

#### Abstract:

Natural products may offer a new approach for control of postharvest diseases of horticultural products. *Pithecellobium dulce* is an evergreen tree indigenous to Americas widely distributed in Mexico. We have previously reported significant antifungal activity of powder and aqueous extracts from the seed and leaves. In order to identify the active compounds present in the hexane-dichloromethane and methanol-water extracts from seed powder, a bidirectional chromatography was performed. The fractions and compounds were tested against various postharvest fungi. The most sensitive strain was *Fusarium oxysporum*, ten fractions tested retarded its growth, while seven of the fractions retarded development of *Rhizopus stolonifer*. The less sensitive strain was *Penicillium digitatum*. The <sup>1</sup>H NMR spectrum of two active fractions indicated the presence of two triacyl glycerols: Glycerol 1,3-dilinoleoyl-2-decanoic; Glycerol 1-linoleoyl-2-docosanoic-3-olein. Several triterpene saponins: Pitheduloside A, B, E, F and I isolated from the methanol-water extracts inhibited or retarded in vitro mycelial growth of *Rhizopus stolonifer* and *Colletotrichum gloeosporioides*, respectively. Further investigation should be undertaken to determine the effects of these compounds with applied studies on fruit.