

## Editor Note-Advances in Dairy Research | Volume 5, Issue 3

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### Editor Note

Dairy products are important for the overall human health. Therefore, dairy research holds a special place in science. *Advances in Dairy Research* is a seminal journal in the field of dairy science. The current issue of *Advances in Dairy Research* highlights some interesting studies. Tripathi and Mishra [1] have authored a review on the pros and cons of glucosinolates in animal feed, with special focus on Brassica based feeding. Al-Sheraji et al. [2], evaluated the effect of supplementation with polysaccharides from Mango peel on the quality of fat-free yoghurt. Zoldan et al. [3], investigated the immunological biomarkers in milk that are indicative of extra-mammary inflammatory diseases. Rusco et al. [4], investigated the influence of milk plasmin activity on Silter cheese, an Italian hard cheese. Abraham and Zeleke [5] conducted a cross sectional study to determine prevalence and awareness regarding animal disease in farm owners living in and around Wolaita Sodo, Ethiopia, between November 2016 and April 2017. Park et al. [6], authored a review on the factors affecting the sensory and gustatory properties of goat cheese and related products. Tøndervik et al. [7], investigated the effects of OligoG CF-5/20, an alginate oligomer on bacteria responsible for causing bovine mastitis.

Brassica is a genus of plants belonging to the mustard family (Brassicaceae). In animal diet, Brassica originated feed and fodder is the chief source of glucosinolates, a large group of sulphur secondary plant metabolites. Consumption of glucosinolates in large amounts induces several health problems in animals; however, feed containing low glucosinolates may prove to be a good protein source, especially of sulfur containing amino acids. Furthermore, recent research has revealed that feeding low glucosinolate containing meals reduces fungal infestation, increases the isothiocyanate content in animal produce and peripheral fat content with higher levels of unsaturated fatty acids (C18:0, 1 trans, C22:2). As both isothiocyanates and unsaturated fatty acids have anti-carcinogenic properties, Brassica based feeding is advantageous to human health. Tripathi and Mishra [1] have authored a review on the pros and cons of glucosinolates in animal feed, with special focus on Brassica based feeding.

Low calorie content containing plant polysaccharides can be employed as a healthy alternative to starches and gum stabilizers for manufacturing fat-free yoghurt. Al-Sheraji et al. [2], evaluated the effect of supplementation with polysaccharides from Mango peel on the quality of fat-free yoghurt. The results revealed that addition of mango peel polysaccharides promotes early gelation and enhanced the rate of pH reduction. Furthermore, there was an enhancement in the gel viscoelastic properties up on the addition of plant polysaccharides. This resulted in a stronger gel network. Finally, the flavor, color, appearance, acidity, and structure of yoghurt prepared using plant polysaccharides also received high scores.

Highly productive dairy cows are very susceptible to inflammatory diseases in early lactation and at the onset of milk production, as a result of functional suppression of immune cells. Therefore, intensive supervision of dairy animals is essential to improve the health of the herd. Zoldan et al. [3], investigated the immunological biomarkers in milk that are indicative of extra-mammary inflammatory diseases. Towards this, a total of 89 healthy and 75 diseased German Holstein cows were studied. Diseases were categorized into either systemic (extra-mammary) or mammary (mastitis). For the biomarker discovery, a top-down approach was used to narrow down on a number of gene products in the milk cell transcriptome and proteome and the most promising biomarker candidates statistically evaluated. The analysis revealed that haptoglobin, lactoferrin, and vascular endothelial growth factor (VEGF) have the potential to serve as biomarkers, of which haptoglobin was statistically found to be the best single-use biomarker.

Silter is an Italian hard cheese manufactured using unpasteurized milk produced by cows fed at high altitudes. The chemical, sensory, and rheological properties of cheese can be affected by modifications in the composition of milk resulting from the breed of animal used and altitude. Altitude is known to modify the protein content, coagulation properties, plasmin activity, and  $\kappa$ -CN glycosylation. Rusco et al. [4], investigated the influence of milk plasmin activity on Silter cheese. Results revealed that the Silter cheese obtained from animals reared in alpine pastures has a higher degree of proteolysis, resulting in high amounts of  $\beta$ -casein ( $\beta$ -Cn) and  $\alpha$ (S1)-casein ( $\alpha$ S1-CN) fragments. This, enhancement in casein fragmentation was attributed the intense activity of plasmin.

Abraham and Zeleke [5] conducted a cross sectional study to determine prevalence and awareness regarding animal disease in farm owners living in and around Wolaita Sodo, Ethiopia, between November 2016 and April 2017. The results revealed that the overall prevalence of bovine mastitis was 5.1%; presence of teat end lesion and lactation stage exhibited a significant correlation with the prevalence of bovine mastitis. Furthermore, the results revealed a lack of knowledge regarding aspects related to bovine mastitis such as clinical manifestations and subclinical mastitis in smallholder dairy farm owners/attendants.

The combination of aromas and tastes associated with goat milk affects the overall quality of goat milk and goat milk products. Since a variety of goat breeds have been raised in different environments using various management techniques, no one single factor can be used universally to describe the sensory properties of a wide range of goat cheeses and goat cheese products produced the world over. The flavor of cheese can be attributed to a series of complex reactions involving enzymatic reactions and microbial metabolism which include proteolysis, lipolysis, and fermentation. Park et al. [6], have authored a

review on the factors affecting the sensory and gustatory properties of goat cheese and related products.

Alginate oligomers are known to disrupt microbial biofilms and lower the minimum inhibitory concentration (MIC) of many clinically relevant antibiotics. The antibiofilm effects of these oligomers have been usually focused on microbial strains that play a significant role in human infections. Tøndervik et al. [7], investigated the effects of OligoG CF-5/20, an alginate oligomer on bacteria responsible for causing bovine mastitis. OligoG CF-5/20 was found to inhibit the growth of all the tested strains, and demonstrated a 2-fold to 8-fold reduction in MICs for cephalothin, erythromycin, and lincomycin.

## References

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