

# MILK PROTEINS GENETIC ASPECTS RELATED TO HUMAN HEALTH

C.T. Socol<sup>1</sup>, F.L. Criste<sup>2\*</sup>

<sup>1</sup>University of Oradea, Oradea, Romania

<sup>2</sup>National Agency for Animal Husbandry “Prof. dr. G. K. Constantinescu”,  
Balotești, Romania

e-mail: florinleontincriste@gmail.com

## Abstract

*In general, milk quality depends on its chemical composition and on some key proteins' genetic variants. Cow's milk shows a various protein profile based on specific polymorphisms, which are related to human health, throughout positive associations with different diseases occurrence or prevention. Caseins are the main proteins of cow's milk and  $\beta$ -casein of the caseins, showing a variable genetic profile, but with two most common variants, A1 and A2, which are still under debate on their effect on human health, in the context of a growing global interest for A2-milk. Also, other milk proteins with genetic polymorphic variation show potentially benefic effects for human health. Dairy cattle genetic management could be directed for using favorable milk genetic profiles, by genotyping means. Since many countries, including Romania still need to make progress towards implementing and using widely available genotyping facilities for such purposes, the present paper aims to highlight some relevant aspects and the necessity of knowing the prevalence of milk proteins variants in indigenous as well as cross bred cattle population for targeting adequate breeding strategies based on health concerns of milk proteins genotypes.*

**Key words:** milk protein, genotypes, cattle, human health