

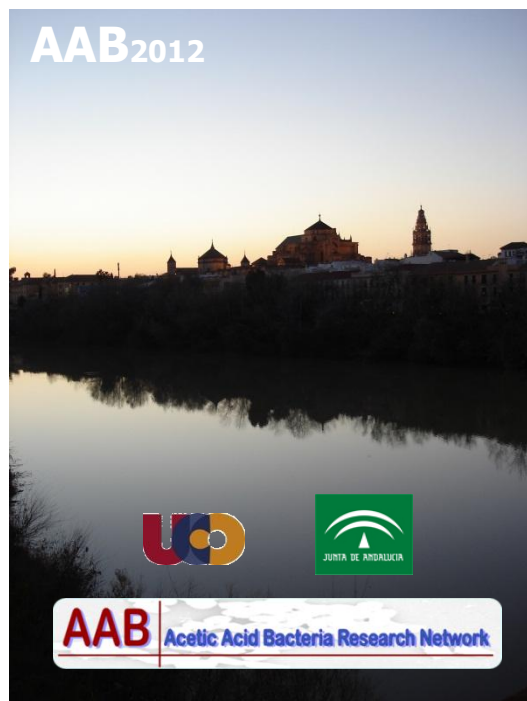


University of Córdoba  
17-20 April, 2012, Córdoba, SPAIN

AAB 2012

3<sup>rd</sup> International Conference on  
**Acetic Acid Bacteria**  
Vinegar and other products

# III International Conference on Acetic Acid Bacteria Vinegar and other products



## PROGRAMME

17 - 20 April, 2012  
Cordoba - Spain

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University of Córdoba  
17-20 April, 2012. Córdoba, SPAIN

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3<sup>rd</sup> International Conference on  
**Acetic Acid Bacteria**  
Vinegar and other products

# CONFERENCE PROGRAMME

## Tuesday, 17

### Time

09.00-11.30	<b>Registration. Affixing posters</b>
11.30-13.30	<b>Opening Session</b> <b>José Manuel Roldán Nogueras</b> Rector University of Córdoba <b>Ana M<sup>a</sup> Troncoso González</b> Executive Director of The Spanish Food Safety and Nutrition Agency <b>Francisco Javier de las Nieves López</b> President of The Institute for Fishing and Agrarian Research and Training, Spain <b>Isidoro García García</b> University of Córdoba
12.00-13.00	<b>Opening Talk</b> Food safety, a tool for succesful innovation <b>Ana M<sup>a</sup> Troncoso González</b>
13.30-15.30	<b>Welcome reception</b>
15.30-16.30	<b>Meeting of Scientific Committee</b>
18.00-19.00	<b>Visit: Cathedral (old Mosque)</b>
19.00-21.00	<b>Visit: Historical quarter</b>
21.00-21.30	<b>Reception by Córdoba City Council at Castle of the Christian Monarchs</b>
21.30-22.00	<b>Córdoba, the light of cultures – Water, Light and Sound Show at Castle of the Christian Monarchs</b>

III

## Wednesday, 18

### Time

09.00-09.30	<b>Session I – Why do we care about Acetic Acid Bacteria? History. Traditional vinegar. Food and Health</b> <b>Chairs: M. Gullo and C.J. González-Navarro</b> <b>Keynote</b> Protected Geographical Status: limits and opportunities for vinegars <b>P. Giudici</b>
09.35-09.45	Third Jubilee of the discovery of the mechanism of the acetous fermentation by Louis Pasteur in 1861 <b>J.F. Bourgeois*, I. García García</b>
09.50-10.00	Chinese Cereal vinegars in solid-state fermentation <b>F.S. Chen, L. Li, J. Qn, C.X. Chen*</b>
10.05-10.15	Simple procedure to discriminate among balsamic vinegars <b>F. Lemmetti*, P. Giudici</b>
10.30-11.00	Coffee break
11.00-11.30	<b>Session II – What are they? Taxonomy and Phylogenesis Ecological aspects (natural occurrence of AAB; Biodiversity)</b> <b>Chairs: E. Bartowsky and J.M. Guillamón-Navarro</b> <b>Keynote 1</b> Taxonomy of acetic acid bacteria and molecular techniques suitable for their identification at the species level <b>I. Cleenwerck</b>
11.30-12.00	<b>Keynote 2</b> Ecology of acetic acid bacteria and their role as plant growth-promoters <b>R.O. Pedraza</b>
12.05-12.15	MALDI-TOF mass spectrometry fingerprinting tool for rapid identification and classification of acetic acid bacteria <b>C. Andrés-Barrao, M. Chappuis, C. Benagli, M. Tonolla, F. Barja*</b>
12.20-12.30	Culture-dependent and culture-independent community dynamics analysis of acetic acid bacteria during cocoa bean fermentation <b>Z. Papalexandratou, K. Illegghems, L. De Vuyst*</b>

IV

Time	
12.35-12.45	Diversity of acetic acid bacteria present in healthy and mouldy-infected grapes from Australia vineyards <b>E. Mateo*, M.J. Torija, A. Mas, E. Bartowsky</b>
12.50-13.00	No-culture strategy for tracking AAB and yeasts in low-acidic and high polyphenolic niches <b>D. Mamlouk*, L. Solieri, M.Gullo</b>
13.05-13.15	Influence of exogenous phytohormones on the growth and pellicle formation of <i>Gluconacetobacter xylinus</i> <b>J.L. Strap*, O. Qureshi, H. Sohail, A.J. Latos</b>
13.30-15.30	Lunch  <b>Session III.A – How they work? Genetics and Molecular Biology</b> <b>Chairs: L. De Vuyst and H. Toyama</b> <b>Keynote</b> Molecular biology approaches to acetic acid bacteria population studies <b>A. Mas</b>
15.30-16.00	
16.05-16.15	Genome-wide analyses for hyper glucose tolerance of acetic acid bacteria <b>H. Hadano, K. Omura, J. Tomatsu, H. Hirakawa, S. Takebe, K. Matsushita, Y. Azuma*</b>
16.20-16.30	Studies of an Fnr-like transcriptional regulator in <i>Gluconobacter oxydans 621H</i> <b>S. Schweikert*, S. Bringer, M. Bott</b>
16.35-16.45	Highlights on <i>Acetobacter pasteurianus</i> proteome modifications <b>C. Andrés-Barrao, M. M. Saad, M. Chappuis, R. Ortega Pérez, M. Boffa, X. Perret, F. Barja*</b>
16.50-17.00	Promoters of membrane-bound dehydrogenases from <i>Gluconobacter oxydans 621H</i> and their ability in a new expression system <b>M. Mientus*, B. Peters, D. Kostner, W. Liebl, A. Ehrenreich</b>
17.05-17.15	Tales of two enzymes: membrane-bound alcohol dehydrogenase and aldehyde dehydrogenase of acetic acid bacteria <b>T. Yakushi*, H. Mukai, T. Kodama, M. Matsutani, G. Theeragool, K. Matsushita</b>

Time	
17.20-17.30	A new clean deletion system for different <i>Gluconobacter oxydans</i> strains <b>D. Kostner*, B. Peters, M. Mientus, W. Liebl, A. Ehrenreich</b>
17.30-19.00	<b>Poster Session</b>
21.00-22.00	<b>Equestrian show in the monumental Royal Stables in Cordoba</b>
<b>Thursday, 19</b>	
<b>Session III.B – How they work? Biochemistry and Physiology</b> <b>Chair: E. Escamilla and A. Mas</b> <b>Keynote</b> <i>Gluconobacter oxydans</i> : biochemistry meets biotransformation <b>U. Deppenmeier</b>	
09.00-09.30	
09.35-09.45	Simulated cocoa pulp fermentations of cocoa-specific acetic acid bacteria reveal their functional role and interactions during cocoa bean fermentations <b>F. Moens*, T. Lefeber, L. De Vuyst</b>
09.50-10.00	Proteomic study of <i>Acetobacter pasteurianus</i> NBRC3283 and analysis of factors possibly related to acetic acid fermentation <b>A. Okamoto-Kainuma*, M. Ishikawa, K. Ito, Y. Koizumi</b>
10.05-10.15	Elucidating the metabolic properties of <i>Gluconobacter oxydans 621H</i> by 13C-metabolic flux analysis <b>S. Ostermann*, W. Wiechert, M. Oldiges</b>
10.30-11.00	Coffee break
11.00-11.10	How different carbon sources and conditions make AAB “working” strains: <i>Acetobacter pasteurianus</i> strain AB0220 in superficial acetification system as case study <b>M. Gullo</b>
11.15-11.25	Role of the pentose phosphate pathway and the Entner-Doudoroff pathway for cytoplasmic fructose catabolism in <i>Gluconobacter oxydans 621H</i> <b>J. Richhardt*, S. Bringer, M. Bott</b>

Time	
11.30-11.40	Diversity of the respiratory chain of AAB, especially <i>Acetobacter pasteurianus</i> , <i>Gluconacetobacter diazotrophicus</i> and <i>Gluconobacter oxydans</i> <b>H. Miura, S. Nishiyama, M. Arimitsu, Y. Anami, M. Matsutani, T. Yakushi, K. Matsushita*</b>
11.45-11.55	The quest for new oxidative catalysts: Expression of metagenomic membrane-bound dehydrogenases from acetic acid bacteria in <i>Gluconobacter oxydans</i> <b>B. Peters*, M. Mientus, D. Kostner, W. Liebl, A. Ehrenreich</b>
12.00-12.10	The active and inactive forms of the membrane-bound alcohol dehydrogenase from <i>Gluconacetobacter diazotrophicus</i> <b>J. E. Escamilla*, S. Gómez-Manzo</b>
12.15-12.25	Structures and functions of <i>Acetobacter aceti</i> CoA-transferases <b>T. J. Kappock*, E.A. Mullins</b>
12.30-12.40	Screening of quorum sensing and quorum quenching activities in the genome of a <i>Gluconacetobacter xylinus</i> strain <b>M.J. Valera, W. Streit, M.J. Torija, A. Mas, E. Mateo*</b>
13.30-15.30	Lunch  <b>Session IV – What can we do with them? Biotechnological applications. Bioengineering aspects. New products</b> <b>Chairs: D. Cantero and F. López Bonillo</b> <b>Keynote</b>
15.30-16.00	Applications, Technologies and Scale up Criteria of Fermentation Processes with Acetic Acid Bacteria <b>F. Emde</b>
16.05-16.15	4-Keto-D-aldopentoses and 4-Pentulosonates, new products with Acetic Acid Bacteria <b>O. Adachi*, R.A. Hours, E. Shinagawa, Y. Akakabe, T. Yakushi, K. Matsushita</b>
16.20-16.30	Comparison of novel GH 68 levansucrases of levan-overproducing <i>Gluconobacter</i> species <b>F. Jakob, D. Meißner, R.F. Vogel*</b>
16.35-16.45	Gluconic acid production in strawberry by acetic acid bacteria <b>F. Sainz, E. Mateo, A. Mas, M.J. Torija*</b>

VII

Time	
16.50-17.00	The response of <i>Acetobacter senegalensis</i> to stressors: A study towards improvement of vinegar starter production <b>R. Shafiei*, P. Thonart</b>
17.05-17.15	Cheese whey recycling in dairy food chain: effects of vinegar from whey in dairy cow nutrition <b>C. Belli, E. Salimei, G. Alfano, G. Lustrato, C. Maglieri, F. Fantuz, L. Grazia, G. Ranalli*</b>
17.20-17.30	Influence of different high-molecular weight levans produced by selected acetic acid bacteria on the volume and texture of breads <b>F. Jakob, H. Rüksam, T. Becker, A. Pfaff, R. Novoa-Carballal, A.H.E. Müller, R.F. Vogel*</b>
17.35-17.45	Brewage of novel multifunction Chinese quince vinegar <b>B. Gao, L.P. He*</b>
21.00-	<b>Conference Dinner</b>

## Friday, 20

**Session V – How do we know what they are up to? Measurement techniques. Biosensors. Quality control. Other aspects**

**Chair: M.J. Torija**

**Keynote**

Chemical Characterization and health claims and AAB fermented products

**M.C. Garcia-Parrilla**

09.00-09.30  
09.35-09.45  
Use of Denaturing High-Performance Liquid Chromatography for rapid detection and identification of acetic acid bacteria  
**N. Sagarzazu\*, M. Martinez, R. Virto, C. Gonzalez**

09.50-10.00  
Sensory analysis of Sherry vinegars enriched with dietary fibre  
**A. Marrufo, M.C. Rodríguez, E. Durán\*, M.J. Cejudo, R. Castro, R. Natera, C.G. Barroso**

10.05-10.15  
Changes in amino acids content during the production of strawberry and persimmon vinegars  
**R.M. Callejón, C. Ubeda\*, C. Hidalgo, E. Mateo, A.M. Troncoso, M.L. Morales**

10.30-11.00  
Coffee break

VIII

## Time

11.00-12.00	<b>Round-table talks</b>
12.00-13.30	<b>Closing Session</b> <b>Paolo Giudici</b> University of Modena and Reggio Emilia <b>Kazunobu Matsushita</b> Yamaguchi University <b>Fusheng Chen</b> Huazhong Agricultural University <b>Isidoro García García</b> University of Córdoba <b>Closing Talk</b> Adaptive Evolution and Adaptive Breeding of Acetic Acid Bacteria, and its Future Prospect for AAB Research and Development <b>Kazunobu Matsushita</b>
14.30-	<b>29th Montilla-Moriles Wine-tasting Festival Reception by The Consejo Regulador Montilla-Moriles</b>

## Organizing Committee

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Isidoro García García  
University of Córdoba

### Secretariat

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University of Córdoba

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Teresa García Martínez  
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## Collaborators:



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## Organize by



University of Córdoba



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## Venue

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