

hydroxy acids, beta hydroxy acids, aloe vera, panthenol, kinetin and vitamins A, C, E¹.

The cosmeceutical concept is used by many skin-care companies; especially those endorsed by dermatologists, to give the impression that the products contain more effective or more biologically active ingredients than just ordinary cosmetics. As more and more dermatologists are endorsing cosmeceutical products, one may forget the cosmetic products.

Despite all this medical pedigree, the cosmeceuticals are not that stringently regulated or controlled. Hence, anyone can slap the label with tall claims to promote these products saying the products are more beneficial than the existing conventional regulated cosmetic products. Cosmeceuticals are nothing more than a marketing term with illusions of grandeur. Even the United States Food and Drug Administration (USFDA) does not recognize the term 'cosmeceuticals', and considers that these products are merely

cosmetics with clever marketing language attached. It is some kind of a vague language used by cosmeceutical manufacturers that make the regulatory job complicated at times. It is difficult for them to decide 'what is a drug?' and 'what is only drug-like?'. Many consumers readily believe outrageous claims about luxury cosmeceuticals because they mistakenly think that the USFDA must have approved these claims². The hideous truth behind cosmeceutical marketing is more of advertisement of products highlighting the science and technologies used.

Cosmeceuticals are not used in the diagnosis or treatment of diseases, nor, in FDA parlance, are they intended to affect the structure or function of the human body. Cosmetic companies in order to sell their products have long made health-related claims. But these days the risk is that if these companies become too aggressive in making claims, their cosmeceutical products could result in an FDA warning or might even result in a recall.

It is therefore high time that regulatory authorities prescribe regulatory guidelines for cosmeceuticals to check which products work and which do not.

1. Dureja, H., Kaushik, D., Gupta, M., Kumar, V. and Lather, V., *Indian J. Pharmacol.*, 1995, **37**, 155–159.
2. Anti-Aging and Cosmeceutical Corner, *Happi*, 2006, **43**, 38–42.

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Hard-work versus productivity

'I'm a great believer in luck and I find the harder I work, the more I have of it.'

– Thomas Jefferson

Often we try to equate hard-work and productivity. Is productivity proportional to hard-work? The answer is 'not directly'. I think productivity or output (in terms of some quantitative parameters like publications) depends upon the stage of the project. Usually, initial stages require many experiments which become a part of the spade work and may not get reflected in the finished product. Quite often, months of bench work reaches a finishing line and finds a place in print in the form of a few lines. However, these lines have to be significant. Certainly, those who have undergone the travails of long hours of bench work in research will be able to appreciate the arithmetic of hard-work vs productivity.

The conception of great ideas requires a convergence of bench work, holistic thinking, and obsession that prepares the

mind for serendipity. Hard-work is not a substitute for hard-thinking and vice versa. Who gets the great ideas is a moot question. There are umpteen examples in the history of science, where simple ideas did not occur to stalwarts of the day. For example, everyone had observed that apples fall on the ground, but only Newton could come up with the laws of gravity. It is germane to have breaks from the bench work. Ruts of thoughts or a single activity inhibits creativity. Also, according to Peter Medawar, one should not keep on reading too many papers as these block one's thinking and creativity.

Workers usually fall into two broad categories. The first is truly hard-working or workaholics. It is always a good idea to get to your laboratory as early as possible; the early birds finish their daily work on time following an organized approach. Whatever experiments you plan for the day can be finished in a decent time-frame. The second type are those who pretend to work.

According to Thomas Elva Edison: 'Being busy does not always mean real work. The object of all work is production or accomplishment and to either of these ends there must be forethought, system, planning, intelligence, and honest purpose, as well as perspiration. Seeming to do is not doing'.

There is also a concern whether the bench work has gone waste. One need not worry on this account as long as the approach is systematic. Success is a journey not a destination. Again, Edison rightly pointed out on his way to the discovery of incandescent bulb: 'I have not failed. I've just found 10,000 ways that won't work'.

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