

Mitogenic Activities in African traditional herbal medicines

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Abstract

Mitogenic activities in African traditional herbal medicines were examined using protein fractions obtained from their extracts by precipitation with ammonium sulfate. Potent mitogenic activities for human and mouse lymphocytes were found in the three plants *Croton macrostachyus*, *Croton megalocarpus* (Euphorbiaceae), and *Phytolacca dodecandra* (Phytolaccaceae). All the gel chromatographic patterns of these protein fractions progressed toward the smaller molecule size with pronase treatment, while their mitogenic activities decreased significantly. Protein fractions from these three plants induced mitogenesis both in human and mouse isolated T cells, but not in lymphocytes from athymic nude mice. By testing further fractionated protein fractions with gel filtration chromatography, it was found that all three plants contained several mitogens having different molecule sizes.