From Thymus to Skin

演者：Yann Barrandon, M.D, Ph.D.
Professor, Ecole Polytechnique Fédérale Lausanne and
Centre Hospitalier Universitaire Vaudois, Lausanne, CH

日時：2010年11月10日（水）15:00〜16:00
場所：再生医科学研究所 東館5階 ルーフテラス

要旨

The thymus contains epithelial cells (TECs) that form a complex three-dimensional network organized in cortical and medullary compartments, the organization of which is strikingly different from simple or stratified epithelia. Despite the different embryological origins of thymus and skin (endodermal and ectodermal respectively), some TECs express stratified-epithelia markers, a finding interpreted as promiscuous gene expression. We have recently demonstrated that the thymus of the rat contains a population of clonogenic TECs that can be extensively cultured and cloned (Bonfanti et al., Nature 2010). These TECs conserve the capacity to integrate in a thymic epithelial network and to express Aire and MHC Class II molecules. Surprisingly, they can permanently adopt the fate of hair follicle multipotent stem cells when exposed to an inductive skin microenvironment, a change in fate correlated with robust changes in expression of genes important for TEC identity. Hence, microenvironmental cues are sufficient to re-direct epithelial-cell fate, allowing crossing of primitive germ layer boundaries and increase in potency.

連絡先
京都大学 再生医科学研究所
生体システム制御学分野 中川俊徳
Tel:075-751-3872
e-mail:nakagawagakana@fronteir.kyoto-u.ac.jp