CLINICAL SNIPPETS
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Follicle Futures

There are about 90 human tyrosine kinases and about half of those are receptors. Yu and colleagues analyzed cultured rat cells and found that follicular papilla cells and dermal fibroblasts expressed different tyrosine kinases. Consistent with their data, c-met (HGF receptor) kinase preferentially stimulated growth in rat follicular papilla cells and PDGF receptor preferentially stimulated rat fibroblasts. The recognition that kinases are somewhat hair follicle-specific may lead to drugs that inhibit their expression and therefore, can serve in hair removal. J Invest Dermatol 123:283-290, 2004.

New Hope for Treating MF and SS?

Patients with advanced stages of mycosis fungoides and Sézary syndrome often receive poor prognoses, and novel therapies are needed. Zhang and colleagues examined the capacity for CDDO and bexarotene to treat MF/SS cells. CDDO, a multifunctional synthetic oleanane triterpenoid, inhibits proliferation of many human tumor cell lines, and bexarotene, a retinoid RXR ligand, reduces cutaneous manifestations of MF/SS in both early-stage and late-stage disease. Since CDDO is so powerful in inducing apoptosis, and many chemotherapeutic agents work similarly, the clinical potential of CDDO, either alone or in combination with bexarotene, is a promising area for study. J Invest Dermatol 123:380-387, 2004.

All Langerhans on Deck

Langerhans cells (LC) are considered the immune system’s “sentinels”, presenting antigens that stimulate T cell-mediated defenses against viral infections and neoplasias of the skin or mucosa. This information is important for those pursuing vaccine design and immunotherapy, and provides insights into the pathogenetic mechanisms for cutaneous diseases. Here, von Bubnoff and co-workers show that specialized LC can produce indoleamine 2,3-dioxygenase (IDO), which inhibits T cell response. This new view of LC as serving an immunoregulatory function in promoting T cell tolerance will help investigations with allogeneic fetuses, the inhibition of graft rejection, or, possibly, in some individuals, the prevention of allergic disease. J Invest Dermatol 123:298–304, 2004.

Mapping AA

Alopecia areata, an autoimmune disease that targets actively growing hair follicles, affect nearly 2% of the general population. Sundberg and colleagues, using mouse cross-strains, identified expanded intervals for AA genetic susceptibility on two mouse chromosomes where a variety of immunoregulatory genes are located. This provides data for analyzing the genetic candidates responsible for AA as well as insights into other conditions, such as thyroid disorders, which have been associated with AA subsets. Random genome-wide linkage screening in mice and humans can lead to greater understandings of AA and other complex polygenic diseases. J Invest Dermatol 123:294–297, 2004.

Strip Searching for HPV

Human papillomavirus (HPV) genomes are often retrieved from tumor biopsies, but cutaneous HPV are common on the top of skin lesions and in healthy skin. Forslund and colleagues, comparing samples from skin lesions, same-tumor biopsies “stripped” of superficial cells, and healthy skin, observed that HPV DNA prevalence was greater in lesions than in biopsies, but viral rates were equivalent in healthy sites and tumor tops. Apparently, the presence of virus is not specifically associated with the tumor below. These findings will inform studies on HPV in non-melanoma skin cancers—a risk for renal and other post-transplant patients. J Invest Dermatol 123:388–394, 2004.

All Wavelengths Count

In humans, nevi are both indicators for developing melanoma and short-term markers of adverse reactions to melanoma-inducing sun exposure. To link light-wavelength ranges to pathogenesis, Menzies and colleagues exposed guinea pigs to ultraviolet (UV)B to near UVA2 light, UVA, visible light, a full solar spectrum, or no irradiation. As sun-exposure increased, so did nevi, and the sun-exposure patterns similarly induced both nevi and melanoma. The most powerful findings for nevi induction was in the UVB-treated group compared with all groups. Surprisingly, wavelengths beyond UVB may have a protective role. J Invest Dermatol 123:354–360, 2004.

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