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### CHEMICAL CONSTITUENTS OF OROBANCHE AEGYPTICA

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*Orobanche* (Broom Rape; Hindi-Tokra) is a phanerogamous parasite on tobacco, which occurs sporadically in all tobacco tracts in the sub-continent.<sup>1,2</sup> Of the two known species of the parasite, *Orobanche cernua* Loefft-var. *desertorum* Beck (Syn. *O. nicotianae* Wight) and *O. aegyptica* Pers. (Syn. *O. indica* Back-Ham.) ex Roxb, *O. aegyptica* is more common in Pakistan. This communication describes for the first time the results of a chemical analyses of the whole parasitic plant.

The plants were collected in the months of June-July from tobacco fields in Mardan. The air-dried, material was extracted with hexane and then with alcohol. The alcoholic extract, when concentrated and left overnight at room temperature, deposited D-mannitol (0.2%), m.p. 166-

67°C; m.p. of acetate 122-23°C confirmed by mixed m.p. and IR spectra. The alcoholic filtrate on removal of the solvent was dissolved in 5% HCl. The solution was basified with NH<sub>4</sub>OH. Its chloroform extract, on chromatography over active neutral alumina, yielded nicotine. The hexane extract also on chromatography over neutral alumina gave a small quantity of nicotine. Nicotine was identified by its characteristic smell, TLC, paper chromatographic comparison with authentic nicotine and by the preparation of its picrate and methiodide. The third compound, obtained by column chromatography of hexane extract over acidic alumina was  $\beta$ -sitosterol, m.p. 136-37°C, m.p. of acetate 129-30°C confirmed by mixed m.p. and IR spectra.

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#### References

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2. C. J. Bamber, *Plants of the Punjab* (Government Printing Press, Lahore, 1916), p. 649.