



Letter to the Editor

## Circular RNA DLGAP4 ameliorates cardiomyocyte apoptosis through regulating BCL2 via targeting miR-143 in myocardial ischemia-reperfusion injury

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Dear Editor,

We have recently read the report by Tian et al. that atorvastatin rescued cardiomyocytes from oxidative stress induced apoptosis through decreasing microRNA-143 (miR-143) level [1]. Here we speculate that miR-143 may play a key role in circular RNA DLGAP4 (circDLGAP4) mediated cardiomyocyte apoptosis during myocardial ischemia-reperfusion (I/R) injury.

Circular RNAs (circRNAs) are highly expressed in the cardiomyocytes and regulate physiological and pathophysiological processes [2]. However, the potential role of circRNAs in myocardial I/R injury remains largely unknown. Recently, Bai et al. have confirmed that circDLGAP4 levels were significantly decreased in the plasma of acute ischemic stroke patients and in a mouse stroke model, and upregulation of circDLGAP4 expression significantly attenuated neurological deficits and decreased infarct areas and blood-brain barrier damage in the transient middle cerebral artery occlusion mouse stroke model [3]. This finding implies that circDLGAP4 may act as a novel therapeutic target for myocardial I/R injury. Furthermore, they showed that the circDLGAP4 functions as an endogenous miR-143 sponge to inhibit miR-143 activity, resulting in

ischemic stroke outcomes [3]. This means that the circDLGAP4/miR-143 axis may play a key role in myocardial I/R injury. Interestingly, Liu et al. confirmed that miR-143 could function as a sponge for BCL2 [4], which can significantly attenuate cardiomyocyte apoptosis during myocardial I/R injury. Therefore, circDLGAP4/miR-143/BCL2 axis may play a key role in myocardial I/R injury.

Therefore, it is speculated that circDLGAP4/miR-143/BCL2 axis is a potential regulated axis of cardiomyocyte apoptosis in myocardial I/R injury. However, this speculation needs to be further proved by experimental evidence.

**Conflict of interest**

The authors report no relationships that could be construed as a conflict of interest.

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