

World Congress on

ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS

July 15-16, 2019 | London, UK



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Pharmaceuticals to nutraceuticals: Standardized extract of *Anacardium occidentale*, Cashew Nut Testa (CNT), shows multi-faceted biological activities to mitigate inflammatory responses in-vitro screening model

In recent years role of inflammation in human health has been the subject of considerable study. Moreover, Inflammation is now recognized as a key factor in virtually all chronic and degenerative diseases, including arthritis, heart disease, asthma, neurodegeneration, cancer, and kidney and bowel diseases. Consumers are more health conscious and are very receptive to use products from natural sources. Cyclooxygenases (COXs) and Lipoxygenase (LOX) are prostaglandin synthases and are major players in various inflammatory disorders. There are very little published results on the botanical ingredient which could be used to produce this dual effect (COX/LOX) to mitigate wider spectrum of anti-inflammatory effects.

In our persistent efforts to find botanicals containing bio-active phytochemicals with its capacity to inhibit both COX and LOX resulted in the discovery of a standardized extract from Testa of *Anacardium occidentale* nut. Our recent findings suggest that CNT extract could provide numerous therapeutic advantages in terms of its anti-inflammatory applications in product development.

Use of a series of *in vitro* high-throughput screening model system, extraction technology, chemical profiling of commercially available CNT samples will be discussed.



Biography

Jat Rana, who grew up in a small village in the foothills of the Himalayas in India, has a double Major in Chemistry and Botany. He has Master of Science in Applied Organic Chemistry, Ph.D. in Organic Chemistry from Birmingham University, England (UK). He was a post-doctoral fellow at the University of Glasgow Scotland (1981) and USDA Research fellow at University of Minnesota, Minneapolis (1985). He was a Production Manager at the Sigma-Aldrich Corporation in St. Louis, MO (1985-1996) and also as a Principle Senior Research Scientist at Amway (1996-2017). In 2017, he joined the Innovative botanical ingredients. Active member of Society of Cosmetic Chemists (SCC), International Association of Analytical Communities (AOAC), Member of American Chemical Society (ACS) and Asian Congress of Nutrition (ACN). He has chaired and presented at many Scientific Sessions at the National and International events.

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