

IR, formation of isomeric methyl ethers, and TLC) with authentic compounds *W. paniculata* lachnanthocarpone (2,6-dihydroxy-9-phenylphenalenone), m p 212–214° (lit <sup>3</sup> 208–212°), MW *m/e* 288 0763 Calc for C<sub>19</sub>H<sub>12</sub>O<sub>3</sub>, 288 0772 Lachnanthoside aglycone (2,5,6-trihydroxy-9-phenylphenalenone), m p 220–223° (lit <sup>4</sup> 217–222°), MW *m/e* 304 0735 Calc for C<sub>19</sub>H<sub>12</sub>O<sub>4</sub>, 304 0732 *W. thyrsiflora* lachnanthoside aglycone, and haemocorin aglycone (2,6-dihydroxy-5-methoxy-9-phenylphenalenone), m p 230–232° (C<sub>6</sub>H<sub>6</sub>) [lit <sup>5</sup> 277–278° (acetone)],  $\delta$ , 8 75 (d, *J* 8Hz, 1H), 7 70 (s, 1H), 7 60 (d, *J* 8Hz, 1H), 7 56 (s, 5H), 7 20 (s, 1H), 4 10 (s, 3H), MW *m/e* 318 0893 Calc for C<sub>20</sub>H<sub>14</sub>O<sub>4</sub>, 318 0888

Phenalenone pigments have so far been isolated from *Haemodorum*, *Wachendorfia*, and *Lachnanthes* spp., and the accumulated evidence (3/14 genera positive) suggests that this aromatic system may characterize members of the family Haemodaceae

<sup>3</sup> EDWARDS, J M and WEISS, U (1970) *Phytochemistry* **9**, 1653

<sup>4</sup> EDWARDS, J M and WEISS, U (1974) *Phytochemistry* **13**, to be published

<sup>5</sup> COOKE, R G and SEGAL, W (1955) *Australian J Chem* **8**, 107 We are indebted to Professor R Thomas, Surrey University, England, for a sample of haemocorin aglycone

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## DEMETHYLHOMOPTEROCARPIN AN ANTIFUNGAL COMPOUND IN *CANAVALIA ENSIFORMIS* AND *VIGNA UNGUICULATA* FOLLOWING INFECTION

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**Key Word Index**—*Canavalia ensiformis*, *Vigna unguiculata*, Leguminosae, jack bean, cowpea, pterocarpin, demethylhomopterocarpin

*Plants Canavalia ensiformis* (cv large white), *Vigna unguiculata* (cvs IVu57 and IVu76) grain legumes grown from seed supplied by the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria *Previous work* Antifungal activity <sup>1–3</sup>

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<sup>1</sup> SMITH, I M (1971) *Physiol Plant Pathol* **1**, 85

<sup>2</sup> KEEN, N T (1972) *Phytopathology* **62**, 1365

<sup>3</sup> BAILEY, J A (1973) *J Gen Microbiol* **75**, 119

*Present work* Etiolated hypocotyls were inoculated with either tobacco necrosis virus (TNV) or *Colletotrichum lindemuthianum*, the latter isolated from infected cowpea at IITA as described previously<sup>3,4</sup> Hypocotyls showing cellular browning were extracted as described previously<sup>4</sup> Antifungals were detected by bioautography of TLC plates<sup>5,6</sup> and purified by preparative TLC [silica gel 60<sub>F254</sub>, C<sub>6</sub>H<sub>6</sub>-Et<sub>2</sub>O (1:1) or CHCl<sub>3</sub>-EtOH (97:3)]

Demethylhomopterocarpin was detected as in Table 1 by comparison with authentic spectra and had m.p. 130–130.5 °C, lit. 130–131 °C<sup>7</sup> [ $\alpha$ ]<sub>D</sub><sup>21</sup> –192 (c 0.1095, EtOH/1 cm)

TABLE 1 OCCURRENCE OF DEMETHYLHOMOPTEROCARPIN FOLLOWING INFECTION

| Plant               | Infective agent                                   |                                      |
|---------------------|---|--------------------------------------|
|                     | TNV   | <i>Colletotrichum lindemuthianum</i> |
| Jack bean           | 1200–1500 µg/g<br>$R_f$ , m.p., OR, UV, IR<br>NMR | $R_f$ , UV, IR                       |
| Cowpea<br>cv. IVu57 | Trace<br>$R_f$ , UV                               | 50 µg/g<br>$R_f$ , UV, IR            |
| Cowpea<br>cv. IVu76 | Not detected <sup>3</sup>                         | Absent in single experiment          |

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<sup>6</sup> HOMANS A. L. and FUCHS A. (1970) *J. Chromatog.* **51**, 327.

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## MINOR PHENOLIC CONSTITUENTS OF *DALBERGIA RETUSA*

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*Plant* *Dalbergia retusa* Hemsley. *Source* Panama. *Previous work* The isolation of obtusaquinone, (±)-4-methoxydalbergione, (±)-obtusquinol and the isoflavones, retusin