

Effect of *Bombyx mori*, *Antheraea yamamai* and *Antheraea pernyi*
silk protein in skin fibroblast cell proliferation

SangMi Han¹, KwangGill Lee¹, Joo-Hong Yeo¹, HaeYong Kweon¹, Soon-Ok Woo¹,
Yong-Woo Lee¹, HaJu Baek², and Kwan-Kyu Park³

¹*Dept. of Agricultural Biology, NIAST, RDA, Suwon 441-100, Korea;* ²*Dept. of Wastewater Analysis, KyongsangBuk-Do Goverment Public Institute of Health & Environment, Daegu 702-702, Korea;* ³*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 skin fibroblast cells (CCD-986sk) 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 0.1 ug/ml and 10 ug/ml. But, the macrophage, RAW 264. 7 cell viability was unaffected by the silk protein fractions by MTT assay. The 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 skin fibroblast proliferation.