

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	FRANCISCO JAVIER		
Family name	CEJUDO FERNÁNDEZ		
Gender (*)	MALE	Birth date	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-3936-5491		

(*) Mandatory

A.1. Current position

Position	Full Professor of Biochemistry and Molecular Biology		
Initial date	08/10/2007		
Institution	University of Sevilla		
Department/Center	Instituto de Bioquímica Vegetal y Fotosíntesis		
Country	Spain	Teleph. number	
Key words	Oxidative stress, chloroplast, photosynthesis, peroxiredoxin, plant, redox regulation, thioredoxin		

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

Period	Position/Institution/Country/Interruption cause
June 1988-February 1989	Post-doctoral at Centre d'Etudes Nucleaires, Grenoble (France). CEA contract.
Years 1990 and 1991	Post-doctoral at John Innes Centre (UK) MEC (Spain) and EU fellowships

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed Biology	Sevilla, Spain	1982
PhD Biology	Sevilla, Spain	1986

(Include all the necessary rows)

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

I got the Grade in Biology with Extraordinary Award (1982) and the PhD in Biology (1986) at Sevilla University supported by an FPU fellowship from the Spanish Ministry of Science and Education (MEC). During the thesis, I performed a 3-month stay at Sussex University, UK, supported by an EMBO fellowship. My first post-doc, in which I continued the research line of nitrogen fixation in bacteria, was at the *Centre d'Etudes Nucleaires*, Grenoble, France, supported by a CEA contract. Then, I performed a new post-doc (1990-91) on plant molecular biology studying gibberellin-regulated genes from cereals in Prof. Baulcombe's group at John Innes Centre, Norwich, UK, supported by fellowships from the Spanish MEC (6 months) and EU (18 months). In 1992, I returned to Sevilla University where I became Prof. Titular (1995) and, in 2007, I got the National Habilitation to become Full Professor in Biochemistry and Molecular Biology, which is my current position.

Scientific contributions. In 1992, I was granted my first research project as PI from Plan Estatal starting an independent group that has maintained uninterrupted financial support since then. Initially, we focused on cereals, which led us to propose a model for the hormone control of storage mobilization and cell death in wheat developing and germinating seeds. Our work



on redox regulation was initiated by addressing the function of thioredoxins (Trxs) in the regulation of thiol-proteases in germinating seeds. The analysis of the family of Trxs and their reductases in plants led to the discovery of a novel type of NADPH-dependent Trx reductase, termed NTRC, which allows the use of NADPH in chloroplast redox regulation, thus challenging the established paradigm that chloroplast redox regulation relies exclusively on photo-reduced ferredoxin. Since then, our studies have focused on chloroplast redox regulation in the model plant *Arabidopsis thaliana* making important contributions. In 2017, our group reported in PNAS a model of chloroplast redox regulation uncovering the central role of 2-Cys peroxiredoxins (Prxs), which emphasizes the tight functional relationship between redox regulation and thiol-dependent hydrogen peroxide scavenging systems and suggested the participation of 2-Cys Prxs in chloroplast enzyme oxidation in the night. The delay in the rate of enzyme oxidation in the dark in mutants lacking 2-Cys Prxs demonstrated the participation of these enzymes in relaying oxidative signals in chloroplast, hence providing an explanation for the long-lasting question of the mechanism of chloroplast enzyme oxidation and initiating research on the oxidative side of chloroplast redox regulation, which is now a hot topic in the field. These achievements place our group in a leading international position in plant redox biology, which was recognized by the invitation to contribute an update review in the Plant Physiology Special Issue on Redox Regulation (2021) or as Discussion Leader at the Gordon Research Conference on Thiol-based redox regulation and signaling (2026). Our group maintains collaborations with national and international groups, which have led to joint grants and publications over the years. Our results have been published in high-profile journals including Plant Cell, Mol. Plant, PNAS and Redox Biol., among others. In summary, I have published 117 papers in SCI journals and 31 in books. I have been PI of 10 Plan Estatal research grants, 4 infrastructure grants, 6 grants from Junta de Andalucía, and several international grants. I carried out stays at international universities including Berkeley (USA), Sao Paulo (Brazil), Montevideo (Uruguay), München and Würzburg (Germany) and Paris-Sud (France). I have been invited as speaker in national and international Meetings, including Gordon Research Conferences, ESF-EMBO Meetings, Korean Biochemical Society Meeting and European Photosynthesis Meeting, among others.

Contributions to society. Though most of my research career is devoted to basic science, I have performed applied science by contracts with AIMCRA on sugar beet flowering inhibition and on plant biostimulants with ECONATUR S.L. Our lab hosts “Formación Profesional” students for practical studies and I perform frequent divulgation activities such as conferences at Casa de la Ciencia (CSIC) and Pint of Science, among others.

Supervision of young researchers. I have supervised 16 doctoral theses, 1 to be defended in 2026, doctors having now permanent positions in academy: University Prof. (5); Científico Titular (CSIC) (2); Technician (CSIC) (1); and Secondary School teaching (2), or in private companies (4).

Management. Vicedirector (2006-2010) and Director (2018-2022) of IBVF. I have performed evaluations for ANECA being member of a commission (2009-11). I was member of the ethic committee of Sevilla University (2009), of the Editorial Boards of J. Plant Physiol. (since 2009) and Plant Commun. (since 2019), and Associate Editor of Front. Plant Sci. in 2018-19. I routinely evaluate manuscripts for scientific journals and research grants for national and international agencies.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions). 10 selected articles of the 10 last years (as corresponding author)

1. Ojeda V, Pérez-Ruiz JM, González M, Nájera VA, Sahrawy M, Serrato A, Geigenberger P, **Cejudo FJ** (2017) NADPH thioredoxin reductase C and thioredoxins act concertedly in seedling development. *Plant Physiology* 174: 1436-1448

2. Pérez-Ruiz JM, Naranjo B, Ojeda V, Guinea M, **Cejudo FJ** (2017) The NTRC-dependent redox balance of 2-Cys peroxiredoxins is needed for optimal function of the photosynthetic apparatus. *Proc. Natl. Acad. Sci. USA* 114: 12069-12074
3. Ojeda V, Pérez-Ruiz JM, **Cejudo FJ** (2018) 2-Cys peroxiredoxins participate in the oxidation of chloroplast enzymes in the dark. *Molecular Plant* 11: 1377-1388
4. **Cejudo FJ**, González MC, Pérez-Ruiz JM (2021) Redox regulation of chloroplast metabolism. *Plant Physiology* 186: 9-21
5. Ojeda V, Jiménez-López J, Romero-Campero FJ, **Cejudo FJ**, Pérez-Ruiz JM (2021) A chloroplast redox relay adapts plastid metabolism to light and affects cytosolic protein quality control. *Plant Physiology* 187: 73-87
6. Gallardo-Martínez AM, Jiménez-López J, Hernández ML, Pérez-Ruiz JM, **Cejudo FJ** (2023) Plastid 2-Cys peroxiredoxins are essential for embryogenesis in Arabidopsis. *Redox Biology* 62: 102645
7. Casatejada A, Puerto-Galán L, Pérez-Ruiz JM, **Cejudo FJ** (2023) The contribution of glutathione peroxidases to chloroplast redox homeostasis in Arabidopsis. *Redox Biology* 63: 102731
8. Hernández ML, Jiménez-López J, **Cejudo FJ**, Pérez-Ruiz JM (2024) 2-Cys peroxiredoxins contribute to thylakoid lipid unsaturation by affecting FAD8 abundance in Arabidopsis chloroplasts. *Plant Physiology* 195: 1521-1535
9. Jiménez-López J, Casatejada A, Gálvez-Ramírez A, Pérez-Ruiz JM, **Cejudo FJ** (2025) Functional relationship of atypical thioredoxins with ANDPH-thioredoxin reductase C and 2-Cys peroxiredoxins in Arabidopsis chloroplasts. *Journal of Experimental Botany* 76: 5481-5498
10. Rodríguez-Marín F, Gallardo-Martínez AM, Hernández ML, González MC, **Cejudo FJ**, Pérez-Ruiz JM (2026) 2-Cys peroxiredoxins and chaperone cpHSP70 act in concert in chloroplast biogenesis in Arabidopsis seedlings. *The Plant Cell* (In press: doi:10.1093/plcell/koag096)

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

Organization of congresses and workshops

- Organizer of the Symposium “Plant Oxidant systems” in the 41 Congress of the SEBBM (Santander, 11/09/2018).
- Organizer of the Workshop “Understanding plant response to climate changes: redox-based strategies”. Environmental Research Meetings, UNIA. Baeza 20-22/09/2021
- Organizer of the Workshop “Plants under stress. Overcoming current climate challenges” Environmental Research Meetings, UNIA, Baeza 5-7/11/2024

Participation as invited speaker

- Symposium “Thiol metabolism and redox regulation of cellular functions”. Montevideo, Uruguay, 6-7/03/2015
- ESF-EMBO Meeting on Thiol-Based Redox Switches in Life Sciences. Sant Feliu de Guixols, Spain, 12-17/09/2015
- EMBO Workshop on Thiol Oxidation in Toxicity and Signaling. Sant Feliu de Guixols, Spain, 17-21/09/2017
- Keynote speaker at International Symposium and Annual Meeting of the Korean Soc. Appl. Biol. Chem. Jeju Island, South Korea, 18-20/06/2018
- Journées de la Société Française de Photosynthèse. Gif-sur-Yvette, France, 9-10/05/2019
- Workshop “Understanding plant response to climate changes: redox-based strategies”. Environmental Research Meetings, UNIA. Baeza 20-22/09/2021
- European Photosynthesis Workshop, Schloss Lautrach, Alemania, 11-14/07/2023

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

Plan Estatal

-Ref.: BIO2013-43556-P. Función de NTRC en la regulación redox de cloroplastos: relación con el sistema dependiente de ferredoxinas e implicaciones en señalización de plantas. MINECO. Subvención: 235.950 €. **IP: F.J. Cejudo**

- Ref.: BIO2017-85195-C2-1-P. Regulación redox del metabolismo fotosintético del cloroplasto. Ministerio de Economía, Industria y Competitividad. Subvención: 259.093 €. **IP: F.J. Cejudo**

- Ref.: PID2020-115156G. Desentrañando el componente oxidativo de la regulación redox del cloroplasto. AEI, Ministerio de Ciencia e Innovación. Subvención: 254.100 €. **IPs: F.J. Cejudo y J.M. Pérez**

-Ref.: PID2023-146573NB-100. Función de sistemas redox del cloroplasto en la aclimatación de plantas al estrés térmico. Posibles aplicaciones biotecnológicas. AEI, Ministerio de Investigación, Ciencia y Universidades. 250.000 €. **IPs: F.J. Cejudo y J.M. Pérez**

Infrastructure Grants

-Ref.: UNSE15-CE-3182. Adquisición de equipamiento científico básico destinado al edificio de ampliación del IBVF-CICCARTUJA. MINECO (2015). Subvención 265.030,62 €. **IP: F.J. Cejudo**

-Ref.: EQC2018-004018-P. Actualización y mejora del servicio de cromatografía y análisis químico del IBVF-CICCARTUJA. MICINN (2018). Subvención: 360.000,00 €. **IP: F.J. Cejudo**

Red excelencia

- Ref.: BIO2015-68957-REDT. Regulación redox y estrés oxidativo y nitrosativo en plantas. Red de excelencia, Ministerio de Economía y Competitividad. Subvención 40.000 €. **IP: FJ Cejudo**

International Grants

-Ref.: 400602/2013-0. Investigaç o da relev ncia biol gica de sistemas redutores de 1-Cys Peroxirredoxinas de plantas. Consejo Nacional de Desarrollo Cient fico y Tecnol gica (Brasil). **IPS.: L.E. Soares Netto, F.J. Cejudo.** Desde 1/11/2013-30/10/2016. Dotaci n: R\$ 124.905,78.

- Ref.: MSCA-2019-IF (Valle Ojeda). Discovering genome-wide thiol-dependent metabolic regulation in photosynthesis with redox chemoproteomics. UC-Berkeley (2020-22, Superv. S. Merchant) y Univ. de Sevilla (2022-23, Superv. **F.J. Cejudo**). Subvenci n: 263.732,16 €

- Ref.: EMSL Large-Scale Proposal 60307. The thiol redox proteome dynamics in *Arabidopsis thaliana* in response to light. Environmental Molecular Science Laboratory (EMSL), EE. UU. **IP: F.J. Cejudo.** Inicio: 01/10/2022; Fin: 31/12/2024

Regional Grants

- Ref.: PY20-00567. Efecto del balance redox del cloroplasto sobre la eficiencia del proceso fotosint tico en plantas Junta de Andaluc a. Consejer a de Transformaci n Econ mica, Industria, Conocimiento y Universidades Subvenci n: 108.000 €. **IP: FJ Cejudo**

-Ref.: US-1380582. Relevancia de modificaciones post-traduccionales en la optimizaci n del rendimiento fotosint tico en plantas. Junta de Andaluc a. Consejer a de Transformaci n Econ mica, Industria, Conocimiento y Universidades. Subvenci n: 80.000 €; **IP: FJ Cejudo**

C.4. Contracts, technological or transfer merits

- Contrato con la empresa de biofertilizantes Econatur S.L. en el proyecto "Alimentos con efecto neuroprotector para un envejecimiento activo de la sociedad (FOODSTROKE)". Cuant a: 34.140 €. Desde marzo de 2020 hasta 31 de diciembre de 2021.