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Subfractions/subpopulations of HDL cholesterol and dysfunctional HDL- A time for new biomarkers in lipid disorders patients?

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High-density lipoprotein (HDL) is regarded as atheroprotective because it is involved in reverse cholesterol transport and expresses antioxidant and anti-inflammatory effects. The literature evidence also indicates on cytoprotective, vasodilatory and anti-infectious activity of these lipoproteins. It is known that HDL is very heterogeneous in structure, intravascular metabolism and biological activity. Thus, HDL can be distinguished into several subclasses by different techniques. Results of several studies indicate that some smaller HDL particles might be more protective than larger and have potent antioxidant properties, but also that changes in the content of small, dense HDL might decrease its activity and induce pro-atherogenic properties (make them dysfunctional). According to the available studies it seems that HDL quality is a better target than HDL cholesterol quantity, however it is still a large debate which subfractions have stronger benefits. Anyhow, there is growing evidence supporting HDL subclasses and dysfunctional HDL as important biomarkers to predict and/or reduce cardiovascular (CV) risk.

Biography

Maciej Banach was an Undersecretary of State at Ministry of Science and Higher Education of Republic of Poland (2010-2012). He is Professor of Medicine at Medical University of Lodz, Head of Foreign Affairs Office (2012-Present) and Head of Department of Hypertension (2008-Present) at Medical University of Lodz and Professor in the Department of Nephrology, Hypertension and Family Medicine, Chair of Nephrology and Hypertension, at WAM University Hospital in Lodz, Poland. He is a Founder and Head of Polish Lipid Association (PoLA) (2011-Present) - the official partner of National Lipid Association (NLA, US) and Lodz Chapter of Polish Society of Hypertension (2009-Present). Dr. Banach has published more than 500 original articles, reviews, editorials, and book chapters in the field of hypertension, dyslipidemias, cardiology, cardiac surgery, and risk stratification (185 acc. to PubMed, 220 acc. to Web of Knowledge, 238 acc. to SCOPUS, and 407 acc. to Google Scholar). His combined IF (for only full-text manuscripts) is over 600 pts., number of citations: 1553 (acc. Web of Knowledge), 2121 (acc. SCOPUS), and 2826 (acc. Google Scholar), Hirsch's Index = 20 (WoS), 23 (SCOPUS), and 27 (i10-index: 84) (Google Scholar).

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