

## ABSTRACT

The sterile secret of skin glands is not immediately odoriferous. The characteristic body odour is released after microorganism transformation of the secreted compounds. The aim of the work is to elucidate the mechanisms of the body odour production. The major contributor to the body odour are volatile fatty acids hydrolysed from glutamine precursors, structurally unusual long-chain fatty acids or lipids. Another component are sulphur compounds, mainly secreted as the Cys-Gly-(S) conjugates, and steroid substances. The genus *Corynebacterium* is associated with these transformations and intense body odour. The composition of the resident microflora varies depending on age and gender. Axillary odour with large apocrine secretion has probably biggest importance for human chemical communication. Apocrine glands secretion starts during puberty and decreases in postmenopausal women. There are quantitative differences between gender composition of sweat. In the Asian population is more common the recessive homozygosity of the ABCC11 gene which is associated with lower body odour intensity. Also MHC proteins effect body odour and they seem to play a role in mate choice. To some extent, the environmental factors such as diet or emotions influence body odour. Knowledge of mechanisms behind body odour production can help in understanding human chemical communication.