

DATOS PERSONALES

Nombre y Apellidos:	Gustavo Adolfo Cordero Bueso	
Departamento:	Biomedicina, Biotecnología y Salud Pública (Microbiología)	
Email:	Gustavo.cordero@uca.es	
Dirección:	Lab. Microbiología, CASEM, Puerto Real, Cádiz	
Teléfono:	+34 600490122	
Grupo de Investigación:	BIO 219	
Núm. identificación del investigador	Researcher ID	M-1159-2014
	Código Orcid	0000-0003-1538-066X

FORMACIÓN ACADÉMICA:

Licenciatura/Grado/Doctorado	Universidad
Ldo. Biología	Universidad de Salamanca
Máster en Viticultura y Enología	EUITA (Universidad de Valladolid)
Doctor en Tecnología de los Alimentos e Ingeniería Química	Universidad Autónoma de Madrid

ACTIVIDAD INVESTIGADORA

Breve Resumen del Curriculum Investigador:

In June 2006, I obtained my degree in Biology Sciences (Hons) from the University of Salamanca. I accessed to a University Master's in viticulture, oenology and wine marketing at the University School of Agricultural Technical Engineers (section of the University of Valladolid). In August 2007, I was a PhD fellow at the Instituto Madrileño de Investigación Desarrollo Rural Agrario y Alimentario (IMIDRA) with Dr. Arroyo as supervisor. I completed my PhD courses program at the Autonomous University of Madrid based on food technology and chemical engineering obtaining an excellence scores (*Cum Laude*). My Thesis shows the results obtained from my investigations about the effect of some agronomic management practices on wine yeast diversity and population associated to the grape berry surfaces. Because of the disciplinary nature of my research I have developed a rich network of collaborations with scientists in major Universities and wine research Institutions abroad (Centro di Ricerca per l'Enologia, Asti, Italy; The University of Adelaide, Australia; the Australian Wine Research Institute, Adelaide, Australia) thank to a competitive grant from the International Organization of the Vine and Wine (O.I.V.). In July 2011, I finally completed my doctoral dissertation receiving a unanimous Summa Cum Laude from the panel. Short afterwards, I had obtained my first postdoctoral contract at Rovira i Virgili University (Faculty of Oenology) Tarragona under the supervision of the honored research group led by the Professor Mas. At this place, I was developing a novel molecular biology and fluorescent microscopy techniques. Subsequently, I obtained a NSF Fellowship for Excellence at the Pablo de Olavide University, Seville, Spain (Excelencia Junta de Andalucía grants) through a competitive recruitment process working in a project about advanced in yeast genetics with Dr. Valero as principal investigator. During this time, I have also completed a postdoctoral short-term stage at the National Institute of the Vine and Wine (ICVV-CSIC, Logroño, La Rioja, Spain) under the supervision of Prof. González. Nowadays, In 2015, I got a postdoctoral contract (Andalucía Talent Hub-COFUND) to develop a work related to yeast isolated from wild vines at the University of Milan (Italy). I am working as Assistant Lecturer at the University of Cádiz, Spain, developing cutting-edge techniques to identify and characterize wine yeasts. I have been involved in 23 research projects, I have 30

publications (20 JCR/Scopus papers, 12 journal articles appeared in highly-rated journals and cited by a large number of authors, two completed book and 8 book chapters) and, in addition, I have been involved in 46 national and international congresses and conferences. My teaching experience at the University started in 2012 (more than 800 hours until now). Eight TSRI students completed their research project under my supervision. I have also mentored undergraduates' students in research activities developing programs with them. Regarding my professional experience, I have been working during more than nine years in the viticulture and enology area, mainly in microbiology and molecular biology fields. I have also been involved as a trained judge at several Sensory Analysis of Food panels. Finally, I have also participated in an international committee of the OIV and in knowledge transfer sessions.

Indicadores generales de calidad de la producción científica

Publicaciones en Revistas Internacionales en los últimos 10 años:	20
Número de tesis doctorales dirigidas en los últimos 10 años:	1
Libros y Capítulos de Libros en los últimos 10 años:	10
Participaciones en Congresos Internacionales en los últimos 10 años:	46
Citas totales:	226 (google scholar)

- **Línea/s de Investigación:** (Título y breve resumen)

- Microbiología aplicada: levaduras aisladas de la vid silvestre y de velo de flor
- Microbiología aplicada: Bacteriófagos en alimentos y bebidas
- Análisis sensorial de los alimentos

- **Proyectos y Contratos de Investigación (últimos 5 años):**

1. Project Title: Identificación de genes implicados en la tolerancia de las levaduras vínicas a factores de estrés relacionadas con la fermentación alcohólica mediante técnicas basadas en hibridación genómica comparativa

ID code: AGR-6544

Funding entity: Junta de Andalucía (Proyecto de Excelencia)

Amount: 134.000 € **Type of participation:** Researcher

Duration: From: 01/03/2010 To: 01/03/2015

PI: Eva María Valero Blanco

2. Project Title: Determinación mediante herramientas postgenómicas (proteómica y metabolómica) de nuevos factores de patogenicidad en los hongos fitopatógenos *Botrytis* y *Colletotrichum*. Síntesis de moléculas activas para el control racional de enfermedades fúngicas causadas por estos patógenos.

ID code: AGL2012-39798-c02-02

Funding entity: Ministerio de Economía y Competitividad. Gobierno de España

Amount: 78.000 € **Type of participation:** Researcher

Duration, From: 01/03/2011 To: 31/12/2015

PI: Jesús Manuel Cantoral Fernández

3. Project Title: "Estudio del metabolismo secundario de *Botrytis cinerea* mediante técnicas "ómicas", relación con la patogenicidad y diseño de antifúngicos para su uso en agricultura sostenible".

ID code: AGL2015-65684-C2-2-R

Funding entity: Ministerio de Economía y Competitividad. Gobierno de España

Amount: 80.000€ **Type of participation:** Researcher

Duration, From: 01/03/2015 To: 31/12/2018

PI: Jesús Manuel Cantoral Fernández

4. Project Title: “ Desarrollo de un Nuevo híbrido de *Saccharomyces cerevisiae* con baja producción de ácido sulfhídrico”.

ID code: IDI 20141202

Funding entity: CDTI

Amount: 80.000€

Type of participation: Researcher

Duration, From: 31/07/2014

To: 31/07/2018

PI: Jesús Manuel Cantoral Fernández

5. Project Title: “Sistemas de preparación de muestras biológicas para estudios de microscopía de fluorescencia y bioluminiscencia en el campo de la seguridad alimentaria y trazabilidad en Agroalimentación”.

ID code: UNCA 15-CE-3409.

Funding entity: DGCIYT

Amount: 171.305,75 €

Type of participation: Researcher

Duration, From: 01/01/2016

To: 01/01/2017

PI: Jesús Manuel Cantoral Fernández

6. Project Title: “Preservación de los recursos genéticos de bayas de uva de *Vitis vinifera* ssp. *Sylvestris* (Gmelin) Hegl”.

ID code: GA 291780

Funding entity: ANDALUCÍA TALENT HUB-MARIE CURIE del 7º Marco Europeo Co-funding of Regional, National, and International Programmes (COFUND)

Amount: 147.036 euros

Type of participation: Principal investigator

Duration, From: 01/03/2015

To: 28/02/2017

7. Project Title: Análisis de las poblaciones de levaduras de velo de flor de crianza biológica de las bodegas ubicadas en El Puerto de Santa María y Jerez de la Frontera. Estudio de la viabilidad de un método de implantación de levaduras seleccionadas para la mejora de los velos de flor y de las propiedades organolépticas del vino Fino”.

ID code: OTRI UCA

Funding entity: LUSTAU SA.

Amount: 23.000 euros

Type of participation: Researcher

Duration, From: 09/10/2017

To: 08/10/2019

PI: Jesús Manuel Cantoral and **Gustavo Cordero-Bueso**

- **Publicaciones:** (más relevantes en los últimos 5 años):

1) Cordero-Bueso, G., Esteve-Zarzoso, B., Cabellos, J.M., Gil-Díaz, M. Arroyo, T. (2013). Biotechnological potential of non-*Saccharomyces* yeasts isolated during spontaneous fermentations of Malvar (*Vitis vinifera* cv. L.). Eur. Food Res. Tech. 236, 1, 193-207.

2) Cordente, A., Cordero-Bueso, G., Pretorius, I. S., Curtin, C. D. (2013). Novel wine yeast with mutations in YAP1 that produce less acetic acid during fermentation. FEMS Yeast Res.13, 1, 62-73.

3) Cordero-Bueso, G., Arroyo, T., Valero, E. (2014) A field and long term study of the sensitivity of yeasts associated with grape berry surfaces to fungicides penconazole and sulfur. Int. J. Food Microbiol. 189, 189-194.

4) Luís Jiménez, Alejandro Rodríguez, Juan Domínguez-Robles, Antonio Rosal, Gustavo Cordero-Bueso, Eva Valero, E. (2014). Integral exploitation of olive tree pruning in the paper industry. New Biotechnol. 31, S209



- 5) **Cordero-Bueso, G.**, Arroyo, T., Valero, E. (2014). A long-term field study of the sensitivity of grape berry yeasts to the fungicides penconazole and sulfur. *International Journal of Food Microbiology* 189, 189-194.
- 6) **Cordero-Bueso G***, Esteve-Zarzoso B, Gil-Díaz M, García M, Cabellos JM, Arroyo T. (2016) Improvement of Malvar Wine Quality by Use of Locally-Selected *Saccharomyces cerevisiae* Strains. *Fermentation* 2(1): 7.
- 7) Ramón González , Pilar Morales, Jordi Tronchoni, **Gustavo Cordero-Bueso**, Enrico Vaudano, Manuel Quirós, Maite Novo, Rafael Torres-Pérez and Eva Valero (2016). New genes involved in osmotic stress tolerance in *Saccharomyces cerevisiae*. *Frontiers in Microbiology* 7, 1545.
- 8) **Gustavo Cordero Bueso***, María Esther Rodríguez, Carlos Garrido, Jesús Manuel Cantoral. (2017). Rapid and not culture-dependent based on multiplex PCR-SSR analysis for monitoring inoculated yeast strain in industrial wine fermentations. *Archives of Microbiology*. DOI:10.1007/s00203-016-1287-4.
- 9) **Cordero-Bueso, G.**, Mangieri, N., Maghradze, D., Foschino, R., Valdetara, F., Cantoral, JM., Vigentini, I. (2017). Wild grape-associated yeasts as promising biocontrol agents against *Vitis vinifera* fungal pathogens. *Frontiers in Microbiology* 8, 2025. doi: 10.3389/fmicb.2017.02025
- 10) Ruiz-Muñoz, M., Bernal-Grande, M.C., **Cordero-Bueso, G***, González, M., Hughes-Herrera, D., Cantoral, J.M. A Microtiter Plate Assay as a Reliable Method to Assure the Identification and Classification of the Veil-Forming Yeasts during Sherry Wines Ageing. *Fermentation* 2017, 3, 58.
- 11) **Cordero-Bueso, G***, Ruiz-Muñoz, M, González, M., Chirino, Salvador, Bernal-Grande, M.C., Cantoral, J.M. The microbial diversity of Sherry wines. *Fermentation* 2018, 4, 19.
- 12) **Cordero-Bueso, G***, Izquierdo-Cañas, P.M., Suzzi, G. Editorial: Microorganisms for a sustainable viticulture and Winemaking. *Frontiers in Microbiology* 2018, 9, 2650.