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# Ferulic acid promotes survival and differentiation of neural stem cells to prevent gentamicin-induced neuronal hearing loss

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## Abstract

Neural stem cells (NSCs) have exhibited promising potential in therapies against neuronal hearing loss. Ferulic acid (FA) has been widely reported to enhance neurogenic differentiation of different stem cells. We investigated the role of FA in promoting NSC transplant therapy to prevent gentamicin-induced neuronal hearing loss. NSCs were isolated from mouse cochlear tissues to establish *in vitro* culture, which were then treated with FA. The survival and differentiation of NSCs were evaluated. Subsequently, neurite outgrowth and excitability of

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