Cholesterol

Hindawi

Special Issue on

The Role of Lipid Rafts and Dysfunctional Lipoproteins in Inflammation: Implications for Acute and Chronic Disease Pathology

CALL FOR PAPERS

Inflammation plays a significant role in the pathophysiology of acute and chronic diseases. While immune-mediated inflammation is an essential step in response to injury, failure to appropriately resolve inflammatory responses promotes prolonged tissue dysfunction and systemic disease. The metabolism of cholesterol—including that found in cellular lipid rafts and circulating lipoproteins—is known to influence the initiation, maintenance, and resolution of inflammation. Cellular cholesterol distribution within plasma membrane lipid rafts can significantly affect leukocyte-mediated responses to pathogenic stimuli. Lipoproteins (e.g., HDL and LDL) and their associated cellular transporters can additionally impact leukocyte activity by carrying pro- and anti-inflammatory proteins and modulating lipid raft formation, respectively. Disruption in lipoprotein functionality and metabolism may lead to greater proinflammatory immune cell activation and is associated with increased risk for chronic inflammatory diseases such as cardiovascular disease, type 2 diabetes mellitus, and nonalcoholic fatty liver disease (NAFLD). Current strategies to mitigate disturbances in cholesterol metabolism and inflammatory responses include pharmacological and nutritional intervention.

We invite investigators to contribute original research articles and review articles that explore the relationship between cellular lipid rafts, dysfunctional lipoproteins, and inflammatory disease. Articles that target underlying molecular mechanisms, epidemiological trends, and clinical treatments are encouraged.

Potential topics include but are not limited to the following:

- Cellular cholesterol and oxysterol metabolism in leukocytes
- Role of cellular and systemic cholesterol metabolism in immunity to pathogens
- Lipid rafts
- Toll-like receptors
- Dysfunctional and/or inflammatory lipoproteins (e.g., HDL and oxidized LDL)
- Serum amyloid A
- ATP-binding cassette transporter A1 (ABCA1) and ABCG1
- Scavenger receptor class B type I (SR-BI)
- Cellular cholesterol and lipoprotein metabolism in the pathophysiology of obesity and chronic disease (e.g., cardiovascular disease, diabetes, NAFLD, and cancer)
- Nutritional interventions
- Pharmacological treatment of cholesterol metabolism and inflammation

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/cholesterol/cmid/.

Lead Guest Editor
Catherine J. Andersen, Fairfield University, Fairfield, USA
candersen@fairfield.edu

Guest Editors
Terrence M. Vance, State University of New York, Plattsburgh, USA
terrence.m.vance@gmail.com

Mariana Calle, Worcester State University, Worcester, USA
mcalle@worcester.edu

Jacqueline Barona, University of Antioquia, Medellín, Colombia
maria.barona@udea.edu.co

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