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|--------------------------------------|-------------------|---------------------|------------|
| <b>Part A. PERSONAL INFORMATION</b>  |                   | <b>CV date</b>      | 01/09/2018 |
| First and Family name                | Alberto Mas Baron |                     |            |
| Social Security, Passport, ID number |                   | Age                 | 64         |
| Researcher numbers                   | Researcher ID     | C-9812-2010         |            |
|                                      | Orcid code        | 0000-0002-0763-1679 |            |

**A.1. Current position**

|                                |  |        |  |
|--------------------------------|--|--------|--|
| Name of University/Institution | Universitat Rovira i Virgili                   |        |  |
| Department                     | Bioquímica i Biotecnologia/Facultat d'Enologia |        |  |
| Address and Country            | Marcel·li Domingo sn. 43007 Tarragona          |        |  |
| Phone number                   | 977558688                                      | E-mail | <a href="mailto:albert.mas@urv.cat">albert.mas@urv.cat</a> |
| Current position               | Catedrático de Universidad                     | From   | 2002   |
| Espec. cód. UNESCO             | 3302.02; 3309.01; 3309.05; 3309.29             |        |  |
| Palabras clave                 | Wine, Yeast, Acetic acid bacteria, Vinegar     |        |  |

**A.2. Education**

| Degree/PhD             | University               | Year |
|------------------------|--------------------------|------|
| Licenciado en Biología | Universidad de Barcelona | 1975 |
| Doctor en Biología     | Universidad de Barcelona | 1984 |

**A.3. JCR articles, h Index, thesis supervised...**

Number of research recognitions (sexenios): 4. Date of the last one: 2012.

Number of PhD Thesis in the last 10 years (2008-2017): 7

JCR articles last 10 years: 83 (58 in Q1). Total citations (last 10 years): 2269

H index: 32 ISI, 34 Scopus, 43, Google Scholar

**Part B. CV SUMMARY (max. 3500 characters, including spaces)**

After my PhD in University of Barcelona I follow my research career at the University of New York at Buffalo (US, 1984-1985) and the Hospital for Sick Children in Toronto (Canada, 1985-1988) as postdoctoral fellow and research associate, respectively. In the Academics I was Professor at the High School of "Universidad Laboral de Tarragona" (1978-1984), Assistant Professor at the University of Barcelona (1988-1992), Associate Professor and Full Professor at the University Rovira i Virgili (1992-2002 and 2002 to date). Distinguished Professor at the University Rovira i Virgili since 2014 and Honorary Professor at the Karoly Robert Foiskola de Gyongyos (Hungary, 2010).

I have been visiting Scholar at the Medical Research Council, Toxicology Unit (Carshalton, UK, 1982), Hospital for Sick Children (several visits of 4-6 months between 1988 and 1992), Long Ashton Research Station (Bristol, UK, 1991), Universidad de Chile (2003), Australian Wine Research Institute (Adelaide, 2009), Instituto Canario de Investigaciones Agrarias (2009). Visiting Professor at the University of Talca (Chile, 2014).

During this period I have had responsibilities in the Academic Management as Head of the Department of Biochemistry and Biotechnology (1992-1995) and Dean of the University of Oenology (1995-2001 and 2011-2013). Furthermore, I have been the coordinator of the Doctorate program in Oenology (2003-2007) and of the master in Oenology (2007-2010).

I have been member of the Scientific Committee of the AESAN (Agencia Española de Seguridad Alimentaria y Nutrición, 2009-2011) and evaluator of the agencies ANEP (Spain), AGAUR (Catalonia) and Quality agencies of Andalucía and Castilla y Leon. I am Editor of the

International Journal of Food Microbiology, and Associate Editor of *Frontiers in Microbiology* and *International Wine Research*.

In research, I started with the toxicity of heavy metals in the environment (PhD Thesis) to pursue with the metabolic role of those heavy metals in some inherited diseases (postdoctoral period) and change completely the research filed once I became tenured at the University Rovira i Virgili in Tarragona to wine microbiology. Initially I started with the development and application of different molecular techniques to study yeast dynamics in wine making and later of acetic acid bacteria in wine spoilage and also in vinegar production. I have been the leader of a research group that has been recognised as excellence group from the Generalitat of Catalonia since 2003. I have been PI of 21 competitive National and International projects, being the coordinator of 1 International Project (6<sup>th</sup> Framework Program). Currently I am the co-author of more than 150 JCR publications. I am also the coauthor of 3 patents, one of them being commercially available (Lalvin Clos, Lallemand). I have been the Director or co-director of 19 PhD Thesis, 7 with International Mention (out of 10 possible).

My current interest is the microbiological control of the alcoholic fermentation in wine production and the possible application to face the current challenges of wine making (high sugar concentrations, low availability of nutrients, higher spoilage potential, etc...), with special emphasis on microbial interaction, especially between *Saccharomyces* and Non-*Saccharomyces* species.

## Part C. RELEVANT MERITS

### C.1. Publications (including books)

M Martí-Raga, E. Peltier, A Mas, G Beltran, P. Marullo Genetic causes of phenotypic adaptation of sparkling wines in *Saccharomyces cerevisiae*. *G3: Genes/Genomes/Genetics*, 2017, 7, 399-412.

González, B.; Mas, A.; Beltran, G.; Cullen P.J.; Torija, M.J. Role of Mitochondrial Retrograde Pathway in Regulating Ethanol-Inducible Filamentous Growth in Yeast. *Frontiers in Physiology* 8:148, 2017.

Mas, A., Guillamón, J. M., Beltran, G., eds. (2016). *Non-conventional Yeast in the Wine Industry*. Lausanne: Frontiers Media. doi: 10.3389/978-2-88945-053-4

Lleixà, J.; Martín, V.; Portillo, M.C.; Carrau, F.; Beltran, G.; Mas A. Comparison of the performances of *Hanseniaspora vineae* and *Saccharomyces cerevisiae* during winemaking. *Frontiers in Microbiology*, 2016, 7, 338, 2016.

Hornedo-Ortega, R.; Cerezo, A.B.; Troncoso, A.M.; García-Parrilla, M.C.; Mas, A. Melatonin and other tryptophan metabolites produced by yeasts: implications in cardiovascular and neurodegenerative diseases. *Frontiers in Microbiology*, 6, 1565, 2016.

Wang, C.; Esteve-Zarzoso, B.; Cocolin, L.; Mas, A.; Rantsiou, K. Viable and culturable populations of *Saccharomyces cerevisiae*, *Hanseniaspora uvarum* and *Starmerella bacillaris* (synonym *Candida zemplinina*) during Barbera must fermentation. *Food Research International* 78, 195-200, 2015

Wang, C Esteve-Zarzoso, B Mas A. Factors involved in the interaction between *Saccharomyces cerevisiae* and *Hanseniaspora uvarum* populations during alcoholic fermentation. *International Journal of Food Microbiology*, 206, 67-74, 2015

Gutierrez, A.; Chiva, R.; Beltran, G.; Mas, A.; Guillamon, J.M.: Biomarkers for detecting nitrogen deficiency during alcoholic fermentation in different commercial wine yeast strains. *Food Microbiology*, 34, 227-237, 2013

Rodriguez-Naranjo, M.I.; Torija, M.J.; Mas, A.; Cantos-Villar, E.; Garcia-Parrilla, M.C: Production of melatonin by *Saccharomyces* strains under growth and fermentation conditions. *Journal of Pineal Research*, 53, 219-224, 2012.

Andorra, I.; Monteiro, M.; Esteve-Zarzoso, B.; Albergaria, H.; Mas, A.. Analysis and direct quantification of *Saccharomyces cerevisiae* and *Hanseniaspora guilliermondii* populations during alcoholic fermentation by fluorescence in situ hybridization, flow cytometry and quantitative PCR. *Food Microbiology*, 28, 1483-1491, 2011.

Escoté, X; Miranda, M; Rodriguez-Porrata, B; Mas, A; Cordero, R; Posas, F; Vendrell, J.: The stress-activated protein kinase Hog1 develops a critical role after resting state. *Molecular Microbiology*, 80, 423-435, 2011.

## C.2. Research projects and grants

Aplicación de METAgenómica y metatranscriptómica al CONTROL microbiológico del VINO de crianza (METACONVIN). Proyecto JIN (Young Researchers). 2016-2019. PIP: M. Carmen Portillo. Tutor: Albert Mas

Metabolismo y efectos protectores de compuestos indólicos en levaduras de interés alimentario. AGL2016-77505-C3-3-R. 2017-2019. PI: M.Jesús Torija y Gemma Beltran.

EMJMD on Wine Tourism Innovation (WINTOUR). Erasmus + Key Action 1. Erasmus Mundus Joint Master Degrees. 564513-EPP-1-2015-ES-EPPKA1-JMD-MOB. Coordinator: Gemma Beltran (URV). Partners: 3. Period: 01/09/2015-31/08/2020 (renewed 2019-2023).

Sustainable Management of Cultural Landscape (SUMCULA). Erasmus + Programme, 2017-1-SE01-KA203-034570- Project Coordinator: Sandor Nemethy (University of Gotheborg, Suecia). PI URV: A. Mas. Partners: 13. 01/10/2017-31/08/2020,

La huella microbiológica chilena. Proyecto FONDEF (Chile) ID14I10010. PI: C Jara (U. Chile). PI URV: A. Mas. Partners: 3. 2014-2016.

GMO free systems optimization of wine yeast for wine production by massive scale directed evolution. WINESYS. FP7KBBE ERA-Net for Applied Systems Biology (ERASys). PI (URV): A. Mas y G. Beltran. Coordinator: Eivind Almaas (NTNU). 2015-2018.

Producción y efectos fisiológicos de compuestos bioactivos derivados de aminoácidos aromáticos en poblaciones de levaduras. AGL2013-47300-C3-1-R. PI and coordinator: A. Mas. Partners: 3. 2014 - 2016

Multi-strain indigenous Yeast and Bacterial starters for 'Wild-ferment' Wine production (WILDWINE). FP7 - Capacities - Research for the benefit of SMEs. Unión Europea Coordinator C. Tassou (NAGREF, Greece). PI URV: A. Mas. Partners: 14. 2012 - 2015

Selección y control microbiológico para la producción de una nueva bebida a partir de fresa no apta para comercialización. AGL2010-22152-C03-02. PI: MJ Torija. Partners: 2. 2011 - 2013

Bioteχνologia Enològica. Ajuts per potenciar els grups de recerca de qualitat. Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR). 2009 SGR 73, 2014 SGR 11, 2017 SGR 267. PI: A. Mas. 2009 – 2013, 2014-2016, 2017-2019.

Análisis y control microbiológico del proceso de elaboración de condimentos a partir de frutas. AGL2007-66417-C02-02. IP: MJ Torija. Partners: 2. 2007 - 2011

### **C.3. Contracts**

Nutrición nitrogenada y su influencia en la liberación de aromas varietales tiólicos por levaduras (NUTRIAROMA). Contract with Agrovin. PI: G Beltran.

Nutrientes nitrogenados en la fermentación alcohólica: necesidad y efecto sobre su desarrollo. Productos Agrovin, S.A. (Proyecto Cenit). PI URV: A. Mas. 2008 - 2011

Aspectos que influyen en la calidad de los vinos espumosos elaborados mediante el método tradicional. Juvé & Camps, SA (Proyecto Cenit). PI URV: A. Mas. 2008- 2011

Análisis metabólico de levaduras: Metabolismo del nitrógeno en la levadura vínica y su influencia sobre la fermentación alcohólica y la calidad final del vino. Miguel Torres, S.A. (proyecto Cenit). PI URV: A. Mas. 2008- 2011

Selección y caracterización enológica de levaduras autóctonas de la Finca Mas Perinet. Mas Perinet, SL. PI: A. Mas. 2008- 2009

### **C.4. Patents**

Levadura para vinificación BE-29. *Saccharomyces cerevisiae* CECT 13008. Authors: Mas, A.; Guillamón, J.M.; Rozès, N.; Beltran, G.; Torija, M.J. Start date: 2008. Producer: Danstar Ferment A.G. Commercial Product: Lalvin Clos.

### **C.5 Institutional responsibilities**

Director of the Department of Biochemistry and Biotechnology. URV. 1992-1995

Dean of the Faculty of Oenology. URV. 1995-1998, 1998-2001, 2010-2012.

Coordinator of the Doctoral Programs "Oenology" (Interuniversity program, lead by URV) and "Oenology and Biotechnology". URV. 2003-2007 and 2007-2011, both programs were recognised as Quality or Excellence Programs.

Coordinator of the Master Program "Oenology". URV. 2007-2009.

### **C.6 Editor and peer-reviewer**

Editor of the International Journal of Food Microbiology, Associate editor of Frontiers in Microbiology, and International Journal of Wine Research. Regular reviewer of Applied and Environmental Microbiology, Food Microbiology, Journal in Applied Microbiology, Letters in Applied Microbiology, FEMS Yeast Research, Agricultural and Food Chemistry, etc.