

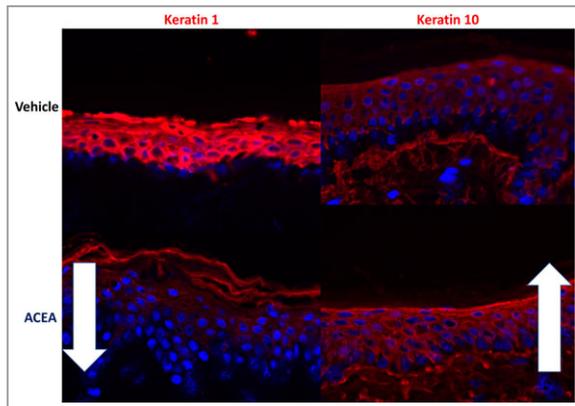


Image Correspondence

Cover Image: Neuroendocrine treatment of inherited keratin disorders by cannabinoids?

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DEAR EDITOR, Epidermolytic ichthyosis (EI) is a rare genodermatosis caused by mutations in keratins 1 or 10. The available treatment options for this debilitating condition, such as retinoids, are highly unsatisfactory and associated with severe adverse effects.¹ A promising novel approach for the treatment of keratin disorders may be to upregulate the expression of compensatory keratins and/or to downregulate the expression of the mutated keratins by neuroendocrine mediators that profoundly modulate the expression of selected keratins.² The current illustration underscores the potential of this as yet untapped, innovative treatment strategy for inherited human keratin disorders. Here we show that the cannabinoid receptor 1 agonist, arachidonyl-2'-chloroethylamide (ACEA) ($1 \mu\text{mol L}^{-1}$, 48 h), can upregulate the expression of keratin 10 protein in human epidermis, and decrease that of keratin 1 in human skin organ culture.



Although it remains to be examined how reproducible the specific keratin-regulatory effects shown here are in skin from different patients, one wonders: can appropriate modulation of cannabinoid signalling (e.g. by topically applied agents) suppress mutated keratin 1 and upregulate the expression of functionally compensatory keratin 10 in patients with EI?

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- 2 Ramot Y, Paus R. Harnessing neuroendocrine controls of keratin expression: a new therapeutic strategy for skin diseases? *Bioessays* 2014; **36**:672–86.

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News and Notices

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