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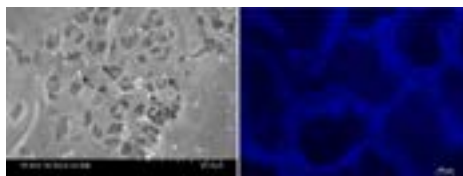
## Preparation of Cellulose-based three dimensional matrices for a skin tissue regeneration

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Cellulose is a versatile materials with adjustable properties, which can be employed for diverse biomedical field. However, coagulated cellulose cannot serve sufficient pores for creating interconnected porous structure in three dimensional constructs, resulting in adherence, proliferation of cells. Accordingly, it was grafted with poly(m-phenylene isophthalamide)(PMIA) for producing a porous structure in the resultant scaffold. The purpose of this research is to develop a novel cellulose-based microporous film as a skin tissue engineered matrix for wound dressing. The films were prepared through a coagulation process modified with peeling off technique, and the synthesizing was confirmed by Fourier transform infrared spectroscopy. Additionally, thermogravimetric analysis, capillary flow prometry, and cellular metabolic assay were carried out. Human keratinocytes were seeded onto the fabricated films in order to determine the biocompatibility.

The adherence and growth of seeded cells were visually examined by scanning electron microscopy, fluorescent microscopic observation by DAPI staining, and a cell viability assay. The results proved that the cellulose-based films have potentiality for wound dressing materials.



**Figure:** SEM and fluorescent microscopic observation probing the cellular growing of human keratinocytes on the fabricated cellulose-based films on 10th day

### Biography

Soonmo Choi is a research professor at Yeungnam University. She obtained her Ph.D. in 2013 for engineering bilayer polymeric scaffold for skin tissue engineering and was awarded National Research Foundation of Korea project. As a research professor, she has been focusing on identifying special ligands on cell surface that act as attachment site when cultured on three-dimensional polymeric substitute and published SCI papers over 30.

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