

Technology information form

Technology title
New compounds for growth media, showing stimulation effects on neural stem cell growth and activity
One sentence description of technology
A number of specific PPLs, a group of prenylflavanone compounds, some novel, were isolated, identified and tested at as low as 0.04 µg/mL to be able to increase survival of neural stem cells, to promote neuronal growth with the lengthening of neurites, and to induce stem cells to differentiate into a high percentage of neurons unattainable by current existing technologies.
Development status
Early stage <input type="checkbox"/> *_ Preclinical <input type="checkbox"/> Phase I <input type="checkbox"/> Phase II <input type="checkbox"/> Phase III <input type="checkbox"/> Phase IV <input type="checkbox"/> <input type="checkbox"/> Preregistration <input type="checkbox"/> Registered <input type="checkbox"/>
Full description (Less than 400 words)
<p>The technology involves the discovery that several identified PPLs could significantly up-regulate gene expression of neurotrophic factors, such as GDNF and BDNF, in rat astrocyte cells. As a supplement for serum-free neurobasal media, these PPLs have been shown to promote the growth of cortical neurons and increase their survival capacity at low cellular densities (< 150 cells/mm²) during culture. The PPLs can also enhance the activity of growth factors such as EGF and bFGF on the proliferation of neural stem cells. When neural stem cells were induced to differentiate, the PPLs were shown to help produce large number of neurons, instead of glial cells, at a level unachievable by current technology ($>60\%$ neurons). The PPLs have also shown the ability to protect rat cortical neurons from damage caused by reactive oxygen species (ROS).</p> <p>Research has indicated that these PPLs can be used efficiently as an individual or complement supplement for serum-free growth media. Furthermore, such PPLs could be good drug candidates for the treatment of neurodegenerative diseases, or adjuvant to stem cell transplantation therapies.</p>
Patent status and no.

Patents have been filed in the US, EU, Japan, Taiwan, China, and Australia
Type of business relationship sought
Licensing to or partnering with pharmaceutical or biotechnological companies that are interested in developing drugs for neurodegenerative diseases, and companies that supply reagents to research laboratories.
Licensing contact
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More information available on the web (company website)
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