## **Assessing Scientific, Market Acceptance of Curcumin**

by Shaheen Majeed



Scientific and market acceptance of curcumin has come a long way, driven by more than 7,500 scientific publications to its credit. The source of curcumin—turmeric—is widely used as a kitchen ingredient and popularly known as curry powder in India and other parts of Southeast Asia. It is documented in the ancient texts of Ayurveda for its potential antimicrobial property and multiple health benefits. Modern research as confirmed and expanded upon traditional knowledge, which has driven market acceptance.

After the identification of curcuminoids and elucidation of their structure, its evaluation for a number of properties such as antimicrobial, antioxidant and anti-inflammatory were initiated in vitro. Increasing evidence on its therapeutic benefits led to more studies on animal models and human subjects.

The role of curcumin has been substantiated in chronic inflammatory conditions—the compound is found to effectively inhibit NF $\kappa$ B, the master switch of inflammation. Inflammation has been identified as the underlying condition for chronic health conditions such as arthritis, Alzheimer's, pulmonary disorders, auto-immune disorders and several forms of cancer. The role of curcumin is not limited to this inflammatory target, but other markers such as COX-2, STAT-3, TNF- $\alpha$ , interleukins, MMPs and other cytokines. With this plethora of information, it is one of the most preferred safe and effective natural supplements for improving general health and wellness.

Curcumin has gained immense popularity through these studies and wide reaching popular articles, blogs, product websites and books, driving the need for safe and effective consumer products. Efforts to standardize this compound and offer effective dosage forms to deliver health benefits was pioneered by the Sabinsa group. Its trademark registered and patented standardized 95% curcuminoids composition, Curcumin C3 Complex®, has more than 45 clinical studies carried out for diverse applications, making it the most clinically evaluated curcumin brand in the world today.

The knowledge about the biotransformation of curcumin in the body has been understood and communicated effectively only by a few researchers. Publications beginning in the 1980s up to 2011 discuss the poor bioavailability of this natural compound. It is only after ground breaking research and publication of that research in the Proceedings of the National Academy of Sciences (PNAS) about the reductive metabolites of curcumin, that its bioconversion in the body has been understood. It is important to deliver curcumin that improves the bioavailability of its active metabolites, in turn enhancing its efficacy. Piperine from black pepper has been reported to effectively improve the efficacy of curcuminoids and cause no adverse effects.

With increasing demand for curcumin, there are always some manufacturers who will seek out cheaper alternatives to natural curcumin, adulterating with synthetic versions that are not supported by research on safety and efficacy. Modern scientific techniques such as radioisotope analysis can help identify such practices. It is the ethical responsibility of manufacturers to deliver to the consumer safe, natural forms of this ingredient.

Curcumin from turmeric is truly one of nature's greatest gifts to mankind. Wise use of this natural ingredient is essential and more important is to utilize the vast scientific information available on curcumin to ensure its sustainability in the marketplace, so future generations will benefit as much as we have.

Shaheen Majeed, marketing director for Sabinsa Corp., knows Sabinsa from the ground up. When he was just 17 years old, Shaheen began in the warehouse of the science-based ingredients company his father founded in 1988. Subsequent positions included customer service, a variety of sales positions, representing the company's substantial portfolio of proprietary nutritional and cosmeceutical ingredients, managing contract manufacturing, cosmetic marketing manager and executive assistant to the CEO. He is spearheading the company's expansion of its functional foods offerings, while being actively involved in Sabinsa's cultivation program, interacting with farmers to ensure sustainability of quality raw materials from which Sabinsa manufacturers the company's proprietary ingredients.