



The Molecular and Cellular Aspects of Insulin Resistance

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Message from the Guest Editors

Insulin resistance is a systemic disorder in which cells fail to respond to normal circulating insulin levels. Experimental and clinical trials have provided evidence that insulin resistance in metabolic tissues constitutes a hallmark of metabolic dysfunction, mainly induced by obesity. This peripheral insulin resistance causes pancreatic β -cells to secrete more insulin in a process known as compensatory hyperinsulinemia. However, together with insulin resistance, there is reduced β -cell function, resulting in sustained hyperglycemia and type 2 diabetes mellitus. At the molecular level, insulin resistance is the consequence of insulin signaling impairment resulting from mutations or post-translation modification of the insulin receptor itself or any of its downstream effectors.

We invite scientists working on this topic to contribute to this Special Issue. Original research articles or reviews on all aspects of the molecular and cellular mechanisms of insulin resistance and its implications in the development of pathologies associated with inflammatory processes, metabolism, cardiovascular, neurological, cognitive disorders, and cancer, among others, will be welcome.





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Message from the Editor-in-Chief

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