

## Development of Bioartificial Hair Papilla Tissue Employing Mesenchymal Stem Cells

유보영, 윤희훈, 신연호<sup>1</sup>, 김영진<sup>1</sup>, 송계용<sup>2</sup>, 박정극\*  
동국대학교 생명화학공학과; <sup>1</sup>라이프코드 의학연구소;  
<sup>2</sup>중앙대학교 의과대학 병리학과  
(jkpark@dongguk.edu\*)

Although the transplanted hair settles at the transplant area as a complete hair follicle and becomes a permanent hair that undergoes a normal growth cycle, the number of hair to be transplanted is severely limited, and in case of transplanting about 2,000 hair strands per one operation, it is generally not possible to perform more than three such operations. Thus, the methods currently used for treating alopecia have a number of limitations, and to overcome such problems, many researchers have attempted to revive hair follicles by *in vitro* culturing hair follicle cells and implanting them in the treatment area. In our study, by utilizing culture-expanded mesenchymal stem cells (MSCs) which don't have aggregative activity, cell-aggregated spheroidal DP tissues were produced by a special culture condition *in vitro*, and hair follicle inductive capacity pertinent to the aggregative activity was evaluated.