10-Hydroxystearic Acid – Identified after Homogenization of Tissue – Is Derived from Bacteria

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10-Hydroxystearic acid seems to be widely distributed in nature: Bacteria generate it by hydroxylation of oleic acid, but it was found also as constituent of plants, in cancer cell cultures and in mammalian tissue homogenates. Investigation of 10-hydroxystearic acid, obtained from mammalian tissue homogenates, revealed its identity with that of bacteria. Thus not 10-hydroxystearic acid is widely distributed in nature but its producers: bacteria. When biological material is processed in aqueous media, lipases are activated, these cleave membrane phospholipids. Thus liberated oleic acid is the substrate for widespread bacteria which are introduced into the media when the work up procedure is done in not sterile surrounding. The bacteria transform then oleic acid to 10*R*-hydroxystearic acid.