Moringa oleifera Lam: targeting chemoprevention

ABSTRACT
Moringa oleifera Lam, family Moringaceae, is a perennial plant which is called various names, but is locally known in Malaysia as "murungai" or "kelor". Glucomoringin, a glucosinolate with from M. oleifera is a major secondary metabolite compound. The seeds and leaves of the plant are reported to have the highest amount of glucosinolates. M. oleifera is well known for its many uses health and benefits. It is claimed to have nutritional, medicinal and chemopreventive potentials. Chemopreventive effects of M. oleifera are expected due to the existence of glucosinolate which it is reported to have the ability to induce apoptosis in anticancer studies. Furthermore, chemopreventive value of M. oleifera has been demonstrated in studies utilizing its leaf extract to inhibit the growth of human cancer cell lines. This review highlights the advantages of M. oleifera targeting chemoprevention where glucosinolates could help to slow the process of carcinogenesis through several molecular targets. It is also includes inhibition of carcinogen activation and induction of carcinogen detoxification, anti-inflammatory, anti-tumor cell proliferation, induction of apoptosis and inhibition of tumor angiogenesis. Finally, for synergistic effects of M. oleifera with other drugs and safety, essential for chemoprevention, it is important that it safe to be consumed by human body and works well. Although there there were promising evident about M. oleifera in chemoprevention extensive research need to be done due to the expected rise of cancer in coming years and to gain more information about the mechanisms involved in M. oleifera in uence, which could be a good source to inhibit several major mechanisms involved in cancer development.

Keyword: Moringa oleifera; Glucosinolate; Glucomoringin; Chemopreventive