Special Issue

Gene Expression in Adipocytes During Obesity: Understanding Challenges and Future Prospects

Message from the Guest Editor

Gene expression in adipocytes plays a pivotal role in the development and progression of obesity and its associated metabolic complications. In obesity, adipocytes undergo significant changes in size, number, and functionality, leading to altered gene expression profiles that contribute to chronic low-grade inflammation and insulin resistance. Understanding these molecular alterations is crucial for unraveling the complex pathophysiology of obesity. However, research in this area faces significant challenges, including the heterogeneity of adipose tissue and the interplay between genetic predispositions and (micro-)environmental factors (e.g., hypoxia). Future prospects lie in employing advanced genomic and proteomic technologies, single-cell analysis, and computational modeling to dissect the intricate regulatory networks governing gene expression in adipocytes during obesity, ultimately paving the way for novel therapeutic interventions. The objective of this Special Issue is therefore to shed light on adipocyte pathophysiology on a genetic basis. For this issue, both original research articles and reviews are welcome.

Guest Editor

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Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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