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	Cecilia		
Family name	Gotor Martínez		
Gender (*)	Female	Birth date (dd/mm/yyyy)	10/06/1962
Social Security, Passport, ID number	27289806F		
e-mail	gotor@ibvf.csic.es	URL Web https://www.ibvf.us-csic.es/metabolismo-y-señalización-celular	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-4272-7446	

(*) Mandatory

A.1. Current position

Position	Investigadora Científica del CSIC (Promocionada a Profesora de Investigación, pero aún no nombrada)		
Initial date	July 2008		
Institution	CSIC		
Department/Center	Institute of Plant Biochemistry and Photosynthesis		
Country	Spain	Teleph. number	954489516
Key words	Arabidopsis, Autophagy, Posttranslational Modifications, Stress Responses, Sulfide Signaling		

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

Period	Position/Institution/Country/Interruption cause
2000-2008	Científica Titular CSIC
1996-2000	University Grant Holder + Associate Professor/University Sevilla
1993-1996	Reincorporation Contract /University Sevilla
1991-1992	Postdoc CSIC Grant Holder + Research Associate /Rutgers Univ (USA)
1989-1991	Postdoc CSIC Grant Holder /Univ. Nebraska (USA)
1985-1988	FPI Grant Holder/University Sevilla

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed in Chemistry	University of Sevilla	1984
Ph. D. in Chemistry	University of Sevilla	1988

(Include all the necessary rows)

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

The most important milestones in my research career have been focused on the study of the cysteine biosynthesis pathway in plants, and the subsequent result of this research has been centered on intracellular signaling by cysteine-related molecules. My research has generated very significant progress in the knowledge of the proteins involved in cysteine biosynthesis, allowing me to make important contributions to the field of intracellular signaling mediated by new molecules. We proposed a change of concept regarding cysteine and the cyanide, S-sulfocysteine and sulfide molecules, in the sense that they exert regulatory functions, acting as signaling molecules. Fundamental milestones have been: i) the discovery in plants of the mechanism of action of sulfide and in any biological system the mechanism of action of

cyanide, both are new post-translational modifications of proteins; ii) decipher the interconnections between sulfide and ABA signaling pathways involved in stomatal closure; iii) discovery of a new regulation mechanism of autophagy by sulfide for the first time in a eukaryotic organism. All this is displayed in 96 articles published in indexed journals, 68 of them in Q1 position, 16 international book chapters and 10 national ones, and an h index of 38. Regarding to the capacity to get funding, I have been researcher responsible in 11 projects from 2001 to the present, noting that I have received continuous national funding since my first application. I have participated in national and international research networks (COST Actions) and in numerous evaluation commissions, highlighting the CSIC opposition tribunals and evaluation panels of national projects in the area of Biotechnology and in panels of regional projects in the area of Agriculture. Also point out numerous collaborations with European, Chinese and American research groups.

Among my contributions to society, the creation of two patents, the development of dissemination activities (day of fascination of plants; science fairs) and publication of informative articles in Science, SEBBM magazine, encyclopedia, newspapers stand out; as well as dissemination of the research carried out by my group on social networks and institutional websites.

I have made an intense task of training of young researchers through the direction of TFGs and TFMs and Doctoral Theses (7; 2 of them Extraordinary Prizes from the University of Seville). It should be noted that in 4 national projects associated predoctoral fellowships were awarded. In addition, I have participated in teaching at the Department of Plant Biochemistry and Molecular Biology of the US, both at the undergraduate and graduate level. I carry out an important editorial activity participating in the editorial committees of journals, highlighting my role as "Associate Editor" of the "Plant Abiotic Stress" section of "Frontiers in Plant Science"; and I have also edited special issues (4). I have also evaluated numerous Spanish, Argentine, Uruguayan and Chinese research projects; and reviewed a huge number of publications in the area of Plant Biology.

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

C.1. Publications *(see instructions)*

1. Aroca, A., Jurado-Flores, A., Filipovic, M.R., **Gotor, C**.(Corresp.), Romero, L.C.(Corresp.) (2022) Detection of protein persulfidation in plants by the dimedone switch method. Vol. 676: “Biochemical Pathways and Environmental Responses in Plants: Part A”, J. Jez, ed., chapter 15, pp. 385-402, Elsevier Academic Press. 10.1016/bs.mie.2022.07.024
2. **Gotor, C.**(Corresp.), Aroca, A., Romero, L.C. (2022) Persulfidation is the mechanism underlying sulfide-signaling of autophagy. Autophagy 18: 695-697. 10.1080/15548627.2021.1936357
3. Aroca, A., Zhang, J., Xie, Y., Romero, L.C., **Gotor, C**. (Corresp.) (2021) Hydrogen sulfide signaling in plant adaptations to adverse conditions: molecular mechanisms. J. Exp. Bot. 72: 5893-5904. 10.1093/jxb/erab239
4. Aroca, A., Yruela, I., **Gotor, C.**, Bassham, D.C.(Corresp.) (2021) Persulfidation of ATG18a regulates autophagy under ER stress in Arabidopsis. Proc. Nat. Acad. Sci. USA 118: e2023604118. 10.1073/pnas.2023604118
5. Jurado-Flores, A., Romero, L.C.(Corresp.), **Gotor, C**.(Corresp.) (2021) Label-free quantitative proteomic analysis of nitrogen starvation in Arabidopsis root reveals new aspects of H_2S signaling by protein persulfidation. Antioxidants 10: 508. 10.3390/antiox10040508
6. Laureano-Marín, A.M., Aroca, A., Pérez-Pérez, M.E., Yruela, I., Jurado-Flores, A., Moreno, I., Crespo, J.L., Romero, L.C., **Gotor, C.** (Corresp.) (2020) Abscisic acid-triggered persulfidation of the cysteine protease ATG4 mediates regulation of autophagy by sulfide. Plant Cell 32: 3902-3920. 10.1105/tpc.20.00766
7. **Gotor, C**. (Corresp.), García, I., Aroca, A., Laureano-Marín, A.M., Arenas-Alfonseca, L., Jurado-Flores, A., Moreno, I., Romero, L.C. (2019) Signaling by hydrogen sulfide and cyanide through post-translational modification. J. Exp. Bot. 70: 4251-4265. 10.1093/jxb/erz225
8. Laureano-Marín, A.M., Moreno, I., Romero, L.C., **Gotor, C.** (Corresp.) (2016) Negative regulation of autophagy by sulfide in *Arabidopsis thaliana* is independent of reactive oxygen species. Plant Physiol. 171: 1378-1391. 10.1104/pp.16.00110

9. Romero, L.C., Aroca, M.A., Laureano-Marín, A.M., Moreno, I., García, I., **Gotor, C.** (Corresp.) (2014) Cysteine and cysteine-related signaling pathways in *Arabidopsis thaliana*. Mol. Plant 7: 264-276. 10.1093/mp/sst168
10. Álvarez, C., García, I., Moreno, I., Pérez-Pérez, M.E., Crespo, J.L., Romero, L.C., **Gotor, C.** (Corresp.) (2012) Cysteine-generated sulfide in the cytosol negatively regulates autophagy and modulates the transcriptional profile in *Arabidopsis*. Plant Cell 24: 4621-4634. 10.1105/tpc.112.105403

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

1. **Gotor C**, Aroca A, Jurado-Flores A, Romero LC (2022) Señalización de sulfuro de hidrógeno en plantas. XIII Reunión del Grupo Español de Investigación en Radicales Libres (GERILI). Sevilla. Invited Conference.
2. **Gotor C**, Aroca A, Romero LC (2021) Persulfidation is the mechanism underlying sulfide-signaling of autophagy. S-Bio2021-Glucosinolate. Joint Meeting for Plant and Human Sulfur Biology and Glucosinolates. Sevilla. Invited Conference.
3. **Gotor C**, Aroca A, Jurado-Flores A, Romero LC (2021) Hydrogen sulfide signaling in plant adaptations to adverse conditions through persulfidation. UNIA Environment Workshops 2021: "Understanding Plant Responses to Climate Change: Redox-Based Strategies". Baeza. Invited Conference.
4. **Gotor C**, Laureano-Marín AM, Aroca A, Jurado A, Moreno I, Romero LC (2018) Hydrogen sulfide acts as a signaling molecule regulating autophagy. 11th International Plant Sulfur Workshop. Conegliano, Italy. Invited Conference.
5. **Gotor C**, Laureano-Marín AM, Aroca A, Jurado A, Moreno I, Romero LC (2018) Hydrogen sulfide acts as a signaling molecule regulating autophagy. SEFAGIA 2018. Miraflores de la Sierra (Madrid). Oral Communication.
6. **Gotor C** (2017) Sulfide negatively regulates autophagy in *Arabidopsis.* S-Bio2017. Plant and Human Sulfur Biology Conference. Balatonfüred, Hungry. Invited Conference.
7. **Gotor C** (2014). Cysteine and cysteine-related signaling pathways in *Arabidopsis thaliana.* UNIA Environment Workshops 2014: "Oxygen and Nitrogen Reactive Species and Environment: A New Vision for 2020". Baeza. Invited Conference.

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. TED2021-131443B-I00. Valorization of the industrial by-product Sulfur in agricultural applications for the improvement of productivity and resilience of crops to environmental threats. Agencia Estatal de Investigación del Ministerio de Ciencia e Innovación. Period: from 01-12-2022 to 31-12-2024. Amount: 218.500 €. Co-PI.
2. PID2019-109785GB-I00. Mechanism of action and molecular targets in plant hydrogen sulfide signaling. Agencia Estatal de Investigación del Ministerio de Ciencia e Innovación. Period: from 01-06-2020 to 30-11-2023. Amount: 121.000 €. PI.
3. P18-RT-3154. Sulfur-rich fertilization as a tool to improve tolerance to salinity and desiccation in crops. Consejería de Economía, Conocimiento, Empresas y Universidad. Junta de Andalucía. Period: from 01-01-2020 to 31-12-2022. Amount: 116.311 €. PI.
4. MSCA-IF-GF 834120-SSHelectPhagy. Regulation of selective autophagy by sulfide through persulfidation of protein targests. Horizon 2020 Framework Programme Marie Sklodowska-Curie Individual Fellowships (H2020-MSCA-IF-2018), European Commission. Period: from 15-06-2019 to 14-06-2021. Amount: 172.932,48 €. Spanish Coordinator.
5. BIO2016-76633-P. Sulfide and cyanide cellular signaling in plants. Associated the FPI BES-2017-080436. Agencia Estatal de Investigación del Ministerio de Economía, Industria y Competitividad. Period: from 30-12-2016 to 29-12-2019. Amount: 248.050 €. PI.
6. BIO2013-44648-P. Cysteine and cysteine-related molecules in intracellular signaling in plants. Associated the FPI BES-2014-069182. Dirección General de Investigación Científica

y Técnica del Ministerio de Economía y Competitividad. Period: from 01-01-2014 to 28-2-2017. Amount: 242.000 €. PI.

7. CVI-7190. Involvement of the S-sulfocysteine metabolite in chloroplast function. Climate adaptation and immune response in plants. Proyecto de Investigación de Excelencia. Consejería de Economía, Innovación y Ciencia. Junta de Andalucía. Period: from 1-02-2013 to 1-02-2016. Amount: 59.943,75 €. PI.
8. BIO2010-15201. Functional role of cysteine and S-sulfocysteine in the signaling and control of plant responses. Associated the FPI BES-2011-046083. Dirección General de Investigación del Ministerio de Ciencia e Innovación. Period: from 01-01-2011 to 31-05-2014. Amount: 254,100 €. PI.

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

Project: The Plantbow. Collaboration Agreement. Involved entities: Plantbow Biotec, CSIC, Universidad Pablo de Olavide. Period: 2010 a 2012. Participant.

Patent: Regulatory sequences of gene expression in plant trichomes and their applications. Inventors: Gloria Gutiérrez Alcalá, Leticia Calo Sánchez, Cecilia Gotor Martínez, Luis C. Romero González. Application number: P200200563. Publication number: 2234347. Publication date: 16/Jun/2005. Priority countries: Spain. Priority date: 8/March/2002.

Patent: Plant resistant to media containing heavy metals. Inventors: José R. Domínguez Solís, Cecilia Gotor Martínez, Luis C. Romero González. Application number: P200100590. Publication number: 2176117. Publication date: 16/February/2004. International application number: PCT/ES02/00123. Priority countries: Spain and PCT countries. Priority date: 14/March/2001. Titular entities: CSIC and University Sevilla.