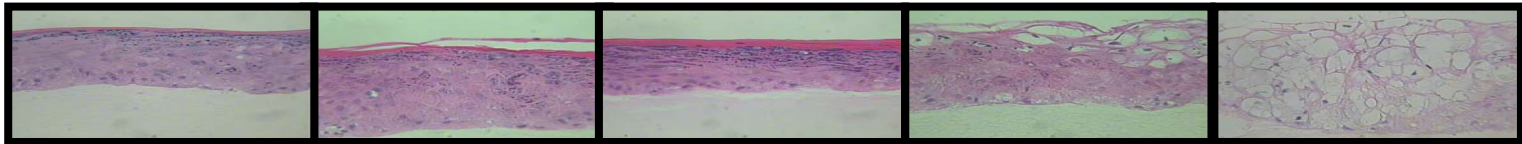


Skin equivalent for *ex vivo* testing

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Organotypic human skin cultures (rafts) have already been successfully used in several research applications demonstrating that they can reproduce the morphology of human skin *in vivo*. In veterinary medicine, the organotypic skin equivalent represent an alternative to animal models in the study of the pathogenesis of epitheliotropic viruses.



Control uninfected

Antiviral tests

Control infected
with orfv

1. Description of the product

This skin equivalent is realised using the air-liquid interface technique in the presence of a dermal equivalent to obtain the differentiation of keratinocytes into a pluristratified epithelium with a stratum corneum on the surface. In the dermal matrix 3T3 J2 fibroblasts act like feeder cells and produce soluble cytokines that allow differentiation of keratinocytes.

2. Innovative aspects of the product

The organotypic culture is a three-dimensional model to reproduce morphological and physiological characteristics of the skin as an alternative to animal models in the research applications. Particularly skin equivalent can be applied to the study of viral pathogenesis of epitheliotropic viruses and for evaluation of the activity of antiviral compounds.

3. Main advantages of the offer

This system will allow a reduction in the number of animals employed for experimental purposes.

4. Technology keywords

Skin equivalent, keratinocytes, epitheliotropic virus, antiviral assay

5. Current stage of development

Already employed for *ex-vivo* antiviral studies.

6. Intellectual property rights

Other contractual agreements.

Technical and scientific publications

Scagliarini A., Dal pozzo F., Gallina L., Guercio A., De Clercq E., Snoeck R., Andrei G. Ovine skin organotypic cultures applied to the *ex vivo* study of orf virus infection. *Veterinary Research Communications* 29 (2005) 245-247.

Dal Pozzo F., Andrei G., Holy A., Van Dne Oord J., Scagliarini A., De Clercq E., Snoeck R. Activities of acyclic nucleoside phosphonates against orf virus in human and ovine cell monolayers and organotypic ovine raft cultures. *Antimicrobial Agents Chemotherapy* 49 (2005) 4843-52

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