

Special Issue on Metabolic Stress and Lipid Dysregulation in Lung Disease

CALL FOR PAPERS

Metabolic stress which drives a cluster of life style disorders like insulin resistance, diabetes, obesity, and major cardiovascular diseases is associated with an elevated blood levels of triglycerides, glucose, fatty acids, cholesterol, and low density lipoproteins (LDL) with a concomitant decrease in high density lipoprotein (HDL). There is growing evidence that metabolic stress underscores a pivotal role in driving the lung or pulmonary diseases, where the rate of mortality closely precedes the mortality associated with cancer and cardiovascular diseases. In spite of advanced pharmacological intervention, mortality associated with the lung diseases, chronic obstructive pulmonary diseases (COPD), acute respiratory distress syndrome (ARDS), pulmonary fibrosis (PF), pulmonary hypertension (PH), asthma, acute lung injury (ALI), and pulmonary emphysema could not be curtailed.

Interestingly, apolipoproteins, which are expressed in different cell types of lung tissue, primarily drive the lipid homeostasis and lung development. Further, apolipoproteins actively participate in the pathological and pharmacological intervention of lung diseases, signifying the fatty acid/cholesterol transport and trafficking. Strikingly, the elevated body fat percentage is inversely correlated with the respiratory function in these lung disorders. Incidentally, the deteriorating respiratory function coupled with dysregulated alveolar gaseous exchange and/or endothelial, epithelial, and smooth muscle dysfunction/remodeling ultimately leads to right heart failure.

The purpose of this themed special issue is to publish the original research and review articles, which potentially highlight the dysregulation of lipid or cholesterol homeostasis against a variety of lung diseases.

Potential topics include but are not limited to the following:

- ▶ Cellular and molecular mechanistic insights, which unravel the association between cause and effect of cholesterol/lipid homeostasis in the lung diseases, potentially supported by *in vivo*, *in vitro*, clinical, or omic findings
- ▶ Identification of newer therapeutic targets or biomarkers to delineate the complete biology between these lung diseases and metabolic stress
- ▶ Exemplifying the specific role of different cell types (such as endothelial, epithelial, airway smooth muscle cells, or lung fibroblasts) against the dysregulated cholesterol/lipid homeostasis in these lung diseases
- ▶ Pharmacological intervention is not limited to small molecules but also includes the naturally available folk/ethnic medicines and biologicals
- ▶ Potential role of lung progenitor or stem cells against the cholesterol/lipid homeostasis
- ▶ Organ specific and cell organelle specific etiology (for example, caveolae participates in the cholesterol/lipid homeostasis and the specific abnormality in the formation of caveolae in different cell types is observed in these lung diseases)

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

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First Round of Reviews

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