It is noted that the above three components all belong to glycosides of gitoxigenin, and glycosides of digitoxigenin series were found only in a negligible amount in the leaves collected so far at the above-mentioned plant garden.

The writers wish to thank Mr. S. Imai, Mr. A. Yamada, and Mr. K. Kometani for technical assistance of this work.

*Pharmaceutical Institute,
Medical Faculty,
University of Tokyo.
Hongo, Tokyo.*

*Research Laboratory,
Takeda Pharmaceutical Industries, Ltd.
Juso, Higashiyodogawa-ku, Osaka.*

April 24, 1953

Morizo Ishidate

Masashi Okada

Yoshiro Sasakawa

A Synthesis of rac-C-trisnoremetine.

An abstract of the paper by Pailer, *et al.*, upon the synthesis of rac-C-noremetines appeared in the recent number of Chemical Abstracts (47, 2186). Our synthesis of rac-C-trisnoremetine, which has been completed nearly a year ago and has to be published jointly with other syntheses in the related field, now under progress in our hands, covered almost the same ground with theirs. But certain discrepancies in properties of some of the compounds cited were observed.

N- β -3,4-Dimethoxyphenethyl-4-carbethoxypyridinium bromide, m.p. 196°, was oxidized by means of alkaline potassium ferricyanide solution, yielding the corresponding pyridone carboxylic acid, m.p. 233~234° (decomp.), in a good yield. This was then ring-closed with phosphoryl chloride and the resultant compound was treated with absolute alcohol, giving rise to 4',5'-dimethoxy-7-carbethoxy-3,4,5,6,7,8-hexahydro-9,10-dehydro-(2',1':1,2-benzoquinolizinium) salt, m.p. 182~184° (decomp.) (as iodide), which, on being reduced catalytically, furnished the corresponding oily tertiary base. The latter forms crystalline hydrazide, m.p. 204~207°, the azide of which was treated with homoveratrylamine in ethereal solution, giving the corresponding amide, 4',5'-dimethoxy-3,4,5,6,7,8-hexahydro-(2',1':1,2-benzoquinolizyl)-7-carboxylic acid homoveratramide of m.p. 154~157° in fair yield. This was then ring-closed and reduced, yielding rac-C-trisnoremetine as colorless crystalline solid with melting range of 97~107° (decomp.), which is fairly unstable in the air, turning gradually red. The dipicrate and dihydrochloride, both having indefinite melting points, were also prepared.

The detail will be published in the forthcoming number of this Bulletin.

*Pharmaceutical Institute,
Medical Faculty,
University of Tokyo.
Hongo, Tokyo.*

May 8, 1953

Shigehiko Sugasawa

Koji Oka