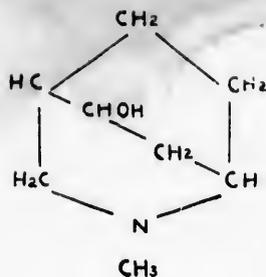


Egonin.

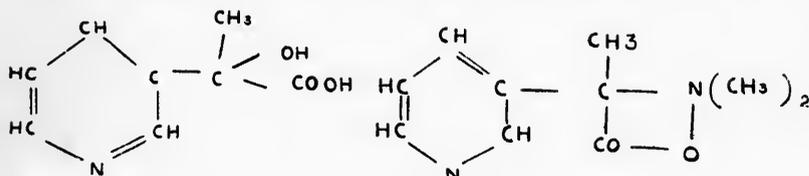


Tropin.

Egonin on treatment with benzoic anhydride and methyl iodide gives cocaine. Taking into account the previous work on tropin one may say that the synthesis of cocaine is far advanced towards completion.

Pilocarpin has also engrossed the attention of many observers. According to Hardy and Calmels it consists of a pyridin nucleus combined with a betain group in the β position.

Pilocarpin, on boiling with water, breaks up into trimethylamin and an acid of the formula $C_8H_9NO_3$. The barium salt of this acid on distillation yields C_7H_9NO , which on oxidation gives β pyridyl methyl keton hydrate, which can be prepared synthetically. The first named of these compounds is from these considerations a β pyridyl, α lactic acid, and from the splitting of pilocarpin into this acid and trimethylamin it may be assumed to have the formula

 β pyridyl α lactic acid.

Pilocarpin.

Hardy and Calmels endeavoured to synthesise pilocarpin from its decomposition products. By treating β pyridyl α lactic acid with phosphorus dibromide and heating the bromo acid so obtained with dimethylamin, pilocarpidin was obtained. This when heated in methyl alcohol solution with methyl iodide and potash gave pilocarpinic acid. This on oxidation and dehydration with permanganate of silver yields pilocarpin. According to Herzig and Meyer pilocarpin contains but one group attached to nitrogen, but owing to the extremely unsuitable state in which the various compounds are obtained, it is too early