

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	Manuel		
Family name	Sánchez López-Berges		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
Social Security ID number			
e-mail	ge2snlpm@uco.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-5523-1725	

(*) Mandatory

A.1. Current position

Position	Associate Professor		
Initial date	28/09/2023		
Institution	University of Córdoba		
Department/Center	Genetics	Science Faculty	
Country	Spain	Teleph. number	619632773
Key words	Fungal genetics, <i>Fusarium oxysporum</i> , Pathogenicity		

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

Period	Position/Institution/Country/Interruption cause
2021-2023	Assistant Professor, University of Córdoba, Spain
2018-2021	Senior Postdoc, University of Córdoba, Spain
2016-2018	Senior Postdoc, Lise Meitner, Medical University of Innsbruck, Austria
2015	Senior Postdoc, University of Córdoba, Spain
2012-2015	Postdoc (JdC), CIB CSIC, Spain
2010-2012	Postdoc, University of Córdoba, Spain
2005-2010	PhD student (FPI program), University of Córdoba, Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Bachelor in Biochemistry	University of Granada/Spain	2004
PhD in Genetics	University of Córdoba/Spain	2010

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

Scientific contributions:

- h-index 15 and normalized impact index (IN) 3.1.
- 24 JCR articles, 11 as first author (1st) and 5 as corresponding author (CA), in prestigious international journals such as Plant Cell (3, 1st in 2), Mol Microbiol (2, 1st), Mol Plant Pathol (4, 1st and/or CA), Int J Mol Sci (1st and CA), PLoS Pathog, PLoS Genet, mBio or Nat Microbiol.
- 1257 overall citations and an annual average of 157.8 (2019-2023).
- In the last 5 years 11 JCR articles, (100% cited, 88.88% in international collaborations).
- Since 2020 9 JCR articles, (88.88% in open access).



- 5 book chapters.
- Participation in more than 30 national and international scientific meetings, in most cases with oral presentations and in some as an invited speaker.
- Participation in more than 15 national and international research projects.
- PI of 4 projects, one funded by the FWF in Austria (2016/18), 2 funded by the Junta de Andalucía (2021/22 and 2023/2025) and one funded by the MICINN in Spain (2023/26).

My research interest focuses on the molecular genetics of fungal pathogenicity. Our group has established a unique multi-host infection model based on a single isolate of *Fusarium oxysporum* able to cause disease both on plant and animal hosts. Our goal is both fundamental, trying to elucidate the molecular bases of fungal pathogenicity, and applied, using this knowledge for the development of new antifungal treatments. In this sense, my research has already shown the potential to impact human life positively by developing new strategies to control fungal infections.

I have solid skills in genetics, microbiology, biochemistry, and cellular and molecular biology, and close collaborations with Prof. Hubertus Haas (Innsbruck, Austria), Prof. Li-Jun Ma (Massachusetts, US) and Prof. Joseph Strauss (Vienna, Austria).

Contributions to society:

- 1 patent under review (University of Innsbruck).
- Collaborations with companies on the agricultural field such as Biofungitek and Fertinagro Biotech.
- Member of the organizing committee (IX Congreso Nacional de Micología).
- Organizer of the Fusarium Workshop, as well as of a concurrent session, at the 16th European Conference of Fungal Genetics (ECFG16).
- Coordinator of the UCO Bioresearch Seminars (University of Córdoba).

Contributions to training:

- 2 doctoral thesis (+2 in progress), 5 final degree projects (+1 in progress) and 2 master thesis (+1 in progress).
- Supervision of multiple Traineeships for undergraduates, including 4 Erasmus Mobility Students.
- 2 teaching innovation projects, one distinguished with the Teaching Innovation Award by the Consejo Social of the University of Córdoba
- Review Editor on the Editorial Board of Fungal Pathogenesis (specialty section of Frontiers in Cellular and Infection Microbiology and Frontiers in Fungal Biology).
- Reviewer in international journals such as Curr Genet, PLoS Genet, PLoS Pathog, Mol Plant Pathol, Fungal Genet Biol and Nucleic Acids Res.

Other contributions:

- Member of the Sociedad Española de Genética, Sociedad Española Microbiología, Genetics Society of America, Red Micelio (2005/12) and Mycology Tyrol (2016/18).
- 2 research awards, best poster at the Asilomar Fungal Genetics Conference 2007 (Genetics Society of America), and Fleming Award 2012 (Sociedad Española de Microbiología).
- 2 short-term stays of 2 months each, one predoctoral at the University Paris Sud XI (France) and one postdoctoral at the Rovira i Virgili University in Tarragona.
- 2 long-term postdoctoral stays, one of 3 years at the Centro de Investigaciones Biológicas (CSIC) in Madrid and another of 2 years at the University of Innsbruck (Austria).
- Recognition of 2 six-year research periods (last in 2018).



Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. Navarro-Velasco GY, Di Pietro A^(CA), **López-Berges MS^(CA)** (2023). Constitutive activation of TORC1 signalling attenuates virulence in the cross-kingdom fungal pathogen *Fusarium oxysporum*. *Mol Plant Pathol* (IF. 5.663). DOI: 10.1111/mpp.13292.
2. Redkar A^(CA), Sabale M, Schudoma C, **López-Berges MS** (6/11), Di Pietro A^(CA) (2022). Conserved secreted effectors contribute to endophytic growth and multihost plant compatibility in a vascular wilt fungus. *Plant Cell* (IF. 11.277). 34:3214-3232.
3. **López-Berges MS^(CA)** (1/12), Scheven MT, Hortschansky P, Brakhage AA^(CA), Haas H^(CA) (2021). The bZIP Transcription Factor HapX Is Post-Translationally Regulated to Control Iron Homeostasis in *Aspergillus fumigatus*. *Int J Mol Sci* (IF. 5.924). 22:7739. doi: 10.3390/ijms22147739.
4. Birštonas L, Dallemulle A, **López-Berges MS** (3/13), Gsaller F^(CA) (2020). Multiplex Genetic Engineering Exploiting Pyrimidine Salvage Pathway-Based Endogenous Counterselectable Markers. *mBio* (IF. 7.867). 11:e00230-20.
5. **López-Berges MS^(CA)** (2020). ZafA-mediated regulation of zinc homeostasis is required for virulence in the plant pathogen *Fusarium oxysporum*. *Mol Plant Pathol* (IF. 5.663). 21:244-249.
6. López-Díaz C, Rahjoo V, Sulyok M, Ghionna V, Martín-Vicente A, Capilla J, Di Pietro A^(CA), **López-Berges MS^(CA)** (2018). Fusaric acid contributes to virulence of *Fusarium oxysporum* on plant and mammalian hosts. *Mol Plant Pathol* (IF. 4.379). 19:440-453.
7. Masachis S, Segorbe D, Turrà, **López-Berges MS** (8/11), Di Pietro A^(CA) (2016). A fungal pathogen secretes plant alkalinizing peptides to increase infection. *Nat Microbiol* (14.174). 1:16043.
8. **López-Berges MS**, Pinar M, Abenza JF, Arst HN Jr, Peñalva MA^(CA) (2016). The *Aspergillus nidulans* syntaxin PepA^(Pep12) is regulated by two Sec1/Munc-18 proteins to mediate fusion events at early endosomes, late endosomes and vacuoles. *Mol Microbiol* (IF. 5.026). 99:199-216.
9. **López-Berges MS** (1/10), Capilla J, Turrà D, Di Pietro A^(CA) (2012). HapX-Mediated Iron Homeostasis Is Essential for Rhizosphere Competence and Virulence of the Soilborne Pathogen *Fusarium oxysporum*. *Plant Cell* (IF. 9.251). 24:3805-3822.
10. **López-Berges MS**, Rispail N, Prados-Rosales RC, Di Pietro A^(AC) (2010). A nitrogen response pathway regulates virulence functions in *Fusarium oxysporum* via the protein kinase TOR and the bZIP protein MeaB. *Plant Cell* (IF. 9.396). 22:2459-75.

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

1. Invited conference. **López-Berges MS**. Ciclo de Seminarios de Investigación 2021 BIO-UG. 26/11/2021. Guanajuato (Mexico).
2. Invited conference. **López-Berges MS**. V Jornada Académico-Científica UJED. 23/09/2021. Durango (Mexico).
3. Oral presentation. Palos-Fernández R, Di Pietro A, **López-Berges MS**. XLII Congreso de la Sociedad Española de Genética. 14-18/06/2021. Online (Spain).
4. Poster. **López-Berges MS**. 30th Fungal Genetics Conference. 12-17/03/2019. Pacific Grove (United States).
5. Invited conference. **López-Berges MS**, Haas H. XIV Congreso Nacional de Micología. 20/09/2018. Tarragona (Spain).
6. Poster. Haas H, Gsaller F, Lindner H, **López-Berges MS**. 14th European Conference on Fungal Genetics. 25-28/02/2018. Haifa (Israel).
7. Oral presentation. **López-Berges MS**, Haas H. Biocenter Seminar Series. 17/11/2017. Innsbruck (Austria).



8. Oral presentation. **López-Berges MS**, Haas H. 1st Mycology Tirol Symposium. 29/09/2017. Innsbruck (Austria).
9. Poster. **López-Berges MS**, Arst HN, Peñanlva MA. 12th European Conference on Fungal Genetics. 23-27/03/2014. Seville (Spain).
10. Invited conference. **López-Berges MS**, Segorbe D, Rispail N, Prados-Rosales R, Di Pietro A. XI Congreso Nacional de Micología. 22/09/2012. Cádiz (Spain).

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. **PID2022-140187OB-I00**. Reprogramación genética y del desarrollo en patógenos fúngicos durante su adaptación al huésped. Ministerio de Ciencia e Innovación (2022). Antonio Di Pietro and **Manuel Sánchez López-Berges**. 01/09/2023 - 31/08/2026. 332.675,00 €. **Principal Investigator**.
2. **ProyExcel_00488**. Characterization of fungal transcription factors regulating vascular wilt disease. Junta de Andalucía (2022). **Manuel Sánchez López-Berges** (University of Córdoba). 01/01/2023 - 31/12/2025. 159.410,00 €. **Principal Investigator**.
3. **PID2019-108045RB-I00**. Plasticidad celular y genética en la adaptación al huésped de los patógenos fúngicos. Ministerio de Ciencia, Innovación y Universidades (2019). Antonio Di Pietro (University of Córdoba). 01/06/2020 - 31/05/2023. 314.600,00 €. **Researcher**.
4. **P20_00179**. Mecanismos de adaptación celular y genética en el hongo patógeno *Fusarium oxysporum*: Nuevas estrategias de control. Junta de Andalucía (2020). Antonio Di Pietro (University of Córdoba). 05/10/2021 - 31/12/2022. 100.000,00 €. **Researcher**.
5. **27375-R**. Relevancia de la homeostasis de cobre y zinc en la patogénesis de *Fusarium oxysporum*. Junta de Andalucía (2018). **Manuel Sánchez López-Berges** (University of Córdoba). 01/01/2020 - 31/12/2021. 46.116,47 €. **Principal Investigator**.
6. **BIO2016-78923-R**. Mecanismos genéticos de la infección fúngica inducidos por el hospedador. Ministerio de Economía y Competitividad. Antonio Di Pietro (University of Córdoba). 01/01/2017 - 31/12/2019. 350.000 €. **Researcher**.
7. **I1346**. Novel molecular mechanisms of iron sensing and homeostasis in filamentous fungi. Austrian Science Fund (2013) / German Research Foundation (DFG). Hubertus Haas (Medical University of Innsbruck) and Axel Brakhage (Friedrich Schiller University Jena). 01/05/2014 - 30/06/2018. 311.535 €. **Researcher**.
8. **M1962 B-21**. Role of TOR in the adaptation to iron deficiency in pathogenic fungi. Austrian Science Fund (2015). **Manuel Sánchez López-Berges** (Medical University of Innsbruck). 15/01/2016 - 14/01/2018. 159.620 €. **Principal Investigator**.
9. **BIO2013-47870**. Adaptación genómica y molecular al estilo de vida patogénico en *Fusarium*. Ministerio de Economía y Competitividad (2013). Antonio Di Pietro (University of Córdoba). 01/01/2014 - 31/12/2016. 370.000 €. **Researcher**.
10. **BIO2012-30695**. Secreción, extensión apical e invasividad en el hongo filamentoso *Aspergillus nidulans*. Ministerio de Ciencia e Innovación (2012). Miguel Ángel Peñalva (CIB/CSIC). 01/01/2013 - 31/12/2015. 286.650 €. **Researcher**.

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. **Patent**: Birštonas L, Dallemulle A, **López-Berges MS** (3/13), Gsaller F. Multiplex genetic engineering exploiting pyrimidine salvage pathway based self-encoded selectable markers. Under evaluation. Medical University of Innsbruck (Austria).