

## Cosmetic & Pharmaceutical Research > Cosmetic & Pharmaceutical Research > Aging

# 4

### Morphological, structural and biophysical properties of French and Brazilian photoaged skin.

Mercurio DG, Jdid R, Morizot F, Masson P, Maia Campos PM. *Br J Dermatol.* 2016 Mar;174(3):553-61. doi: 10.1111/bjd.14280.

#### ABSTRACT

**BACKGROUND:** Knowledge of skin biology and its alterations in different populations is very important for the development of appropriate skincare strategies. **OBJECTIVES:** To evaluate and compare morphological, structural and biophysical properties of photoaged skin in French and Brazilian populations, using biophysical and skin-imaging techniques. **METHODS:** Forty-one French and 41 Brazilian healthy, female volunteers aged between 40 and 65 years were enrolled. Each participant completed a questionnaire concerning habits related to cosmetic use, sun exposure and sun protection during different life periods. Skin on the face and volar forearm was evaluated using noninvasive techniques, to determine skin colour, transepidermal water loss (TEWL), stratum corneum water content, skin microrelief, skin viscoelasticity and dermis structure. Reflectance confocal microscopy was used to measure epidermal layer thickness and epidermal morphological and structural characteristics. **RESULTS:** Compared with Brazilian skin, French skin was more hydrated, had a lower TEWL and presented a distinct viscoelastic profile on the forearms and face. Brazilian facial skin was more wrinkled, and the dermis was less echogenic on the forearms and face. The French participants had thicker stratum corneum. Brazilian facial skin presented a higher prevalence of rete ridge effacement, low interkeratinocyte reflectance, huddled collagen and solar elastosis. **CONCLUSIONS:** Morphological, structural and biophysical differences were found when assessing the skin of the Brazilian and French participants, who were exposed to different environmental factors. © 2015 British Association of Dermatologists. PMID:26555889