

International Conference on

Plant Physiology & Pathology

June 09-10, 2016 Dallas, USA

Biodeterioration of chemical constituents of some indigenous herbal drugs due to fungi

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India is very rich in her medicinal plant wealth. About 35,000 medicinal plants are listed all over the world. Out of that 31000 plants are listed in India. Despite being the wide use of Western medicines, more than 70% of India's population depends up on herbal drugs. There are about 8 lakh licensed registered medicinal practitioners of Indian Systems of Medicine and Homeopathy (ISM&H). There are about 7,000 registered herbal medicine manufacturers and 8,000 pharmacies that mainly derive their raw material requirement directly or indirectly from natural sources. Indian Pharmacopoeia records about 100 medicinal plants and their preparations. Some of these drugs are also recorded in the Pharmacopoeia of other countries of the world (viz. British Pharmaceutical codex possess 80% of Indian medicinal plants). Hence, there is a great demand for the indigenous drugs in the international markets. In the present study it has been observed that many fungi are associated with herbal drugs under storage. Association of fungi were screened on 6 herbal drugs such as *Acorus calamus* Linn., *Boerhaavia diffusa* Linn., *Cassia angustifolia* Vahl., *Clerodendrum serratum* (Linn) Moon, *Cullen corylifolia* (Linn.) Medik and *Fagonia bruguieri* DC. Total 17 fungi and 68 species are isolated from the above stored drugs. It was observed that 75, 96 and 100% RH showed significant reduction in the sugars, proteins, phenols, alkaloids, glycosides contents and maximum storage periods also proliferate the growth of fungi. Selected drugs are also screened for aflatoxin contamination confirmation but it was observed that these drugs are free from aflatoxin contamination.

Biography

Shubhash Deokule has completed his PhD in 1989 from Pune University. At present, he is the senior most Professor in the Department of Botany and HOD from 2010-2013. He has great contribution in the study of Indian medicinal plants, guided about 30 Doctoral and 22 MPhil students. He has published a total of 175 research articles along with 12 books. He is associated with many national and international academic bodies and also appointed as Member, Board of Directors for Asian Society of Pharmacognosy. He has received many prestigious awards at national and international level with gold medals. His area of research interest is mainly in Pharmacognosy, Ethno-Botany, Ethno-Pharmacognosy, Ethno-Pharmacology, Medicinal Plant Tissue culture and Biodiversity.

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