



A Case-Study of Two Sunscreens that May Prevent Apoptotic Sunburn

Chanda Siddoo Atwal

*Medical College of Wisconsin, Milwaukee, Wisconsin, USA
E-mail: chanda@kapoorcompanies.com*

Abstract: Two new sunscreen formulations were tested for their respective ability to block peeling, or, apoptosis following exposure to solar radiation. The active ingredients utilized were zinc oxide and melanin. A slight pinkish sunglass line appeared on the nose following the trial with the zinc oxide sunscreen. Although probably representing some degree of immediate pigment darkening and persistent pigment darkening in response to UVA radiation, the line was none of the expected melanin colours in the eumelanin or pheomelanin range {brown, black, yellow, or red}. In the case of the melanin sunscreen, a sunglass line was visible after one hour of sun exposure on both nose and cheeks while no acute redness or inflammation was observed. Once again, the sunglass line was pinkish and there was some slight stinging during sun exposure possibly indicating a little sunburn. Since there was no peeling even 96 hours after sun exposure with either sunscreen, this indicates that both these formulations may be somewhat effective in preventing the apoptotic phase, but not necessarily the inflammatory phase, of UVB-induced sunburn by uncoupling the two events.

Key Words: Sunscreens, Zinc oxide, Melanin, Peeling, Sunburn, Apoptosis
