CV Date	10/05/2023

Part A. PERSONAL INFORMATION

First Name	Jose Luis		
Family Name	Revuelta Doval		
Sex	Male	Date of Birth	
ID number Social Security, Passport			
URL Web			
Email Address	revuelta@usal.es		
Open Researcher and Contributor ID (ORCID)	0000-0001-7838-5308		

A.1. Current position

Job Title	Catedrático Universidad		
Starting date	2002		
Institution	Universidad de Salamanca		
Department / Centre	Microbiología y Genética / Biologia		
Country		Phone Number	923 - 294671
Keywords	Genetic engineering; Biotechnology		

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
1987 - 2002	Profesor Titular de Universidad / Universidad de Salamanca
1984 - 1987	Investigador / Scripps Research Found. La Jolla, CA, USA

A.3. Education

Degree/Master/PhD	University / Country	Year
Doctor en Ciencias Biológicas	Universidad de León	1981
Licenciado en Ciencias Biologicas	Universidad de León	1978

Part B. CV SUMMARY

Over the past 30 years I have been engaged in the organization and leadership of the Metabolic Engineering Group of the University of Salamanca. This group is devoted to the development of biotechnological processes for the production of compounds of interest in the food and feed industries. As results of our work, we have developed, in collaboration with the industry, a vitamin B2 fermentation production process that has replaced the chemical synthetic process. This process was chosen by the EU as a paradigm of the Industrial Biotechnology since it represents a great economical, energy and CO2 emissions saving process, and uses renewable instead of fossil resources. I'm authoring more than 25 international patents (WP and EP) protecting this process that have been transferred to the industry (BASF SE) for its exploitation. Currently, the Vitamin B2 fermentation process developed by our group accounts for more than 80% of the total world production. Recently, we have developed fungal strains that are the basis of processes of production of vitamin B9 and omega-3 and omega-6 fatty acids. These strains have been transferred to the industry and appropriate patents applications have been filed for its exploitation.

I have collaborated in several EU and international pioneer projects aimed to obtain fundamental knowledge of model organisms. The results of these projects have been published in high prestige journals and rank among 50 top highly cited articles in the last decade.

I have led 29 research projects funded by national public or private entities (Planes Nacionales de Investigación Científica-Técnica, BBVA, etc) or the EU (Biotech Programs) as well as 13 research contracts of economic relevance with the industry. Since 2004, I am Senior Editor of the Journal of Industrial Microbiology and Biotechnology. I am also member of several scientific societies involved in the Development of Industrial and participatein in different

functions of scientific advice (EU Biotech programs, Leenards Foundation-Switzerland, SIMB-USA-Member of the Board of Directors, etc)

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. Javier Montero-Bullon; Gloria Muñoz-Fernandez; Jose Luis Revuelta; Alberto Jimenez. 2021. New Promoters for Metabolic Engineering of Ashbya gossypii. Journal of Fungi. 7-11, pp.e906.

2 **Scientific paper**. David Diaz-Fernandez; Gloria Muñoz-Fernandez; Victoria Martin; Jose Luis Revuelta; Alberto Jimenez. 2020. Sugar transport for enhanced xylose utilization inAshbya gossypii. JOURNAL OF INDUSTRIAL MICROBIOLOGY & BIOTECHNOLOGY. 47-12, pp.1173-1179.

3 **Scientific paper**. Alberto Jimenez; Birgit Hoff; Jose Luis Revuelta. 2020. Genomic Edition of Ashbya gossypii Using One-vector CRISPR/Cas9. New Biotechnology. 57, pp.29-33.

4 **Scientific paper**. Díaz-Fernández D; Aguiar TQ; Martín VI; Romaní A; Domingues L; Revuelta JL (AC); Jiménez A. (6/7). 2019. Microbial lipids from industrial wastes using xylose-utilizing Ashbya gossypii strains. Bioresource Technology. Elsevier. 293, pp.122054.

5 **Scientific paper**. Fernández-Justel D; Peláez R; Revuelta JL; Martinez-Buey R. 2019. The Bateman domain of IMP dehydrogenase is a binding target for dinucleoside polyphosphates. Journal of Biological Chemistry. American Society for Biochemistry and Molecular Biology. 294-40, pp.14768-14775.

6 **Scientific paper**. Buzón-Durán L; Martín-Gil J; Pérez-Lebeña E; Ruano-Rosa D; Revuelta JL; Ramos-Sánchez MC; Martín-Ramos P. 2019. Antifungal Agents Based on Chitosan Oligomers, ε-polylysine and Streptomyces spp. Secondary Metabolites against Three Botryosphaeriaceae Species. Antibiotics. MDPI. 18-3, pp.99.

7 **Scientific paper**. Silva R; Aguiar TQ; Coelho E; Jiménez A; Revuelta JL; Domingues L. 2019. Metabolic engineering of Ashbya gossypii for deciphering the de novo biosynthesis of γ-lactones. Microbial Cell Factories. BioMed Central. 18-1, pp.62.

8 **Scientific paper**. Jiménez A; Muñoz-Fernández G; M Buey R; Revuelta JL (AC). (4/4). 2019. One-vector CRISPR/Cas9 genome engineering of the industrial fungus Ashbya gossypii. Microbial Biotechnology. Society for Applied Microbiology / Wiley. 12-6, pp.1293-1301.

9 **Scientific paper**. Fernández-Justel, D.; Núñez, R; Martín-Benito, J.; Jimeno, D.; González-López, A.; Soriano, EM; Revuelta, JL; MArtinez-Buey, R. 2019. A Nucleotide-Dependent Conformational Switch Controls the Polymerization of Human IMP Dehydrogenases to Modulate their Catalytic Activity. Journal of Molecular Biology.

10 **Scientific paper**. Buey RM; Fernández-Justel D; de Pereda JM; Revuelta JL; Schürmann P; Buchanan BB; Balsera M. (4/5). 2018. Ferredoxin-linked flavoenzyme defines a family of pyridine nucleotide-independent thioredoxin reductases. Proceedings of the National Academy of Sciences. pp.201812781.

11 **Scientific paper**. Ledesma-Amaro R; Jiménez A; Revuelta JL (AC). (3/3). 2018. Pathway Grafting for Polyunsaturated Fatty Acids Production in Ashbya gossypii through Golden Gate Rapid Assembly. ACS Synth Biol. 7-10, pp.2340-2347.

12 **Scientific paper**. Revuelta JL; Serrano-Amatriain C; Ledesma-Amaro R; Jiménez A. 2018. Formation of folates by microorganisms: towards the biotechnological production of this vitamin. Applied Microbiology and Biotechnology. 102-20, pp.8613-8620.

13 **Scientific paper**. Buey RM; Revuelta JL; Ledesma_Amaro R; Lozano-Martinez P; Díaz-Fernández D; Jimenez A. 2017. Bioproduction of riboflavin: a bright yellow history. Journal of industrial microbiology & biotechnology. 44-4-5, pp.659-665.

14 **Scientific paper**. Lozano-Martínez P; Buey RM; Ledesma-Amaro R; Jiménez A; Revuelta JL (AC). (5/5). 2017. Engineering Ashbya gossypii strains for de novo lipid production using industrial by?products. Microbial biotechnology. de Wiley. 10-2, pp.425-433.

15 **Book chapter**. Lyzak OO; Ledesma-Amaro R; Dmytruk KV; Sibirny AA; Revuelta JL. 2017. Molecular Studies of the Flavinogenic Fungus Ashbya gossypii and the Flavinogenic Yeast Candida famata. Biotechnology of Yeasts and Filamentous Fungi. Springer International Publishing. pp.281-296.

16 **Scientific-technical report**. Gloria Muñoz-Fernandez; Alberto Jimenez; Jose Luis Revuellta. 2020. Genomic Edition of Ashbya gossypii Using One-vector CRISPR/Cas9. Bio-Protocol. 10-12, pp.e3660.

C.3. Research projects and contracts

1 **Project**. Ingeniería Metabólica de Bioprocesos en Ashbya gossypii para la Transición Ecológica. (Universidad de Salamanca). 01/09/2021-31/08/2024. 199.650 €.

2 **Project**. Ingeniería metabólica en Ashbya gossypii para el desarrollo de bioprocesos industriales Biología Sintética y Economía Circular. BIO2017-88435-R. Ministerio de Ciencia e Innovación. Universidades. (Universidad de Salamanca). 01/01/2018-31/12/2020. 199.650 €.

3 **Project**. Desarrollo de bioprocesos para la valorización de residuos agro-industriales. SA016P17. (Universidad de Salamanca). 01/01/2017-31/12/2020. 120 €.

4 **Project**. Ingenieria Metabolica de Ashbya gossypii para la produccion de acidos grasos utilizando residuos industriales BIO2014-56930-P. (Universidad de Salamanca). 01/01/2015-31/12/2017. 170.610 €.

5 **Project**. Produccion de acidos grasos poliinsaturados en el hongo oleaginoso Ashbya gossypii.. MCINN BIO2011-23901. (Universidad de Salamanca). From 2011. 181.500 €.

6 **Project**. Descubrimiento y caracterización de los transportadores de bases, nucleósidos y núcleotidos en el hongo Ashbya gossypii por su implicación en la producción biotecnológica del compuesto nutracéutico riboflavina. SA061A06. JCyL (SA061A06). (Universidad de Salamanca). From 2009. 26.420 €.

7 **Project**. Ingeniería metabólica para la producción de ácido fólico.. MEC BIO-2008-00194. (Universidad de Salamanca). From 2009. 196.020 €.

8 **Project**. Producción microbiológica de vitamina B9.. Junta de Castilla y León - Grupo de Excelencia GR147. From 2009. 86.450 €.

9 **Project**. Disección genética de las rutas de recuperación de nucleótidos purínicos en el hongo Ashbya gossypii por su interés biotecnológico.. JCyL (SA061A06). From 2006. 17.400 €.

10 **Project**. Estudio de la actividad biológica de los pigmentos del vino tinto en un sistema modelo eucariótico.. MEC (AGL2005-07245-C03-03/ALI). From 2006. 95.200 €.

11 **Project**. Estudio de la apoptosis en células tumorales humanas y en levaduras y su aplicación al tratamiento del cáncer.. MEC (SAF2005-04293). From 2006. 190.400 €.

12 **Project**. Generación y uso de levaduras modificadas genéticamente en el tratamiento del cáncer.. Fundación la Caixa (BM05-30-0). From 2006. 137.000 €.

13 **Contract**. Novel Glycolipid producing strain using oil as carbon source in a fermentative process (Phase II) BASF SE. 01/11/2019-01/11/2022. 255.000 €.

14 **Contract**. Gene Technology in Ashbya gossypii (Phase V) BASF SE. 01/04/2019-01/04/2021. 101.100 €.

15 **Contract**. Novel Glycolipid producing strain using oil as carbon source in a fermentative process (Phase I) BASF SE. 01/11/2018-01/11/2019. 85.000 €.

16 **Contract**. Gene Technology in Ashbya gossypii (Phase IV) BASF SE. 01/04/2017-01/04/2019. 101.100 €.

17 **Contract**. Gene Technology in Ashbya gossypii (Phase III) BASF SE. 01/04/2015-01/04/2017. 101.100 €.

18 **Contract**. Gene Technology in Ashbya gossypii (Phase III) BASF SE. 01/04/2015-01/04/2017. 101.100 €.

19 **Contract**. Gene Technology in Ashbya gossypii (Phase II) BASF. 2013-01/01/2015. 205.200 €.

20 **Contract**. Gene Technology in Ashbya gossypii BASF. 2010-01/01/2013. 205.200 €.

C.4. Activities of technology / knowledge transfer and results exploitation

1 **Patent of invention**. CN20151784207. Genetic modification of Eremothecium for improving GMP synthetase activation Germany. 25/05/2016. BASF SE.
2 **Patent of invention**. CN105603035. Genetic modification of Eremothecium to increase IMP dehydrogenase activity Germany. 25/05/2016. BASF SE.
3 **Patent of invention**. CN20151784747. RIB genetic modification of Eremothecium to downregulate gene expression by using the RIB7 promoter Germany. 25/05/2016. BASF SE.
4 **Patent of invention**. CN10526218. Genetic modification of Eremothecium to increase glycolipid production Germany. 07/05/2016. BASF SE.
5 EP14107737.3. Increased Vitamin B2 production by enhancement of the activity of the enzyme guanosine monophosphate synthase GUA1 Germany. 05/08/2014. BASF.
6 EP14107738.6. Increased Vitamin B2 production by the reduction of the activity of the enzyme adenylosuccinate synthase ADE12 Germany. 05/08/2014. BASF.
7 EP14177376.3. RIB7-promoter as a tool for targeted reduction of gene expression in Ashbya gossypii Germany. 05/08/2014. BASF.
8 EP14107735.1. Vitamin B9 production by enhancement of the activity of the enzyme inosine-5'-monophosphate dehydrogenase IMD3 Germany. 05/08/2014. BASF.
9 EP13190151.4. Fatty acid production in Eremothecium Germany. 27/10/2013. BASF.
10 Novel genetic products obtained from Ashbya gossypii which are associated with transcription mechanisms, RNA processing and/or translation Germany. 13/03/2003. BASF.