. 2022**
5. Navarro-Payá, Orduña, Zhang, Santiago, Li, Huang, ***Matus, J.T.** Genome-wide exploration of transcription factor targets involved in grape specialized metabolism and visualization through DAPBrowse: a centralized genome-browser for DAP-seq data. *XI International*



Symposium on Grapevine Physiology and Biotechnology. Stellenbosch, South Africa. **Oral. 2021.**

6. Pilati, Navarro-Payá, Malacarne, Tomé, Riscica, Cavecchia, **Matus, J.T.**, Moser, Blanzieri. Vitis OneGenE: a causality-based method for gene network analysis in grapevine. Characterization of the laccase and dirigent protein gene families. *XI International Symposium on Grapevine Physiology and Biotechnology*. Stellenbosch, South Africa. **Oral. 2021.**
7. Orduña, Zhang, Cantu, Huang, ***Matus, J.T.**: DAP-Seq used to unveil MYB cistrome landscapes specifically associated to the regulation of secondary metabolism in grape. *XV Meeting of Plant Molecular Biology*. Online. **Oral. 2020.**

C.3. Research projects with leading or co-leading roles

1. **Project.** Design of biofortified silk as a nutraceutical bioactive coating for seed and food protection (NutraSHIELD). Funding Agency: *Interreg NEXT MED*. (EU-funded program) Duration: 01/07/2025 - 31/06/2028. Total amount: **2,402,878.27€**. Role: **Coordinator** (LP).
2. **Project.** Genomic Insights into Three Locally Adapted Diatoms from the Albufera Coasta Lagoon. D'ajuts per a la Recerca en Biogenoma (Genoma de la Diversitat). Iniciativa catalana per a l'Earth Biogenome Project (CBP). Funding Agency: *Institut d'Estudis Catalans (IEC)*. Duration: 01/01/2025 - 31/12/2025. Total amount: **60,379€**. Role: **PI**.
3. **Project.** Development and implementation of standardised processes (pipelines) for genome assembly and annotation. D'ajuts per a la Recerca en Biogenoma (Genoma de la Diversitat). Iniciativa catalana per a l'Earth Biogenome Project (CBP). Funding Agency: *Institut d'Estudis Catalans (IEC)*. Duration: 01/09/2022 - 31/10/2024. Total amount: **12,460€**. Role: **PI**.
4. **Project.** The Grapevine Genomics Encyclopedia: an innovative portal to integrate knowledge, resources and services for the grape scientific community and industry (GRAPEDIA). COST Innovators Grant. Innovation and Applied Research. Funding Agency: *European Cooperation in Science and Technology Organization (COST)*. Duration: 01/11/2022 - 01/11/2023. Total amount: **125,000€**. Role: **Chair**.
5. **Project.** VALINET. Validation and visualization of gene regulatory networks of plant specialized metabolism using integrative omics methods. PID2021-128865NB-I00 *Ministerio de Ciencia e Innovación*. Funded Center: UV- I²SysBio. Duration: 01/09/2022 - 01/09/2025. Total amount: **229,900€**. Role: **PI**.
6. **Project.** Good Vibes: how do plants recognise and respond to pollinator vibroacoustic signals? *Human Frontiers Science Program. Research (HFSP)*. IPs: Barbero, Francesca; Matus, José Tomás, Oberst, Sebastian. Duration: 01/09/2022 - 01/09/2025. Total amount: **1,140,000 USD**. Role: **Co-PI**.
7. **Project.** NETFRUIT: Systems biology approaches to understand the role of MYB transcription factors in the regulatory networks of secondary metabolism. *Ministerio de Ciencia e Innovación*. Funded Center: UV-I²SysBio. Duration: 01/01/2019- 31/12/2021. Total amount: **127.050€**. Role: **PI**.

C.4. Contracts, technological or transfer merits

1. **Technological Support Contract (CSIC-CIJA)**. Conservation and maintenance of genetic lines of *Cannabis sativa*. CIJA PRESERVATION S.L. (contract with I²SysBio through CSIC). Duration: 07/09/2021-07/09/2022. 33.600€. Role: **PI**.
2. **Technological Support Contract (CSIC-Cannaflos)**. Part 2 of: Conservation and maintenance of genetic lines of *Cannabis sativa*. Cannaflos GmbH. (contract with I²SysBio through CSIC). Duration: 14/11/2022-14/01/2024. 28.307€ + 40.614€ (Adendum). Role: **PI**.
3. **Technological Support Contract (CSIC-Cannaflos Genetics SL)**. Conservation and maintenance of genetic lines of *Cannabis sativa*. (Contract with I²SysBio through CSIC). Duration: 01/03/2024-01/03/2025. 86,143€. Role: **PI**.
4. **Patent**. Reference PT2022/0031. Método de obtención de estilbenos por cultivos celulares de una planta del género *Morus*. Inventors: ***Matus, J.T.**, *Bru R, Martínez MJ, Martínez A, Samper A, Montesinos J. Registered: 20th December 2022. State: rectified documents ('subsanación').