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# Oxysterols and bile acids – From intertwined biosynthesis to combined quantification

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## Abstract

Oxysterols and bile acids, historically viewed as cholesterol byproducts, are now a center of research interest for their roles in physiological and pathological processes. Here we explore the complexities of oxysterol metabolism and bile acid biosynthesis, highlighting the intricate interplay of enzymes in the oxysterome and the network of intermediates in bile acid synthesis. The biological importance of these compounds has led to the development of methods for quantifying them. As discussed here, while these methods provide useful information for biological studies, future methods for the combined analysis of oxysterols and bile acids would further accelerate research in the field, and enable a better understanding of bile acid pathways and the associated diseases. This review provides an overview of the current understanding of oxysterol metabolism and bile acid biosynthesis, highlighting metabolic pathways, analytical challenges, and their relevance to inherited disorders of bile acid metabolism.

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