Anticancer activities of religiously important plants from India

Rachana
Jaypee Institute of Information Technology, India

Essential oils have been part of daily life throughout the world. These plants have been used in beauty products, food, traditional therapies, home remedies, etc. In India, they have also been the ingredients for worship material, since ancient years. Some of these religiously important plants, which contain essential oils and bear anticancer activities are: Ocimum basilicum Linn (Holi Tulsi), Curcuma longa (haldi), Tagetes erecta, (Genda), Syzygium aromaticum (Lawang), Rosa damascene (Gulab), Jasminum grandiflora (Jasmine/Chameli) and Hibiscus cannabinus (Gurhal), etc. All these plants carry various types of phytochemicals including essential oils. The mechanism of action for the anti cancer activity of the essential oils includes: Interfering with the plasma membrane integrity, affecting the redox state of the cells, leakage of calcium, modulation of DNA repair, depolarization of mitochondrial membrane, anti angiogenesis, activation of cell death pathways for apoptosis, inhibiting cell cycle, etc. The present review is about these religiously important aromatic plants from India, which have been worked upon by scientists for their anticancer activities.

Biography

Dr. Rachana has joined JJIT as Asst. Prof. at Biotechnology Department in June, 2009. Before joining JJIT, Dr Rachana taught at School of Pharmacy and Technology Management, SVKM’s NMIMS University, Mumbai. She has done MSc. in Biotechnology from IIT Roorkee in 1998. She has finished her PhD from IIT Bombay in 2005. She has qualified NET-LS and GATE (Topper in Kanpur zone and 4th rank in India). She has been the recipient of DBT fellowship during her masters and JRF and research fellowship, from MHRD during her PhD. For her PhD she worked for designing a therapy for Adult Respiratory Distress Syndrome (ARDS). She has filed two Indian patents, and published three text books and several international and national articles. she got best poster presentation award at International Symposium on Recent Advances in Molecular Biology, Allergy and Immunology (2000) organized by Maharaja Sayajirao University of Baroda and State University of New York at Buffalo

rachana.dr@iitbombay.org