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Protective Effects of Irisflorentin on PC12 Cells Against the Injury Induced by OGD/R Via Inhibiting Oxidative Stress and Apoptosis

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***SUMMARY*. Cerebral ischemic stroke is a severe cause of mortality and disability in people worldwide. To find novel therapy for that disease, we have evaluated the protective effects of irisflorentin and explored the potential mechanisms using PC12 cells injured by oxygen and glucose deprivation/restoration (OGD/R). As a result, irisflorentin at 0.1, 1, and 10 μM protects PC12 cells against the injury induced by OGD/R. Further investigation has revealed irisflorentin can suppress oxidative stress in PC12 cells exposure to OGD/R and inhibit OGD/R-induced apoptosis via ROS-mediated mitochondrial pathway. These results can supply evidences for further evaluation of irisflorentin *in vivo* to discover novel therapeutic approach for ischemic stroke and application in practice.**

RESUMEN. El accidente cerebrovascular isquémico cerebral es una causa grave de mortalidad y discapacidad en personas de todo el mundo. Para encontrar una terapia novedosa para esa enfermedad, hemos evaluado los efectos protectores de irisflorentina y exploramos los mecanismos potenciales utilizando células PC12 dañadas por la privación/restauración de oxígeno y glucosa (OGD / R). Como resultado, irisflorentina a 0.1, 1 y 10 μM protege a las células PC12 contra la lesión inducida por OGD/R. Una investigación adicional ha revelado que irisflorentina puede suprimir el estrés oxidativo en las células PC12 a OGD/R e inhibir la apoptosis inducida por OGD/R a través de la vía mitocondrial mediada por ROS. Estos resultados pueden proporcionar evidencias para una evaluación adicional de irisflorentina *in vivo* para descubrir un nuevo enfoque terapéutico para el accidente cerebrovascular isquémico y su aplicación en la práctica.

KEY WORDS: apoptosis, irisflorentin, ischemic stroke, oxidative stress, oxygen and glucose deprivation/restoration, PC12 cells.

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