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ACCEPTED MANUSCRIPT

"Food for thought: Impact of metabolism on neuronal excitability"

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Metabolism; Neuronal Excitability; Ketone Bodies; Lactate; Epilepsy.

Abstract

Neuronal excitability is a highly demanding process that requires high amounts of energy and

needs to be exquisitely regulated. For this reason, brain cells display active energy metabolism

to support their activity. Independently of their roles as energy substrates, compelling evidence

shows that the nature of the fuels that neurons use contribute to fine-tune neuronal excitability.

Crosstalk of neurons with glial populations also plays a prominent role in shaping metabolic

flow in the brain. In this review, we provide an overview on how different carbon substrates

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