



Skin Care Formulations for Preventing and Treating Skin Cancer

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Non-carcinogenic formulations to prevent and treat skin cancer

A portfolio of three skin care formulations aims to prevent and even treat skin cancer. The portfolio consists of a base lotion, a sunblock lotion and a pharmaceutical skin cancer treatment.

- **Base lotion.** This skin cream has been tested and confirmed to be non-carcinogenic in mice (i.e., does not promote or cause skin cancer, nor does it alone protect against skin cancer). This lotion acts as a base formulation for sunscreen components, anti-aging and/or anti-cancer/anti-tumor agents for skin application.
- **Sunblock lotion.** The sunblock component protects against UVA- and UVB-induced skin cancer, a claim based on studies in which sunblock ingredients were tested for effectiveness in preventing solar UV-induced skin cancer in mice. This formulation will be developed for the consumer market and will also include one or more natural anti-aging/anti-wrinkling compounds.
- **Pharmaceutical skin cancer treatment.** This formulation prevents and/or treats skin cancer (actinic keratosis, squamous cell carcinoma, or basal cell carcinoma) in high risk individuals (e.g., immunosuppressed organ transplant patients, HIV, cancer patients and others with compromised or deficient immune systems). The formulation contains rocuronium bromide or betamethasone 17-valerate, which are FDA approved for other uses but also show efficacy in cancer prevention and/or therapy by inhibiting p53-related protein kinase (PRPK).

Proven effectiveness based on solid scientific evidence

Moisturizing creams, cosmetics and other topical home care products may contribute to increasing non-melanoma skin cancers (NMSC) and/or melanoma in humans. While

moisturizing creams and ointments are generally tested for irritant activity and effects on sensitization, these skin care preparations are generally not tested for carcinogenic activity per se nor for tumor promoting activity. The marked increase in cutaneous squamous cell carcinoma (cSCC) every year suggests that commercially available sunscreens either are not being used appropriately or simply don't work. This portfolio of skin care formulations shows proven effectiveness based on solid scientific evidence. In addition, the pharmaceutical formulation completely blocks skin cancer development either before or after chronic sun exposure. No other existing product can make that claim.

Phase of Development

- In vivo animal studies

Benefits

- Protects against UVA- and UVB-induced skin cancer
- Completely blocks skin cancer development either before or after chronic sun exposure

Features

- Base lotion confirmed non-carcinogenic in mice
- Base formulation for sunscreen components, anti-aging and/or anti-cancer/anti-tumor agents
- Includes natural anti-aging/anti-wrinkling compounds

Applications

- Skin cancer treatment
- Skin creams
- Anticancer treatments
- Consumer products
- Pharmaceutical products
- Pediatric Pharmaceuticals

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