J. Membrane Biol. 206, 73 (2005) DOI: 10.1007/s00232-005-0797-9

Membrane Biology

© Springer Science+Business Media, Inc. 2005

Thematic Issue

Potential Human Benefits of Long-Chain Polyunsaturated n-3 Fatty Acids Alexander Leaf, Guest Editor

Foreword

Alexander Leaf

Department of Medicine, Harvard Medical School and the Massachusetts General Hospital, 149, 13th St. Charlestown, Boston, MA 02129, USA

Received: 30 September 2005

This issue of JMB is devoted to the cardiovascular effects of the n-3 polyunsaturated fatty acids in fish oil. It contains eight contributions devoted to cardiovascular membrane effects of fish oil fatty acids.

Some of the articles review the clinical and epidemiologic studies which demonstrate there are benefits to cardiovascular health in humans. Others illustrate the basic research, which has been done to advance our understanding of the mechanisms by which these fascinating fish oil fatty acids produce their benefits in health and diseases of humans. These benefits derive from research directed at probing basic aspects of membrane biology. The reasons why

the actions of the n-3 fish oil are unique and differ in their actions on cell membranes of the cardiovascular system from other polyunsaturated fatty acids were explored. One manuscript, for example, demonstrates that when the ratio of the n-3 fish oil fatty acids to that of the other class of polyunsaturated fatty acids approximates a ratio of 1:1, marvelous and bountiful membrane benefits ensue, leading to the prevention of many mammalian and probably human diseases.

There is much more to be learned from further probings of the molecular biology of membranes.

I and the Editor hope you will enjoy reading about the practical benefits that have transcended so far.