

# Anti-aging therapies: Other half of the story

Sir,  
We read with great interest the article “Anti-aging therapies” written by Vedamurthy.<sup>[1]</sup> In this respect, we want to elaborate further, especially with respect to over-the-counter products and their ingredients. The desire to look beautiful in this anti-aging generation has led to the demand for products that reduce the cosmetic effects of aging. Although topical medications such as tretinoin and alpha hydroxy acids have been demonstrated in the scientific literature to reduce the signs of aging, patients often seek over-the-counter anti-aging products due to the market availability and comparably cheaper prices.<sup>[2,3]</sup>

Recently, consumer and media attention has focused specifically on products utilizing ‘natural’ ingredients such as vitamins, minerals and botanical/herbal extracts.<sup>[2]</sup> These ingredients have the appeal of appearing wholesome and ‘organic’. Although scientific evidence shows that some of these ingredients do have possible *in vitro* anti-aging activity, the question remains whether it is possible to deliver adequate doses to the skin *in vivo* and to produce either histological or clinical improvement of wrinkles, lentigines, coarseness,

pigmentary changes, dryness and other characteristics of aging skin.

Vitamin E is one of the better established ingredients in over-the-counter treatments of skin aging.<sup>[2]</sup> It is believed to reduce rhytides, skin roughness, length of facial lines and depth of wrinkles.<sup>[4]</sup> The protective effects of vitamin E and C against photoaging have been demonstrated in various animal and *in vitro* skin models.<sup>[5]</sup>

Other than vitamins, tea extracts are becoming popular. The leaf and bud of the plant *Camellia sinensis* are used to manufacture nonherbal teas such as green tea, black tea and oolong tea. These teas contain polyphenolic compounds that have significant antioxidant and anti-inflammatory activity.<sup>[6,7]</sup> The *Ginkgo biloba* plant, better known as a dietary supplement for the treatment of dementia and memory loss, also has been purported as anti-aging medicine for the skin.<sup>[8]</sup> Grape seed extracts which are rich in polyphenols are supposed to have antioxidant, anti-inflammatory and wound-healing properties.<sup>[9]</sup> Lemon oil and lavender oil, traditionally used for their aromatic properties, have been found to increase resistance to oxidative stress when applied to the skin.<sup>[10]</sup> Rosemary extract is another botanical that contains various antioxidants, compounds known as phenolic diterpenes.<sup>[11]</sup> Protein extracts of soybeans and soymilk, including isoflavones such as genistein and daidzein, are among the most recent botanical agents to gain popularity in over-the-counter anti-aging preparations.<sup>[11]</sup> Still there are a number of ingredients which are unsung heroes in their territory, especially in India like aloe vera, cucumber extract, witch hazel, wheat protein and algae extract.

The appearance-conscious public of the present generation frequently ask the dermatologist for newer anti-aging therapies. Before we reach a stage where we have evidence-based anti-aging therapies, much hype has been made by the pharmaceutical, cosmeceutical and cosmetic companies promoting anti-aging or anti-wrinkling products. In the land of Ayurveda with no control over the cosmetic products, dermatologists in India and elsewhere want their share in this big kitty.

Present-day dermatologist-based therapies are targeted at some kind of controlled therapeutic dermal damage and regeneration of new collagen.<sup>[3]</sup> The often used supplements in these therapies are topical steroids and skin lightening agents, which actually promote skin thinning, thus making it more vulnerable to environmental insults. Good diet and physical exercise is hardly being promoted as beneficial to the skin.

## REFERENCES

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