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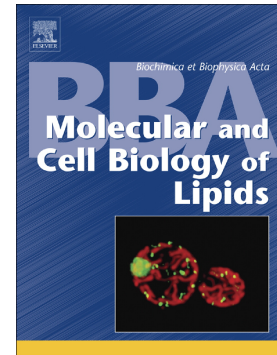
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**Steryl ester synthesis, storage and hydrolysis: a contribution to sterol homeostasis**

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**Abstract**

Sterols are essential lipids of all eukaryotic cells, appearing either as free sterols or steryl esters. Besides other regulatory mechanisms, esterification of sterols and hydrolysis of steryl esters serve to buffer both an excess and a lack of free sterols. In this review, the esterification process, the storage of steryl esters and their mobilization will be described. Several model organisms are discussed but the focus was set on mammals and the yeast *Saccharomyces cerevisiae*. The contribution of imbalanced cholesterol homeostasis to several human diseases, namely Wolman disease, cholesteryl ester storage disease, atherosclerosis and Alzheimer's disease, Niemann-Pick type C and Tangier disease is described.

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