



运动和MicroRNAs

Exercise and MicroRNAs

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中文摘要:

运动通过增加机械负荷或代谢应激可诱导不同的适应,从而调节生理系统的功能,如骨骼肌、心血管和神经系统。MicroRNAs(miRNA)是非编码、小分子mRNA,作为基因转录后的阻遏物。MicroRNAs通过直接阻遏或降解mRNA,沉默mRNA转录,最终影响蛋白的丰度。实验研究业已发现耐力和力量练习,骨骼肌特异miRNA的表达变化。在运动方面研究MicroRNAs分子行为可助于认识运动治疗的作用。

英文摘要:

Physical exercise may induce various adaptations through increasing mechanical load or metabolic stress so as to modulate the function of physiological systems, such as skeletal muscles, cardiovascular system and nervous system. MicroRNAs(miRNA) are small non-coding RNAs that function as post-transcriptional repressors of gene expression. MicroRNAs silence mRNA translation by direct repression and/or mRNA decay and ultimately influence protein abundance. Experimental studies have identified changes in the skeletal muscle profile of specific miRNAs in endurance and strength exercise. Thus, study of the behavior of MicroRNAs in physical exercise helps obtain important information about the effects of therapeutic modality.

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