De Novo Perspectives in the Nutraceutical Industry an Overview and Insight

Jyoti D Vora*
Certified Functional Foods Scientist, (FFC, USA), Proprietor and CEO, Dhirang Consultants, Mumbai, India

*Corresponding Author: Jyoti D Vora, Certified Functional Foods Scientist, (FFC, USA), Proprietor and CEO, Dhirang Consultants, Mumbai, India.


Posterity would definitely remember the present generation with veritable envy, an insatiable curiosity and a mammoth sense of wonderment. The present era is undoubtedly going to be acknowledged as the absolute one which has witnessed the renaissance of Science, first person. Interestingly, we are the extremely fortunate Homo Sapiens who have inhabited this planet Earth, when the Human Genome was mapped and furthermore, we have collectively endeavored to single-mindedly labored towards the achievement of Holistic and sustainable good Health and Wellness. Nutritional interventions are the order of the day in the quest for Lifestyle enhancement and Wellness profiles are achieved and nurtured through use of well thought out dietary practices. Today’s researchers are also the emphatic stake holders in a time zone, when the word “Nutraceutical”, was formally coined and the advent of dietary intervention became the dictum for disease prevention, disease cure and definitely disease management. At this juncture of knowledge reinvention, it is imperative to recognize that to ride the crest of success in this fascinating arena of science, various aspects of research have to be actualized. Additionally we have to systematically and in a committed manner, concentrate on capacity building, training, consolidation of previous experimental findings. Revisiting our extremely precious heritage and Vedic traditions would serve as a forerunner to many novel research endeavors. Addressing Global issues like malnourishment, avitaminosis and alleviating human suffering through science are endeavors. Addressing Global issues like malnourishment, avitaminosis and alleviating human suffering through science are objectives which have to be concerted and addressed.

This protracted exercise of capacity building would certainly serve to provide the necessary Human Resources to shoulder the forward journey of our discipline. The effort is a multifaceted one and involves the Industry players, Law makers, the laity and last but not the least the Academicians..... to first strategize and then actualize their objectives in order to give our discipline its rightful place of honor in the ramparts of Science.

Interestingly, Nutraceutical Sciences is not at all a novel discipline. While Hippocrates enunciated those many years ago the efficacy of “Let Food be thy Medicine”, in our own rich cultural heritage, we are very lucid about, “Anna he purna Bramha”, (Food is at the fulcrum of all generations and is the personification of the Creator). Hence, our Science comes with a natural advantage to us Indians, namely that it is Heritage revised. This becomes a strong springboard of success as we can continuously refer to the large quantum of research carried out in our beautiful country in the past centuries by our extremely knowledgeable and enlightened ancestors.

Having recognized the undeniable importance of Human Resources in any enterprise, it is imperative to add the adjective “trained” before the phrase Human Resources. Hence, training and academic proficiency become the fundamental tool of capacity building. In order to do so, one needs to concentrate on building a Skill set which is intrinsic and uncompromising in its quality. This includes two kinds of educative platforms.

The first can be aptly described as “de novo”, namely gradually generating a set of young professionals with extremely high end employability quotient. These would be the workforce who would address the needs of our Nutraceutical Industry directly.

The second educative platform addresses the extremely relevant aspect of providing Value addition to the already employed workforce. This effort would enhance their “on the job” experience and dexterity with a theoretical and experimental backup, thus completing their professional profile. It would also serve to bring the taskforce up abreast of the latest inroads in research and development. In a sense, the exercise finds an analogy in an Adult Education enterprise. Far from being derogatory, it specifies the dual requirement of “unlearn and then relearn” which is the absolute need of the hour for our Food Science and Technology Industry.

It is a very interesting fact that many Companies whose working ethos was Pharmaceuticals, today are single mindedly reinventing themselves as Nutraceutical Companies. The new health mantra is Nutraceuticals, Nutritional, Functional Foods, Dietary Supplements and what have you. It follows that they need to hone the skills and the mindset of their employees and task force to accept and inculcate the change of vision in their Company profile.

Some very significant areas of contemporary interest and value Food Science, Food Regulations, Food Safety, Quality Control, Food Packaging, Sensory evaluation and Organoleptic Analysis of Foods, Post Harvest Technology, Convenience Foods, GMP (Good Manufacturing Practices), GLP (Good Laboratory Practices), Food Microbiology, Instrumentation Techniques, Frontiers in Food Biochemistry, Product Showcasing, Documentation and Record Maintenance.

Citation: Jyoti D Vora, "De Novo Perspectives in the Nutraceutical Industry an Overview and Insight". Acta Scientific Nutritional Health 4.2 (2020): 01-02.
Protocol building, NPD (Novel Product Development) Bioethics, Scientific Laboratory design, Nutrigenomics, Population Genetic Studies, Food Laws, Forensics in Food...to name a few.

In addition to this, as a universal component of their tool kit, all professionals connected to the Nutraceutical industry, need to be very well versed with an in-depth understanding of basic aspects like Claims, VFM (value for Money), Exim requirements, Global FDA norms, Food Supply chain namely Supplier→Producer→Consumer and above all the Farm to Fork equation. This effort may definitely involve the marrying of management to science and has to be an ethos across the Hierarchy of a company. The process of knowledge acquisition is a strictly dynamic one and requires continuous updating and dialogue.

In a sense, the Nutrition and Food Industry is in its fledgling state and needs to prove it’s worth the world over. It has to be given its rightful place in the vast plethora of Science. Naturally, accountability benchmarks are to be stringently adhered to and followed in an uncompromising manner. The exercise of Capacity building must be recognized as a symbiotic activity involving expertise from various quarters. Hence, a satellite phenomenon can be generated where, Academicians and researchers can be called upon to provide objective opinions and to don the role of trouble shooters. This is particularly important in start-ups of entrepreneurial nature and also to tackle the teething problems which are formidable obstacles to success of any enterprise. Mentoring and hand holding are the order of the day.

The encouraging fact at the dawn of this great industry is that it is here to stay. Backed by the realization that food is a recession free commodity and health is a universal requirement, we would serve to recognize again that in the realms of Nutraceutical Sciences, history connects to contemporary science and yesterday’s wisdom aids today’s knowledge for the achievement of a disease free tomorrow. This is what is going to drive us towards better capacity building.

“The doctor of the future will no longer treat the human frame with drugs, but rather will cure and prevent disease with nutrition”- Thomas Edison.

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