

Proteomic analysis of milk from greek indigenous capra prisca goat breed: Methodology development and initial results

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This paper presents development of methodology for proteomic analysis of milk samples of Greek goats and initial findings of the work. 10 ml of milk were collected in sterile vials and stored at -80°C. Each sample was fragmented in three layers (lipid-, casein-, whey-) by centrifugation at 14,000 rpm for 1 h. 2-DE was performed in total milk, in casein-layer and in whey-layer. Protein content of each sample was measured colorimetrically by the Bradford assay; 1 mg of total protein was diluted in a sample buffer containing urea, thiourea, Chaps. For the first dimension, IPG strips of 3-10NL pI and 4-7L were used and the samples were electrophoresed at 6,000 V for 152,000 Vh. Subsequently, the second dimension was performed on 12% SDS-polyacrylamide gels, which were further stained overnight with colloidal coomassie blue. The method was performed successfully in five samples. Total number of spots detected was 822 (163 ± 17 spots per gel). Analysis by MALDI ToF-MS resulted in identification of 285 single-gene products in total. This is the first description of research presenting proteomic evaluation of milk from indigenous Greek goats. Successful development of methodology will support detailed studies into proteomic evaluation. Description of proteomic characteristics of the breed will support construction of dataset for genetic characterization. Work in this presentation has received funding from the 'GOSHOMICS' program, which takes place within the SYNERGASIA 2009 action and is supported by the European Regional Development Fund and Greek national funds, project number 09SYN-23-990. The text represents the author's views.

Biography

G.C. Fthenakis, DVM, M.Sc., PhD, DipECAR, DipECSRHM is Professor of Veterinary Reproduction at the Veterinary Faculty of the University of Thessaly, Greece, Past-President of the European College of Small Ruminant Health Management and Fellow of the Greek Agricultural Academy. He has published 122 refereed papers (total impact factor: 167.532), which have received >1650 citations. He has managed many research grants, funded from the public (European Commission, Greek Ministry of Education) or the private (animal health industry) sector.

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