FRANCESCO SECUNDO
Institute of Science and Chemical Technologies,
Italy

Healthy environment for cows, good milk for humans. Fatty acids composition of milk from cows grazing at different altitudes.

Abstract:

The composition of fatty acids (FAs) in lipids and phospholipids has been extensively researched due to its potential impact on human health. The Federation of European Nutrition Societies recommends restricting dietary saturated fatty acids (SAFA) while highlighting the importance of replacing them with polyunsaturated fatty acids (PUFA) to mitigate the risk of cardiovascular disease (CVD). SAFA consumption is recognized as a significant risk factor for CVD due to its association with elevated blood cholesterol levels. Moreover, substituting trans-fatty acids with PUFA has shown the most beneficial effect on reducing low-density lipoprotein-cholesterol (LDL-C) and thereby lowering the risk of CVD. Numerous strategies have been employed to develop lipids enriched in beneficial PUFA. Notably, various fungi and marine microalgae can produce relatively high proportions of omega-3 FAs, particularly eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Regarding lipids in animal-derived foods, the environment in which animals reside can significantly influence the FA composition of products such as eggs and milk. For instance, we present an example of how different feeding practices for cows, such as grazing at varying altitudes in the Alpine region or being fed a typical cowshed diet, can impact the fat content and composition of cow milk.

Biography

Dr. Francesco Secundo, obtained the Laurea in Biological Sciences at the University of Milano in 1992 and he has been conducting research activity at the National Research Council of Italy (CNR), in Milan, since 1986. His research activity is documented by 130 articles on international journals (H-index 31, WoS). His research work has dealt with the use of enzymes for several biotechnological purposes. His current research interest is in the study of lipids obtained from microalgae grown in different conditions and lipids modification by lipases.