

## Pharmacognosy And Phytochemistry By Vinod Rangari

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Topics 1. Value of Medicinal Natural Products 2. Chemotaxonomy of Plants 3. Nutraceuticals 4. Natural Sweeteners 5. Natural Colours and Dyes 6. Pesticides of Natural Origin 7. Plant Allergens and Toxins 8. Marine Drugs 9. Traditional Drugs of India 10. Isolation of Phytopharmaceuticals 11. Plant Tissue and Cell Culture

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Besides, recently molecular biology has assumed great importance with respect to plant biotechnology. The present book amalgamates all three aspects into one, practical applications of various techniques being the need of the hour. It discusses micropropagation studies on several crop plants, molecular basis of understanding various life processes including molecular basis of somatic embryogenesis and other physiological and biochemical processes having significant biotechnological applications. It also includes in vitro studies of some important plants like Aloe vera, Simmondsia chinensis, Anacyclus pyrethrum and Crataeva nurvala, Arachis hypogaea L., Phoenix dactylifera, Dendrocalamus asper, Asparagus adscendens Roxb., natural products of plant origin with their therapeutic potential and biotechnological production, genome analysis of crop plants with future applications in biotechnology etc.

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The present book has been designed to bind prime knowledge of climate change-induced impacts on various aspects of our environment and its biological diversity. The book also contains updated information, methods and tools for the monitoring and conservation of impacted biological diversity.

The second edition of Pharmacognosy and Phytochemistry - Part II is marked with addition of two new chapters, namely, Value of Natural Products and Chemotaxonomy, following the steadfast development in these areas. The food pharmaceuticals and dietary supplement industries have started delivering phytochemicals or extracts in the form of functional foods. A greater coverage has thus been given to this rapidly emerging area of Nutraceuticals. Some of the important but uncommon topics such as Natural sweeteners, Natural colours and dyes, and Pesticides of natural origin have been reviewed in detail as they have received emphasis in the last few decades. The topic of Plant allergens has been discussed extensively. Marine resources of the therapeutically active constituents have been discussed in profile in the chapter on “Marine drugs”™ Keeping in mind the use of herbal crude drugs, their extracts and remedies, a chapter, Traditional Drugs of India, has been so designed that about sixty important traditional drugs will be covered for their pharmacognosy and phytochemistry. Unlike many other books, isolation techniques of over fifty important phytopharmaceuticals have been explained under under the heading, Isolation of phytopharmaceuticals, as isolation and characterisation of therapeutically active ingredients are a vital part though many of these processes are of proprietary nature, The historical perspectives, basic techniques and applications of plant tissue culture have been discussed in the chapter on Plant Cell and Tissue Culture.

Honey is a sugary food substance having high sugar concentration (reduced water activity), hydrogen peroxide and low pH 3-4 (acidic). There are various types of honey, which are classified on different basis such as based on origin, based on the floral source etc. It is a supersaturated sugar solution predominantly glucose and fructose. It's colour varies from colourless to dark brown. It is a natural antimicrobial substance that kills microbes by acidity, osmolarity and enzymatic production of hydrogen peroxide. In ancient time, it was valued for its medicinal properties. Now days it is still used as preservative and make a different kind of dishes also alcoholic drinks. It has a greater sweetening ability that sugar does not have. The antimicrobial activity of honey has known since 19th century with a big history. Recently, many studies on honey has done for its antimicrobial properties. The antimicrobial and antioxidant strength depends on the darkness of the honey. Raw honey at different concentration used as natural preservative in food products to increase their self-life, because raw honey has more minerals, vitamins and antifungal and antibacterial properties and it prevents from many diseases. Manuka honey derived from New Zealand used for medicinal purpose in recent time but also can be used as natural preservative instead of using artificial preservative.

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This book covers the history and works done by ZFHC as well as some relevant information on medicinal plants.

Buku ini merupakan rujukan bagi mahasiswa dan praktisi pertanian dalam pengelolaan bahan organik tanah sawah. Kebanyakan buku dasar-dasar ilmu tanah, buku kesuburan tanah, maupun buku pengelolaan tanah masih sedikit, bahkan jarang sekali membahas secara luas tentang keberadaan bahan organik, sumber-sumber bahan organik, dan proses dekomposisi bahan organik itu pada tanah sawah. Buku ini disusun berdasarkan pengalaman penulis sebagai peneliti padi sawah sejak awal penulis diangkat sebagai dosen, dan juga didukung oleh naskah yang telah dipublikasikan, baik pada beberapa Prosiding Seminar dan beberapa jurnal. Terima kasih disampaikan kepada Ketua STIPER Dharma Wacana Metro beserta para wakil ketua, Ketua Jurusan Agroteknologi atas kontribusi dalam penyempurnaan buku ini. Terima kasih kepada Prof. Dr. Ir. Ainin Niswati, M.S., M.Sc. yang telah berkontribusi dalam tim peneliti Hibah Bersaing (2008) dan peneliti Hibah Kompetitif sesuai Prioritas Nasional (2009–2011) serta seluruh staf STIPER Dharma Wacana Metro dan semua pihak yang telah ikut membantu dalam penyelesaian buku ini. Bahan Organik Tanah Sawah ini diterbitkan oleh Penerbit Deepublish dan tersedia juga dalam versi cetak.

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There is an increasing interest in natural plant products as a source of new pharmaceuticals and other biologically-active compounds. This is a timely review of the latest advances and trends in a field which is becoming a commercially significant area of investigation for the pharmaceutical industry. The pharmacological and phytochemical aspects of different preparations from

