

Effect of *Bombyx mori*, *Antheraea yamamai* and *Antheraea pernyi* Silk protein in human dermal Fibroblasts and Epidermal Keratinocytes Proliferation after Injury

SangMi Han*, KwangGill Lee, Joo-Hong Yeo, HaeYong Kweon, Soon-Ok Woo, Yong-Woo Lee, In-kyung Lee, HaJu Baek¹, and Kwan-Kyu Park²

Dept. of Agricultural Biology, NIAST, RDA, Suwon 441-100, Korea

¹*Dept. of Wastewater Analysis, KyongsangBuk-Do Government Public Institute of Health & Environment, Daegu 702-702, Korea*

²*Dept. of Pathology, Catholic University of Daegu School of Medicine, Daegu 712-702, Korea*

We have studied the effect of silk proteins to the cell proliferation of human dermal fibroblasts and epidermal keratinocytes after injury. Silk proteins were extracted treatment with enzyme or NaOH solution from raw silk and cutted-cocoon shell of *Bombyx mori*, *Antheraea yamamai* and *A. pernyi*. The cell proliferation after *in vitro* injury are increased in treatment by *Bombyx. mori* (BM-1, 2), *Antheraea yamami* (AY-1, 2) and *A. pernyi* (AP-1, 2). The silk protein fractions-treated cells exhibited proliferation in a dose dependent between 1 ug/ml and 100 ug/ml. Molecular weights of the silk protein fractions were from 300-600 to 900-1500. These results results that the silk protein fractions may function through dermal fibroblast and epidermal keratinocytes proliferation.