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## Novel protective effects of baicalin on high-glucose induced chick embryo malformation and its molecular mechanisms

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Baicalin, which is a traditional Chinese monomer isolated from a traditional Chinese tocolytic medicine; Baical skullcap root, has shown the ability of anti-oxygenation. Here, we investigated for the first time whether baicalin treatment could improve the high-glucose induced chick embryo malformation and uncovered its underlying mechanisms. In our study, we have found certain concentration of baicalin did not affect the development of early chick embryo. The number of high-glucose induced heart tube and blood island malformation in chick embryos were decreased in baicalin treating. Western blot analysis of the experimental chick embryos revealed that GATA-4 was inhibited, while LC3-II and C-caspase-3 were increased following high glucose treatment. However, baicalin treatment could improve the expression of these genes. In addition, we confirmed that the baicalin could improve the cell survival through both anti-oxygenation and regulating autophagy *in vitro*. Therefore, our data indicated that baicalin could be a potential candidate for gestational diabetes induced malformation.

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