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## Identity of Pericalline, Tabernoschizine, Apparicine, and Gomezine

**Keyphrases**  Pericalline—identity confirmation  IR spectrophotometry—identity  Optical rotation—identity

Sir:

The alkaloid pericalline was first reported by Svoboda from the roots of *Catharanthus roseus* (1).<sup>1</sup> This was

An inspection of the physical data reported for all of these alkaloids (see Table I) shows them to be very similar, if not identical. Samples of pericalline from *Catharanthus roseus* and *C. lanceus* were available as were samples of tabernoschizine from *Schizogygia coffaeoides*<sup>2</sup> and (–)-apparicine from *Aspidosperma* sp.,<sup>3</sup> and IR spectra (KBr) of all four alkaloids were superimposable.

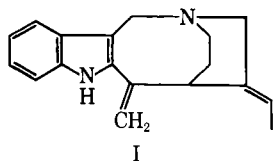
Since the report announcing the discovery of pericalline (1) predates those for the other alkaloids in question, *i.e.*, tabernoschizine (2), gomezine (6), and apparicine (4), the name pericalline for this alkaloid should have priority.

Table I—Comparison of Physical Data for Alkaloids

| Name            | Source                          | Formula  | M.p., °C. | pKa  | [α] <sub>D</sub>    | λ <sub>max</sub> , mμ | Ref. |
|-----------------|---------------------------------|--|-----------|------|---------------------|-----------------------|------|
| Pericalline     | <i>Catharanthus roseus</i>      | —  | 196–202   | 8.05 | –183 <sup>o a</sup> | 304                   | 1    |
| Tabernoschizine | <i>Schizogygia coffaeoides</i>  | C <sub>15</sub> H <sub>20</sub> N <sub>2</sub> | 198–199   | 7.26 | –138 <sup>o</sup>   | 303                   | 2    |
| Pericalline     | <i>Catharanthus lanceus</i>     | —  | 196–202   | 8.02 | –186 <sup>o a</sup> | 304                   | 3    |
| (–)-Apparicine  | <i>Aspidosperma olivaceum</i>   | —  | 188–191   | —    | –179 <sup>o</sup>   | —                     | 4    |
| (–)-Apparicine  | <i>Aspidosperma eburneum</i>    | —  | 195–198   | —    | —                   | —                     | 4    |
| (–)-Apparicine  | <i>Aspidosperma multiflorum</i> | —  | 188–192   | —    | –126 <sup>o</sup>   | —                     | 4    |
| (–)-Apparicine  | <i>Aspidosperma gomezianum</i>  | —  | 188–191   | —    | —                   | —                     | 4    |
| (–)-Apparicine  | <i>Aspidosperma</i> sp.         | C <sub>15</sub> H <sub>20</sub> N <sub>2</sub> | 192–194   | —    | ±177 <sup>o</sup>   | 303                   | 5    |
| (+)-Apparicine  | <i>Aspidosperma dasycarpon</i>  | —  | 192–194   | —    | +176 <sup>o</sup>   | 303                   | 4    |
| Gomezine        | <i>Aspidosperma gomezianum</i>  | C <sub>13</sub> H <sub>20</sub> N <sub>2</sub> | 195–198   | —    | —                   | 304                   | 6    |

<sup>a</sup> Data not given in original reference, but determined subsequently in our laboratory.

followed shortly thereafter by a report on an alkaloid with similar composition, tabernoschizine, from *Schizogygia coffaeoides* (2).<sup>1</sup> A year later, we isolated pericalline from the roots of *Catharanthus lanceus* (3). Subsequently, (–)-apparicine was isolated from *Aspidosperma olivaceum*, *A. eburneum*, *A. multiflorum*, and *A. gomezianum* by Gilbert *et al.* (4), and (+)-apparicine from *Aspidosperma dasycarpon* (4). The structure for (–)-apparicine was subsequently elucidated by Joule *et al.* (5) as I. Finally, an alkaloid named gomezine was isolated from *Aspidosperma gomezianum* by Owellen (6).



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<sup>3</sup> Generously provided by Dr. C. Djerassi.