

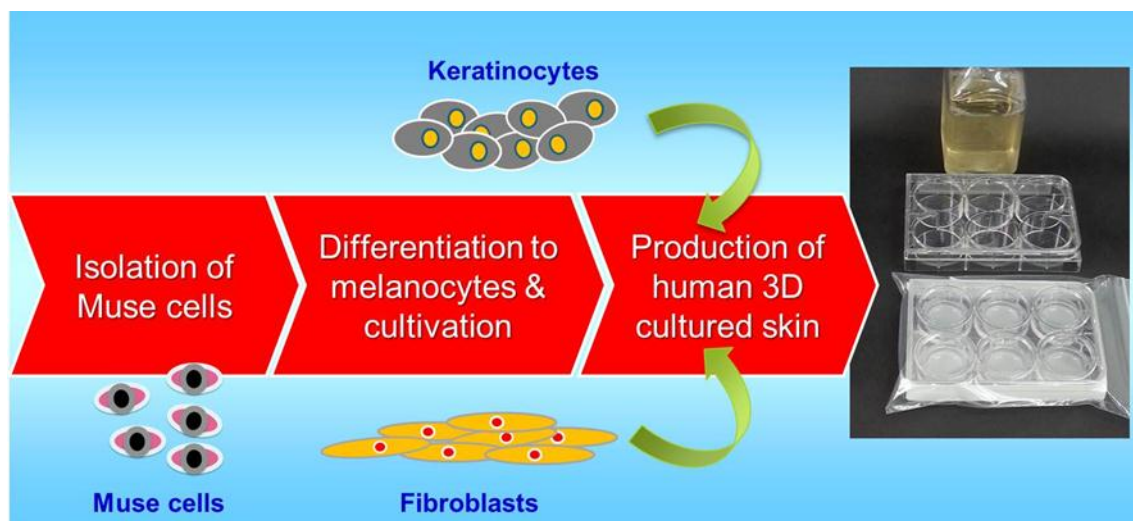
December 11, 2014

New Energy and Industrial Technology  
Development Organization  
Tohoku University  
Clio Inc.  
DS Pharma Biomedical Co., Ltd.

**NEDO Project Leads to Commercialization of Human  
Three-dimensional (3D) Cultured Skin Employing Muse Cells  
- Launch of Screening and Product Performance Test Kit for  
Pharmaceutical and Cosmetic Industries -**

NEDO\*, in collaboration with Dr. Mari Dezawa of Tohoku University and Clio Inc. (Clio), has successfully established a robust method for producing human three-dimensional (3D) cultured skin employing melanin-producing cells (melanocytes) differentiated from Multi-lineage Differentiating Stress-Enduring cells (Muse cells). Clio has licensed this technology to DS Pharma Biomedical Co., Ltd. (DSPB), and DSPB has developed commercially viable manufacturing process of human 3D cultured skin accommodating human Muse cells-derived melanocytes. DSPB launches this human 3D cultured skin as a kit for screening and product performance testing during product development in pharmaceutical, cosmetic and other industries.

As this human 3D cultured skin is very close to actual human skin in terms of 3D architecture, barrier function, etc., it is expected that this will substitute animal testing and become a valuable tool for investigating potential side effects such as vitiligo of pharmaceuticals and cosmetics, etc., as well as for evaluating skin whitening efficacy of cosmetics.



(\*: About NEDO, please click [here](#))

Contact:

Cell Science Division

Product Management & Business Development

DS Pharma Biomedical

Tel: +81-72-636-8160

Email: [dspb-ls@bio.ds-pharma.co.jp](mailto:dspb-ls@bio.ds-pharma.co.jp)