

CV Date	04/12/2024
---------	------------

Part A. PERSONAL INFORMATION

First Name	Romain		
Family Name	Minebois		
Sex	Male	Date of Birth	
ID number Social Security, Passport			
URL Web	www.linkedin.com/in/romain-minebois-207a3b217		
Email Address	r.minebois@iata.csic.es		
Open Researcher and Contributor ID (ORCID)	0000-0001-6959-1572		

A.1. Current position

Job Title	Titulado Superior		
Starting date	2022		
Institution	Instituto de Agroquímica y Tecnología de Alimentos		
Department / Centre	Biotecnología de alimentos / Instituto de Agroquímica y Tecnología de Alimentos		
Country		Phone Number	
Keywords			

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

Period	Job Title / Name of Employer / Country
2021 - 2022	Titulado superior / Instituto de Agroquímica y Tecnología de Alimentos
2017 - 2021	Titulado superior / Instituto de Agroquímica y Tecnología de Alimentos

A.3. Education

Degree/Master/PhD	University / Country	Year
PhD in Food Science, Technology and Management	Universidad Politécnica de Valencia	2021
Master's degree in enology	Universidad Politécnica de Valencia	2017
Agronomy engineer	Université de Lorraine (FRANCE)	2016

Part B. CV SUMMARY

I am a French national and have been living in Spain for over ten years, seven of which I dedicated to scientific research at the Severo Ochoa Institute of Agri-Food Technology and Chemistry (IATA-CSIC). Passionate about oenology, I completed my master's thesis and doctoral dissertation in this field, specializing in yeast systems biology, particularly *Saccharomyces cerevisiae*, and biotechnology applied to winemaking. During my career, I acquired expertise in microbiological and biotechnological techniques, especially in the use of chromatographs, bioreactors and metabolomics. My PhD combined omics approaches (metabolomics, transcriptomics) and modeling to explore the metabolism of non-conventional yeasts for winemaking. I extensively collaborate with the Biosystems and Bioprocess Engineering (Bio2Eng) research group of Institute of marine research (IIM-CSIC) to develop dynamic fermentation models. Since 2021, I have been working as a postdoctoral researcher on a project aimed at digitizing the wine sector by applying the concept of a "digital twin" to optimize product quality and reduce energy costs. I am responsible for a pilot fermentation project to validate models. I have also completed internships at National Research Institute for Agriculture, Food and the Environment (INRAE) in Montpellier (France), where I enhanced my skills in metabolomics and big data processing. I collaborated with various PhD students and currently co-supervised a doctoral thesis. I describe myself as proactive and adaptable, capable of easily learning new scientific concepts and integrating into new environments.

Part C. RELEVANT ACCOMPLISHMENTS

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

AC: corresponding author. (n° x / n° y): position / total authors. If applicable, indicate the number of citations

- 1 **Scientific paper**. Alba Contreras Ruíz; Romain Minebois; Javier Alonso-del-Real Arías; Eladio Barrio; Amparo Querol. 2024. Differences in metabolism among *Saccharomyces* species and their hybrids during wine fermentation. *Microbial biotechnology*. <https://doi.org/10.1111/1751-7915.14476>
- 2 **Scientific paper**. 2023. Understanding the role of GRE3 in the erythritol biosynthesis pathway in *Saccharomyces uvarum* and its implication in osmoregulation and redox homeostasis. *Microbial biotechnology*. <https://doi.org/10.1111/1751-7915.14313>
- 3 **Scientific paper**. David Henriques; Romain Minebois; David dos Santos; Eladio Barrio; Amparo Querol; Eva Balsa-Canto. 2023. A Dynamic Genome-Scale Model Identifies Metabolic Pathways Associated with Cold Tolerance in *Saccharomyces kudriavzevii*. *Microbiology Spectrum*. <https://doi.org/10.1128/spectrum.03519-22>
- 4 **Scientific paper**. Artai R. Moimenta; David Henriques; Romain Minebois; Amparo Querol; Eva Balsa-Canto. 2023. Modelling the physiological status of yeast during wine fermentation enables the prediction of secondary metabolism. *Microbial biotechnology*. <https://doi.org/10.1111/1751-7915.14211>
- 5 **Scientific paper**. D. Pérez; M. Denat; R. Minebois; J.M. Heras; V. Ferreira; A. Querol. 2022. Modulation of aroma and chemical composition of Albariño semi-synthetic wines by non-wine *Saccharomyces* yeasts and bottle aging. *Food Microbiology*. <https://doi.org/10.1016/j.fm.2022.103981>
- 6 **Scientific paper**. D. Henriques; R. Minebois; S. Mendoza; et al; E. Balsa-Canto. 2021. A Multiphase Multiobjective Dynamic Genome-Scale Model Shows Different Redox Balancing among Yeast Species of the *Saccharomyces* Genus in Fermentation. *mSystems*. 6-4. <https://doi.org/10.1128/msystems.00260-21>
- 7 **Scientific paper**. R. Minebois; M. Lairón-Peris; E. Barrio; R. Pérez-Torrado; A. Querol. 2021. Metabolic differences between a wild and a wine strain of *Saccharomyces cerevisiae* during fermentation unveiled by multi-omic analysis. *Environmental microbiology*. 23-6, pp.3059-3076. <https://doi.org/10.1111/1462-2920.15523>
- 8 **Scientific paper**. R. Minebois; R. Pérez-Torrado; A. Querol. 2020. Metabolome segregation of four strains of *Saccharomyces cerevisiae*, *Saccharomyces uvarum* and *Saccharomyces kudriavzevii* conducted under low temperature oenological conditions. *Environmental microbiology*. 22-9, pp.3700-3721. <https://doi.org/10.1111/1462-2920.15135>
- 9 **Scientific paper**. R. Minebois; R. Pérez-Torrado; A. Querol. 2020. A time course metabolism comparison among *Saccharomyces cerevisiae*, *S. uvarum* and *S. kudriavzevii* species in wine fermentation. *Food Microbiology*. 90. <https://doi.org/10.1016/j.fm.2020.103484>
- 10 **Scientific paper**. W. Mardones; C. Villarroel; K. Krogerus; et al; F. Cubillos. 2020. Molecular profiling of beer wort fermentation diversity across natural *Saccharomyces eubayanus* isolates. *Microbial Biotechnology*. 13-4, pp.1012-1025. <https://doi.org/10.1111/1751-7915.13545>
- 11 **Scientific paper**. G. Ortiz-Tovar; R. Minebois; E. Barrio; A. Querol; R. Pérez-Torrado. 2019. Aroma production and fermentation performance of *S. cerevisiae* × *S. kudriavzevii* natural hybrids under cold oenological conditions. *International Journal of Food Microbiology*. 297, pp.51-59. <https://doi.org/10.1016/j.ijfoodmicro.2019.03.005>
- 12 **Book chapter**. 2018. New Trends in the Uses of Yeasts in Oenology. *Advances in Food and Nutrition Research*. ISSN 1043-4526. <https://doi.org/10.1016/bs.afnr.2018.03.002>

C.2. Conferences and meetings

- 1 Lainy Ramírez Aroca; Romain Minebois; Vicente Ferreira; Amparo Querol. El efecto de la suplementación de nitrógeno en una fermentación vínica. Agroalnext24 - Gandia. Universidad Miguel Hernández de Elche. 2024. Spain. 'Participatory - poster. Conference.
- 2 Romain Minebois; Lainy Ramírez Aroca; Artai Rodríguez Moimenta; Antonio Aguirre; Eva Balsa Canto; Amparo Querol. Hacia fermentaciones alcohólicas más sostenibles y automatizadas en enología. Agroalnext24 - Gandia. Universidad Miguel Hernández de Elche. 2024. Spain. 'Participatory - poster. Conference.
- 3 Lainy Ramírez Aroca; Romain Minebois; Vicente Ferreira; Amparo Querol. Development of intelligent and predictive sensors for rapid wine quality monitoring. 37th EFFOST International Conference. Universitat de València. 2023. Spain. 'Participatory - poster. Conference.
- 4 Romain Minebois; David Henriques; Eva Balsa-Canto; Amparo Querol; Carole Camarasa. A combine isotopic tracer and modelling approach to disclose carbon and nitrogen metabolic specificities of *S. cerevisiae*, *S. uvarum* and *S. kudriavzevii* species during winemaking. 8th Conference on Physiology of Yeasts and Filamentous Fungi (PYFF8). University College Cork. 2023. Ireland. 'Participatory - poster. Conference.
- 5 Sonia Albillos Arenal; Romain Minebois; Eladio Barrio; Amparo Querol. Deciphering the pathway of erythritol synthesis in *Saccharomyces* species and its function. 8th Conference on Physiology of Yeasts and Filamentous Fungi (PYFF8). University College Cork. 2023. Ireland. 'Participatory - poster. Conference.
- 6 Amparo Querol; Alba Contreras Ruiz; Romain Minebois. Differences in metabolism among species of the genus *Saccharomyces* and their hybrids in wine fermentation. 8th Conference on Physiology of Yeasts and Filamentous Fungi (PYFF8). University College Cork. 2023. Ireland. 'Participatory - poster. Conference.
- 7 R. Minebois; R. Pérez-Torrado; A. Querol. A study of the respiro-fermentative metabolism among species of *Saccharomyces* in microvinification conditions. International Specialized Symposium on Yeasts (ISSY 34). IPATEC. 2018. Argentina. 'Participatory - poster. Conference.
- 8 R. Minebois; R. Pérez-Torrado; E. Barrio; A. Querol. Estudio del papel de las acuaporinas en la resistencia a la congelación en las especies *Saccharomyces cerevisiae*, *S. kudriavzevii*, *S. uvarum*, *S. paradoxus* e híbridos de *S. cerevisiae* – *S. kudriavzevii*. 6ta jornada sudamericana de biología y biotecnología de levaduras. Universidad Nacional del Comahue. 2018. Argentina. 'Participatory - poster. Conference.
- 9 R. Minebois; R. Pérez-Torrado. Estudio de las diferencias en la regulación del metabolismo fermentativo en las especies del género *Saccharomyces*. 5a Jornada de estudiantes predoctorales del IATA-CSIC. Instituto de Agroquímica y Tecnología de Alimentos. 2018. Spain. Participatory - oral communication. Workshop.
- 10 R. Minebois; R. Pérez-Torrado; A. Querol. Differences in the regulation of the fermentative metabolism among species of the genus *Saccharomyces*. 4a Jornada de estudiantes predoctorales del IATA - CSIC. Instituto de Agroquímica y Tecnología de Alimentos. 2017. Spain. Participatory - oral communication. Workshop.

C.3. Research projects and contracts

- 1 **Project.** PLEC2021-007827, DTWINE. R&D strategic lines. Amparo Querol Simon. (Instituto de Agroquímica y Tecnología de Alimentos). 09/2021-03/2025. 1.045.537 €. Team member.
- 2 **Project.** PID2021-126380OB-C31, OPTIWINE. Proyectos de Generación de Conocimiento. Amparo Querol Simon. (Instituto de Agroquímica y Tecnología de Alimentos). 01/2022-2025. 242.000 €. Team member.
- 3 **Project.** AGROALNEXT/2022/021, SENSWINE. AGROALNEXT. Amparo Querol Simon. (Instituto de Agroquímica y Tecnología de Alimentos). 09/2022-09/2024. 239.985 €. Team member.
- 4 **Project.** AGL2015-67504-C3-1-R, IMPROWINE. Amparo Querol Simon. (Instituto de Agroquímica y Tecnología de Alimentos). 04/2017-09/2021. 242.000 €. Team member.