

## Plants contain health secrets for functional foods

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By **Dr Suman PS Khanuja**, chief mentor and director, NutraHelix Biotech

There is a clear gap between what an aware consumer would like to have and what the nutraceuticals and functional food products in the markets are. If we consider the mismatch of available and desired nutraceuticals as an opportunity to innovate, the path is clear for technological interventions.

The consumer demand is and will be for good taste and texture in healthy foods. This clearly places the technological challenge for innovation to retain the taste, texture, organoleptic characters, and cooking quality in such nutra foods. Contrary to this, however, most of the available functional foods lack some or all of these features.

The world has witnessed a transformation of "going digital" in recent past but the immediate future is for the world to "go vegan", that is, beyond vegetarian or herbal. The vegetation that will steer this transformation is not limited to medicinal herbs alone but to the whole plant kingdom.

### Opportunities galore

The nutraceuticals sector poses a ready-to-utilize challenge to research with agriculture. The man behind green revolution, Nobel laureate Dr Norman Borlaug had once expressed, "Plants don't speak, they just whisper, you have to be real close to them to understand." These words in my understanding make the basis for "secondary agriculture". The aim through tertiary agriculture would be not only to enhance the value of agricultural products, but also to elevate their use in preventive healthcare.

With traditional diversity in food habits and the range of processes and recipes used by communities in preparing meals for health, it is an advantageous situation in India for nutraceuticals' business. The recipes and ingredients of meals are the

gateway to invent health ingredients and innovate nutraceuticals-based food formulations with desired organoleptic properties combined in likeable edible formats.

According to Frost & Sullivan and BCC Research sources, the global nutraceuticals market is valued at \$149.5 billion in 2011 and is predicted to rise to almost \$207 billion by 2016. In this, Indian nutraceuticals market is valued at approximately 7,400 crore (\$1.48 billion) in 2011 (about 1 percent share) which is anticipated to be around 14,655 crore (\$2.73 billion) by 2016 (about 1.32 percent share). Functional foods are considered to be the quickest growing category till 2015 followed by dietary supplements. However, dietary supplements, specifically herbal and dietetic supplements, will form the greatest opportunity areas for nutraceutical manufacturers, driven by growing demand from an evolving consumer base.

Unfortunately, India's positioning in the global market has not stretched beyond one or two percent. This could be because of the lack in the vision and strategy to achieve more than what has been targeted.

The only way to target India's positioning as a visible giant player will be to create clear investment priority of next plan in nutraceuticals research and development (R&D). Therefore, supporting different ideas of inventoin and innovatoin will facilitate converting gaps into technologies.

### About the author

**Suman Preet Singh Khanuja**, chief mentor, is translating his innovation in science by shaping up a novel venture as a research driven startup, NutraHelix Biotech, in the nutraceuticals sector. He has served as former director, Central Institute of Medicinal and Aromatic Plants (CIMAP India) and was elected the fellow of National Academy of Science, India (FNASc) and National Academy of Agricultural Science (FNAAS). He is also an eminent advisor to the biotech industry in India.