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## **Omentin-1 Suppressed Inflammation by NLRP3 through AMPK Function**

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**KEYWORDS** Acute Cerebral Infarction. AMP-Activated Protein Kinase. Cerebral Vessels. NOD-Like Receptor Family Pyrin Domain Containing 3. Omentin-1

**ABSTRACT** This experiment investigated the biological roles of Omentin-1 in cerebral vessels of acute cerebral ischemia (ACI). The expressions of Omentin-1 in mouse model or patients with ACI were down-regulated. Moreover, Omentin-1 was negatively correlated with NIHSS score or serum IL-1 $\beta$  expression in patients undergoing intravenous thrombolysis for ACI. Omentin-1 was positively correlated with Barthel index in patients undergoing intravenous thrombolysis for ACI. In the mouse model or the in-vitro model, Omentin-1 mitigated inflammation factors. Additionally, in the in-vitro model of ACI, overexpression of Omentin-1 induced AMPK/ NLRP3 signaling pathway. Down-regulation of Omentin-1 also inhibited AMPK/ NLRP3 signaling pathway. Taken together, Omentin-1 suppressed ACI in the ACI model through inhibiting inflammation, which might serve as a potential treatment strategies of cardiovascular and cerebrovascular diseases in ACI.