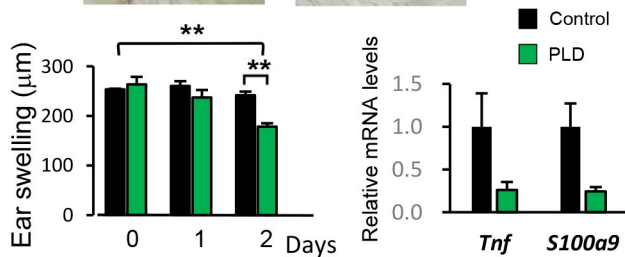
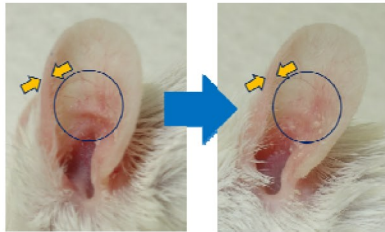
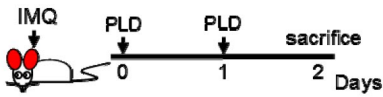


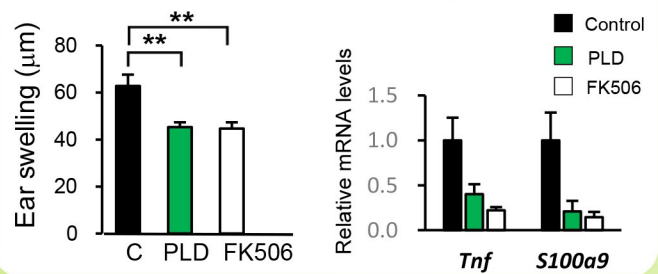
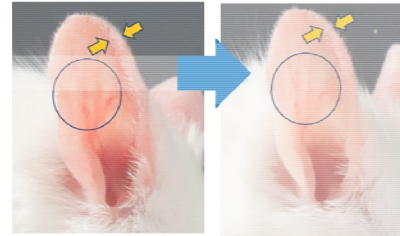
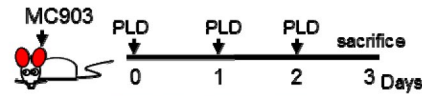
# Lysoplasmalogen-specific Phospholipase D(LyPls-PLD) can be a non-steroidal topical treatment that is specific to Epidermal Hyperplasia Symptom

## Topical application of LyPls-PLD

Improving effect of LyPls-PLD for hyperplasia in imiquimod (IMQ)-treated mice (Psoriasis)



LyPls-PLD / FK506 (Tacrolimus) comparison of improving effects for hyperplasia in MC903-treated mice (Atopic Dermatitis)



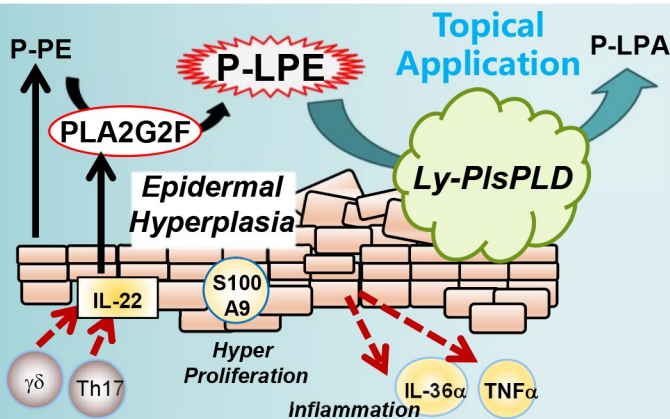
Patent Application : PCT/JP2018/019345 (with Tokushima University)

## Mechanism

Group IIF-secreted phospholipase A2 (PLA2G2F) expression level is high in the human thickened epidermis and psoriasis patients.

From the investigation using PLA2G2F overexpression/ KO mice model and lipid analysis of epidermis, we found that Lysoplasmalogen molecule P-LPE is released on epidermis by PLA2G2F and promote hyperplasia.

(K. Yamamoto *et. al.*, *J. Exp. Med.* 212, 1901-1920, 2015)



## Safety

- Topical treatment of 10μg/day LyPls-PLD for 8 weeks in wild type mice had no adverse event (no difference versus vehicle control on TNF-α gene elevation in epidermis, spleen weight) .

- No cytotoxic effect in J-TEC LabCyte EPI-MODEL (OECD TG439 guideline listing model )

## Proposal

We can propose that LyPls-PLD could be an optional treatment for hyperplasia, which can promote the current steroidal /anti-inflammatory treatment due to its hyperplasia-induced P-LPE specific hydrolyzing characteristic.

For more information please contact our Technology Licensing Office  
Person: Yasuko Makino, PhD., Licensing Associate



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