

Antibiotic Resistance and Virulence Factors among Enterococci Isolated from Chourico, a Traditional Portuguese Dry Fermented Sausage

Author(s): Ribeiro, T (Ribeiro, T.)¹; Oliveira, M (Oliveira, M.)¹; Fraqueza, MJ (Fraqueza, M. J.)¹; Laukova, A (Laukova, A.)²; Elias, M (Elias, M.)³; Tenreiro, R (Tenreiro, R.)⁴; Barreto, AS (Barreto, A. S.)¹; Semedo-Lemsaddek, T (Semedo-Lemsaddek, T.)¹

Source: JOURNAL OF FOOD PROTECTION **Volume:** 74 **Issue:** 3 **Pages:** 465-469 **DOI:** 10.4315/0362-028X.JFP-10-309 **Published:** MAR 2011

Times Cited: 0 (from Web of Science)

Cited References: 36 [[view related records](#)]  [Citation Map](#)

Abstract: Enterococci are ubiquitous microorganisms, found as part of the normal intestinal microbiota of many animals. They can be present in food products, for example, the Portuguese dry fermented sausage chourico. Twenty enterococci were isolated from chourico in two processing units; after identification and typification by conventional-molecular methods, the isolates were screened for virulence factors and antibiotic resistance. Identification allocated all enterococci to the species *Enterococcus faecalis*, and PCR fingerprinting demonstrated that each isolate was specific to the processing unit and chourico from which it was recovered. Regarding the screening for virulence factors, 1 strain produced cytolyisin and 4 were gelatinase positive, but none produced lipase. The *ace* gene was detected in 1 enterococci, *ebpABC* and *efaA(fs)* in 16 isolates each, *esp* in 3, *fsrB* in 5, *gelE* in 7, and *cylA* in 1. A multiresistant phenotype was observed in 8 isolates, 6 belonging to factory A. The antibiotic resistance gene *ere(B)* was detected in 9 enterococci, whereas the genes *tet(M)*, *aac(6')-Ie-aph(2'')*, and *vanA* were detected in 8 isolates each. As some of the *E. faecalis* chourico isolates present a multiresistant profile and harbor virulence and/or resistance genes, to assess further the safety of Portuguese dry sausages, a larger number of products and processing units must be analyzed.

Accession Number: WOS:000288313200018

Document Type: Article

Language: English

KeyWords Plus: ANTIMICROBIAL RESISTANCE; MEAT-PRODUCTS; SURFACE PROTEIN; FAECALIS; GENES; FOOD; FAECIUM; SUSCEPTIBILITY; PHENOTYPES; STRAINS

Reprint Address: Semedo-Lemsaddek, T (reprint author), Univ Tecn Lisbon, Ctr Invest Interdisciplinar Sanidade Anim, Fac Med Vet, Ave Univ Tecn, P-1300477 Lisbon, Portugal

Addresses:

1. Univ Tecn Lisbon, Ctr Invest Interdisciplinar Sanidade Anim, Fac Med Vet, P-1300477 Lisbon, Portugal
2. Slovak Acad Sci, Inst Anim Physiol, Kosice 04001, Slovakia
3. Univ Evora, Inst Ciencias Agr & Ambientais Mediterranicas, P-7002554 Evora, Portugal
4. Univ Lisbon, Fac Ciencias, Ctr Biodiversidade Genom Integrat & Func, Lisbon, Portugal

E-mail Address: tlemsaddek@fmv.utl.pt

Funding:

Funding Agency	Grant Number
"Quality of Life and Management of Living Resources, Assessment and Improvement of Safety of Traditional Dry Sausages from Producers to Consumers-TRADISAUSAGE," project	QLKI CT-2002-02240
Centro de Investigacao Interdisciplinar em Sanidade Animal from the Faculty of Veterinary Medicine, Lisbon, Portugal	

[\[Show funding text\]](#)

Publisher: INT ASSOC FOOD PROTECTION, 6200 AURORA AVE SUITE 200W, DES MOINES, IA 50322-2863 USA

Web of Science Category: Biotechnology & Applied Microbiology; Food Science & Technology

Subject Category: Biotechnology & Applied Microbiology; Food Science & Technology

IDS Number: 734DK

ISSN: 0362-028X