

Preparation and Characterization of Novel Microneedle Arrays (MNs) fabricated with Hyaluronic Acid containing Lonicera Japonica (LaJa)

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Lonicera Japonica (LaJa) is a species of honeysuckle native to north eastern Asia, including Korea, northern and eastern China. LaJa is traditionally used to medicinal plant and human pharmacological studies have demonstrated LaJa possesses anti-inflammatory. In this study, we proposed here the use of microneedle arrays (MNs) containing LaJa for application as a new transdermal therapeutic system (TTS). TTS has fewer side effect than oral drugs and injection it's effective blood concentration of the drug. Transdermal delivery is limited by skin's outer stratum corneum layer, however MNs to make holes in stratum corneum and contact MNs to the skin surface. MNs with hyaluronic acid that have the ability to store 200 times the body size containing LaJa have made by molding method in this work. SEM analysis performed to investigate the morphology of MNs and the transmittances of MNs were measured using an artificial skin. Also, its cytotoxicity was examined by MTT assay and measure the cell survival curve changes. Conclusively, MNs were well fabricated and there were no toxicity.