# Omega-3 Fatty acids from marine microbes

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Omega-3 fatty acids regularly make headlines for their potential to prevent cardiovascular diseases, asthma, depression etc. Evidently, n-3 fatty acids reduce blood triglycerides level and regular intake reduces the risk of secondary and primary heart attack. Long chain EPA/ DHA omega-3 fatty acids supplementation can be co-preventative and co-therapeutic. Current research suggests increasing accumulated long chain omega-3 fatty acids for health benefits and natural medicine in several major diseases, hence global fisheries are generally acknowledged to be threatened indicating a requirement for new and sustainable sources of n-3 oils. New sources of these oils would reduce pressure on declining fish resources worldwide.

This presentation deals with the molecular effects of n-3 fatty acids on coronary heart disease, cancer, atherosclerosis, type II diabetes and need for alternative mean for the synthesis of beneficial polyunsaturated fatty acids considering of aquatic population. Marine microorganisms have been isolated and are found to be efficient producers of EPA and DHA. Identifying and characterizing molecules in the omega-3 fatty acid pathway will help the pharmaceutical industry to explore drugs that mimic these compounds.