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ABOUT THE COVER

The cover features a photomicrograph (200X magnification) of a frozen cross-section of laboratory-generated human skin containing a melanocytic lesion created from a cell line obtained from a patient having an early-stage melanoma. This model represents organotypic skin, to which topical agents can be applied for cancer prevention studies that recapitulate results of agents applied to animal skin. The organotypic skin contains layers and boundaries (an epidermis and dermis) similar to those in human skin. Furthermore, green fluorescence protein (GFP)-tagged WM35 cells form an early melanocytic lesion in this model that is similar in structure to that seen in humans with disease at the same stage of development. The GFP-tag in the cells enables measurement via fluorescence microscopy of the effects of topically applied chemopreventive agents. The photomicrograph shows the GFP-tagged melanocytic lesion cells (green) and DAPI-stained nuclei (blue) of these cells, as well as nuclei of keratinocytes and fibroblasts present in the organotypic skin, six days after creation. As reported in this issue of the journal, the chemopreventive efficacy of topically applied ISC-4 was evaluated in this model and compared with its effects in animals with invasive subcutaneous human melanoma xenografts. Cumulatively applied ISC-4 reduced melanocytic or melanoma lesions in the organotypic skin model by 80%-90% and similarly decreased tumor development in animals by ~80%. See article by Nguyen et al. (beginning on page 248) for more information.