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## EXPRESSION OF EPITHELIAL DIFFERENTIATION MARKERS IN CUTANEOUS ADNEXAE OF FOOD-PRODUCING ANIMALS

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One striking feature of terminal differentiation in mammalian epidermis is the deposition of a 20 nm thick, insoluble layer of protein on the cell's inner surface, named cornified cell envelope (CE). The dermal adnexae show a different and more complex differentiation pattern than other squamous stratified epithelia.

The main objective of this work was to evaluate, by means of immunohistochemical techniques, the expression and distribution of keratin filaments and cornified cell envelope components in the adnexae of different cutaneous regions from food-producing animals. Samples from eight cutaneous regions were collected from goat, sheep, cow and pig.

For characterization of keratins, two monoclonal antibodies (DAKO) were used. MNF116, labeling human keratins 5, 6, 8, 17 and 19 in non differentiated keratinocytes and simple epithelia and LP34, labelling human keratins 5, 6 and 18 in well-differentiated keratinocytes. The distribution of corneum envelope precursors was studied using two antibodies: monoclonal antibody anti-human involucrin (NOVOCASTRA), labelling keratinocytes of the upper *stratum spinosum* and *stratum granulosum*, and polyclonal antibody anti-human profilaggrin (ZYMED), labelling keratinocytes of the *stratum granulosum*.

With the MNF 116 antibody, the follicular epithelium was positive in all species, always in the outer root sheath and rarely in the inner root sheath. The cutaneous glands and ducts were also positive. With the LP34 antibody, was positive the outer root sheath from follicular infundibulum. The sebaceous ducts were also positive in some sheep and pig regions.

With the anti-involucrin antibody, the follicular outer root sheath was positive in most studied regions and the inner root sheath was positive in the sheep and cow. Only small ruminants species revealed positive reaction in the glandular epithelium from some cutaneous regions. The follicular outer root sheath was positive with the anti-profilagrin antibody in the infundibula from all studied species. The epithelial components of nasal and labial glands revealed an irregular reaction.

It was possible to conclude that cutaneous adnexae expresses keratins characteristics from simple epithelia with major intensity than epidermal layers and that the follicular epithelium expresses keratins characteristics from well-differentiated keratinocytes when it's differentiation and keratinisation are similar with those from epidermis.