

Technology/ Title	A composition and method to make reconstructed human skin equivalent	
Subtitle	Recombinant human skin unit	
Technology Type	<input type="checkbox"/> Biotechnology	<input checked="" type="checkbox"/> Device/Diagnostics
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Link		
Technology Description	<p>Our product aims to provide an animal replacement platform to perform skin irritation, skin corrosion, phototoxicity, and genotoxicity tests. To make the skin equivalent unit, human keratinocyte cell line and fibroblasts were used to reconstruct the human skin equivalent. These units were cultured and differentiated for epidermis maturation and stratification. Our full thickness skin equivalent model applied unique methods to avoid using chemical crosslinker which may cause cytotoxicity and eliminate using primary keratinocyte to bypass IRB and save manufacturing cost.</p> <p>Our product has the following advantages:</p> <ol style="list-style-type: none"> <li>1. Human skin includes a dermis layer and an epidermis layer, so our reconstructed skin equivalent has the advantage over most other commercial product for having a dermal layer.</li> <li>2. Independently developed dermal layer biomatrix, without chemical cross-linking agent, can greatly reduce the collapse of the dermis layer after it is made, and improve the success rate of tissue engineering.</li> <li>3. Independently develop the rerogenitization medium formula of human keratinocytes, so that the keratinocytes can be differentiated at the dermal layer, eliminating the shortcomings of individual differences between human specimens and the application for IRB review.</li> <li>4. Independently develop the keratinocyte differentiation medium formula to transform keratinocytes into a complete epidermal layer.</li> </ol>	
Intellectual Property	Taiwan TW I868601	
Key Publications		
Business Opportunity	1. Animal replacement platform to perform skin irritation, skin corrosion, phototoxicity, and genotoxicity tests	

	2. Animal replacement platform for anti-wrinkle drug screening.
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