Prospective stem cell lines as in vitro neurodegenerative diseases models for natural product research

ABSTRACT

The use of in vitro model for screening pharmacological compounds or natural products has gained global interest. The choice of cells to be manipulated plays a vital role in coming up with the best-suited model for specific diseases, including neurodegenerative diseases (ND). A good in vitro ND model should provide appropriate morphological and molecular features that mimic ND conditions where it can be used to screen potential properties of natural products in addition to unravelling the molecular mechanisms of ND. In this mini review, we intend to demonstrate two prospective stem cell lines as the potential cell source for in vitro ND model and compare them to the commonly used cells. The common source of cells that have been used as the in vitro ND models is discussed before going into details talking about the two prospective stem cell lines.

Keyword : Neurodegenerative diseases; Natural products; Stem cell; In vitro ND models