

Anticancer potentials of phytochemicals from indigenous west African plants

Joseph O Nwankwo
Federal University, Nigeria

Many indigenous West African plants have been employed as local remedies for various human ailments in the traditional medicine of the region and as nutritional sources for countless generations. Isolation and characterization of the chemical structures for phytochemicals from useful indigenous plants have however been undertaken only for a minimal fraction largely, because the modern techniques of chromatography and mass spectroscopy have been exploited by African scientists relatively, recently. The significance of the latter development has been to greatly enhance an understanding of the molecular mechanisms of action for these isolated compounds as pharmacological agents. In particular, such knowledge has been applied in the present discussion to identify indigenous West African phytochemicals with potential anticancer activities based on their structure-activity relationships to known active compounds, an outcome totally unanticipated by the organic chemists who merely isolated and characterized these phytochemicals. The compounds are grouped as potential Cancer Chemopreventive and Cancer Chemotherapeutic agents and cover most of the known phytochemical classes of alkaloids, flavonoids, lignans, quinones, terpenoids and miscellaneous, the latter class comprising compounds considered chemically inappropriate for the previous classes. Such identified compounds still await relevant biological activity tests before confirmation of suggested anticancer potentials.

Biography

Joseph O Nwankwo has obtained his DPhil from Oxford University and Post-doctoral/Research Fellowships at University of Southern California and University of Iowa. He was an Associate Scientist at the University of Wisconsin, Madison Department of Surgery and the Cancer Centre. He was the pioneer Director of the Centre for Molecular Biosciences and Biotechnology, Michael Okpara University of Agriculture, Umudike, Nigeria and currently, the Head of Department of Medical Biochemistry at the Federal University, Ndufu-Alike, Ikwo, Nigeria. He has published more than 25 papers in reputed journals.

jonwankwo@yahoo.com

Notes: