



SP4-Capacities
Research for SMEs

INNOYEAST

Innovation and improvement of European wine industry competitiveness by the research and development of native microencapsulated wine yeasts to produce quality wines

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PROJECT FINAL REPORT

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 232454.



CONTENTS

1. FINAL PUBLISHABLE SUMMARY REPORT	3
Executive summary.....	3
Web site and relevant contact details.	6



FINAL REPORT

1. FINAL PUBLISHABLE SUMMARY REPORT

Executive summary.

Wine is the result of fermentation, a complex microbial process involving the transformation of grape juice into wine by the action of yeasts and bacteria. Yeasts have a huge influence on the composition and the quality of the final wine, not only because they convert the grape sugars into ethanol, but also because they are involved in the synthesis of a great number of by-products which constitute the final wine organoleptic profile.



European winemaking industry currently faces the need to strengthen the reputation of European quality wine, to retrieve old markets, to win new ones and to improve the European wine differential image. This can be achieved, among others, through novel and autochthonous starter yeasts, owing to the huge impact of yeast on several key areas of wine production.

The main objective of INNOYEAST has been to isolate, select and microencapsulate oenological autochthonous yeasts from four participating European wine regions (Rioja Alavesa, Pomerol, Vinho verde and Chianti), to allow the wineries to manage the fermentation process and a uniform production of the highest quality wine, maintaining the sensory properties and the aroma profile of each wine area.

The work developed in INNOYEAST has been divided into five work packages, from the obtaining of biological materials (WP1), isolation, identification and characterization of yeast strains from the grapes through laboratory fermentations, sample culturing and biochemical tests (WP2), yeast selection through microfermentations, chemical analysis and tastings (WP3), production of the selected autochthonous yeasts and their microencapsulation (WP4) and wine fermentations at industrial scale with the produced autochthonous yeasts (WP5).



The following technical, scientific, economic and social objectives have been achieved:

- The isolation of the autochthonous yeast strains from the different European vine-growing regions.
- The selection of the yeast strains that develop the best the personality of the wines from each European vine-growing region.
- The incorporation of innovative technologies as the microencapsulation to prepare the selected autochthonous micro-organisms.
- The contribution to the common interest of the different European wine-making regions interested in having autochthonous oenological yeasts to make a high quality wine.
- The cooperation in the global competitive development of the European wine based on the general interest in the maintenance of the differential characters of each wine region implicated in the project.
- The defence of the image of a rich and diverse Europe with all its wines opposite to the entrance of the globalized and generalised New World Wines.

Ten participating organizations from four different European countries, including universities, research institutions and industry partners have worked on INNOYEAST, a 28 months (2009/2011) EU-funded project with a total budget of 1,5 million €.

The INNOYEAST project (www.innoyeast.eu) has been coordinated by BODEGAS BAIGORRI (ES) and TECNALIA RESEARCH & INNOVATION (ES) with the participation in the consortium of VINOS DE LOS HEREDEROS DEL MARQUÉS DE RISCAL (ES), CHÂTEAU LA POINTE (FR), QUINTA DA LIXA (PT), AZIENDA AGRICOLA PETRIOLO (IT), ADERA-MICROFLORA (FR), UNIVERSIDADE DO MINHO (PT) and METROPOLI-AZIENDA SPECIALE DELLA CAMERA DI COMMERCIO DI FIRENZE (IT).

The research has permitted to each winery participating in the consortium to obtain a microencapsulated autochthonous yeast fulfilling all the requirements to elaborate a quality wine with excellent results.

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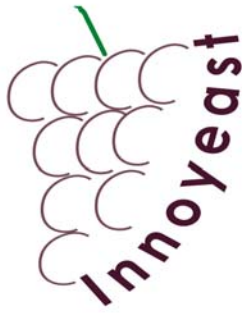
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For more information, please visit:

www.innoyeast.eu



Web site and relevant contact details.

The web page for INNOYEAST is www.innoyeast.eu

The contact details:

	<p>BODEGAS BAIGORRI (ES). Coordinator.</p> <p>www.bodegasbaigorri.com</p> <p>Baigorri represents in Rioja Alavesa the image of an innovative winery that wants to be at the forefront of all the researchers related to high quality wines production. The winery is present in the high quality specializing market at national and international level and its wines have numerous awards and mentions.</p> <p>Contact person: Mr. Simón Arina (Technical Director) simon.arina@bodegasbaigorri.com</p>
	<p>VINOS DE LOS HEREDEROS DEL MARQUÉS DE RISCAL (ES)</p> <p>www.marquesderiscal.com</p> <p>Marqués de Riscal has always been a leading and pioneering company in the wine producing sector. As far back as 1858, it became the first winery in the Rioja to produce wines following the Bordeaux method. Marqués de Riscal sells its products in over 70 countries and its wines enjoy the highest international distinctions.</p> <p>Contact person: Mr. Juan Luis Taboada (Technical Director) jltaboada@marquesderiscal.com</p>




	<p>CHÂTEAU LA POINTE (FR)</p> <p>www.chateaulapointe.com</p> <p>Château La Pointe is involved in high quality red wine production in Pomerol The production area of the winery covers 22 ha. Wines are sold through the traditional Bordeaux wine trade. The château has been the property of the Darfeuille family for three generations. Since Novembre 2007, it belongs to the Generali France group.</p> <p>Contact person: Mr. Eric Monneret (General Manager) eric.monneret@chateaulapointe.com</p>
	<p>QUINTA DA LIXA (PT)</p> <p>www.quintadalixa.pt</p> <p>Quinta da Lixa is the most expressive example of the passion that the Meireles family have always had for the "Vinho Verde". The winery produces and merchandizes wines from the Vinho Verde wine region.</p> <p>Contact person: Mr. Carlos Teixeira (Winemaker) carlosteixeira@quintadalixa.pt</p>
	<p>AZIENDA AGRÍCOLA PETRIOLO (IT)</p> <p>www.fi.camcom.it</p> <p>Petriolo is a farm that produces wines exclusively from grapes of its production over an area of about 40 ha. Other 50 ha. are rented. The main product is the Chianti DOCG.</p> <p>Contact person: Mr. Emiliano Burini (Winemaker) emiliano.burini@gmail.com</p>



	<p>TECNALIA Research & INNOVATION (ES)</p> <p>www.tecnalia.com</p> <p>TECNALIA is the largest private Research, Development and Innovation (R+D+i) group in Spain and one of the leading ones in Europe, with a staff of over 1,400 people. The Bioprocesses & Preservation area in TECNALIA researches and offers advanced technological services for the food industry and related sectors, to become your technological partner on the road to innovation and improved competitiveness.</p> <p>Contact person: Mrs. Edurne Elejalde (Enology team coordinator) edurne.elejalde@tecnalia.com</p>
	<p>ADERA-MICROFLORA (FR)</p> <p>www.microflora.u-bordeaux2.fr</p> <p>Adera is a non-profit organisation dedicated to enhancing relations between regional research centres and enterprises. Its main activity relies on technology transfer through research and development projects, finding funding capacities in order to promote regional innovation.</p> <p>Contact person: Mrs. Julie Maupeu (Researcher) julie.maupeu@u-bordeaux2.fr</p>
	<p>UNIVERSIDADE DO MINHO (PT)</p> <p>www.bio.uminho.pt</p> <p>The University of Minho has a student population of 16.000 and a teaching staff of 1.200 members. Yeast biotechnology is one of the main research areas of the Biology</p>



	<p>department. Ongoing research is focused on molecular/biochemical studies related to the genetic improvement of strains for industrial applications, genotyping and physiological screening of strain collections derived from winemaking environments.</p> <p>Contact person: Mrs. Dorit Schuller (Auxiliar Professor of the Biology Department) dschuller@bio.uminho.pt</p>
	<p>METROPOLI- AZIENDA SPECIALE DELLA CAMERA DI COMMERCIO DI FIRENZE (IT)</p> <p>www.promofirenze.com</p> <p>This laboratory analyses Chianti and Chianti Classico wines since 1950. METROPOLI is authorized by the Ministry of Agriculture, Foodstuff and Forestry to issue certificates of analysis with official values for wines and oils. Since 1999 the laboratory is engaged in research to improve the quality of foods in the province of Florence.</p> <p>Contact person: Mrs. Laura Mazzanti (Division Coordinator) laura.mazzanti@fi.camcom.it</p>