

Joint Event

# 4<sup>th</sup> EUROPEAN BIOPHARMA CONGRESS

&

# 6<sup>th</sup> International Conference and Exhibition on PHARMACOLOGY AND ETHNOPHARMACOLOGY

November 09-11, 2017 Vienna, Austria



## *Anupam Bishayee*

Larkin University, USA

### **Natural product-based cancer prevention and intervention: From ethnopharmacology to modern medicine**

Natural products represent an important source for discovery and development of drugs for cancer prevention and therapy. About 80% of all drugs approved by the United States Food and Drug Administration during the last three decades for cancer therapy are either natural products per se or are based on, or mimicked natural products. Local and traditional knowledge on natural resources has been instrumental for discovery and development of numerous successful drugs. To lead the search for medicinal plants with potential anticancer activities, ethnopharmacological knowledge can provide a valuable direction. Various extracts, fractions, mixtures and pure compounds from traditionally used plants have been found to possess encouraging cytotoxic activities against numerous cancer cell lines. These agents have also been studied for cancer preventive and therapeutic properties using preclinical animal models that mimic human cancers. The cancer preventive and anticancer pharmacological attributes of various natural products and compounds can be explained by multiple cellular and molecular mechanisms, including scavenging of free radicals, detoxification of free radicals, DNA repair, alteration of cell cycles, programmed cell death (apoptosis), immune surveillance, anti-inflammatory, anti-angiogenic, anti-invasive and antimetastatic activities as well as their ability to modulate a plethora of dysregulated oncogenic signaling molecules and pathways. This presentation aims to present studies on cancer preventive and therapeutic attributes of various ethnobotanical species and underlying mechanisms of action, including those reported from our own laboratory. Current limitations and future directions of research for successful cancer drug development based on ethnobotany and ethnopharmacology will also be discussed.

#### **Biography**

Anupam Bishayee, Professor and Founding Chair, Department of Pharmaceutical Sciences, Larkin University College of Pharmacy presented an invited lecture titled "Current affairs: black currants in health and disease" during 4th International Phytocosmetics and Phytotherapy Congress held in the ancient city of Antigua, Guatemala during June 4-8, 2016. Dr. Bishayee also joined a panel of international experts on natural products during a roundtable discussion "Advances in Phytotherapy and Ethnopharmacology" which identified support mechanisms that various scientific, academic and governmental agencies should provide to raise awareness about herbal medicines and their use in the prevention and treatment of various diseases, including cancer.

[abishayee@ULarkin.org](mailto:abishayee@ULarkin.org)

#### **Notes:**