赖氨酸琥珀酰化修饰的研究进展

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Title: Research progress on lysine succinylation modification

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摘要: 琥珀酰化修饰是一种重要的蛋白翻译后修饰（post-translational modification,PTM），可通过调控蛋白酶活性和基因表达，参与糖代谢、氨基酸代谢、脂肪酸代谢、酮体合成及活性氧清除等多种生命活动。琥珀酰化修饰水平主要受琥珀酰基供体和琥珀酰基转移酶/去琥珀酰化酶的调控，其异常与包括肿瘤、心脏代谢疾病、肝脏代谢疾病、神经系统疾病等在内的多种疾病的发生发展密切相关。本文拟针对琥珀酰化的基本特点和功能、调控因素及其与疾病的关系作一综述。

Abstract: Succinylation modification is an important post-translational modification (PTM) of proteins.It participates in various life activities such as glucose metabolism,amino acid metabolism,fatty acid metabolism,ketone synthesis and reactive oxygen species scavenging through regulating the activity of substrate protein or gene expression.The level of succinylation modification is mainly regulated by succinyl donors and succinyltransferase/desuccinylase.The aberrant succinylation is closely related to the occurrence and development of various diseases,including tumors,cardiac metabolic diseases,liver metabolic diseases and nervous system diseases.In this article,we aimed to review the basic characteristics and functions of succinylation,its regulatory factors and the relationship between succinylation and diseases.

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