3944

## Selection of the Number of Tailrings in the Albino Mus Musculus.

A. B. DROOGLEEVER FORTUYN.

*From the Department of Anatomy, Peking Union Medical College.*

The tail of a mouse is characterized by scales which are arranged in more or less regular rings. Taxonomists long ago recognized the systematic value of the average number of tailrings. For *Mus musculus* this is given at about 180.

In 400 albino mice obtained from the animal house of the Peking Union Medical College—all of them descendants of 32 animals imported from the Rockefeller Institute, Princeton, N. J., by Dr. C. TenBroeck in 1924—the number of tailrings, counted after the death of the animal, varied from 142 to 220, with an average of $189.38 \pm 0.62$. (The standard deviation is $\pm 12.57$.) On account of the irregularity of some rings, the number of tailrings of a given mouse cannot be stated with absolute accuracy; it may be 2 more or less than the number actually counted. The correlation of the number of tailrings with the length of the tail is low. (The coefficient of correlation is $0.27 \pm 0.05$.) In general, therefore, fewer rings mean broader rings.

Selection of the number of tailrings in these mice was tried simultaneously in the direction of high and of low number and all animals were kept in the same room and treated in the same way. This prevents crediting any changes in the number of tailrings to changes in the environment.

Selection was based on the number of tailrings counted in the living mouse. For the low number of tailrings (series L T M) 4 mice were chosen which appeared after death to have 152, 154, 178, and 196 tailrings. Of course, the selection of the last one for this group was a mistake. After 7 months these 4 mice had altogether 65 descendants. In 58 of them the tailrings were counted after death. Their number varied between 149 and 212 with an average of $170.15 \pm 1.77$. (Standard deviation $\pm 13.49$.) The result of a second selection is not yet accurately known as most of the animals concerned are still living, but the number of tailrings seems to have reached an average of about 148 and extremes of 134 and 156.

For the selection of a high number of tailrings (series H T M) 9 mice were chosen which after death appeared to have 194, 200, 201, 205, 208, 209, 212, 222, and 225 tailrings. (Average 208.) These 9 mice had after 7 months a total of 63 descendants. In 50

of them the tailrings were counted after death. Their number varied between 172 and 228 with an average of 207.38±1.53. (Standard deviation ±10.83.)

From the 63 descendants of the first group 10 animals were again selected. After death 8 of them appeared to have 211 to 227 tailrings, with an average of 217. Within 3 months this second group of 10 selected animals had 53 descendants. In 47 of them the tailrings were counted after death. The number varied between 187 and 220 with an average of 204.06±1.23. (Standard deviation ±8.48.)

This second selection had no greater success than the first selection in the H T M series. This proves that a fairly pure race with a higher number of tailrings had been isolated from the original stock by the first selection. The original colony also contains a race with a low number of tailrings, but this has not yet been successfully isolated. How many other races with intermediate numbers of tailrings may be selected from the original colony remains uncertain.

The study of these races of *Mus musculus* with widely differing numbers of tailrings will be continued, but the results of the experiments already appear to justify the opinion that in the phaenotype of the mouse a new detail has been found which may serve as basis for genetical analysis.

## 3945

## Some New Alkaloids from Chinese Corydalis Ambigua, Cham. et. Sch. (Yen-Hu-So).

TSAN-QUO CHOU. (Introduced by B. E. Read.)

*From the Department of Pharmacology, Peking Union Medical College.*

Corydaline, the principal alkaloid of Corydalis roots, was discovered by Wackenroder[1] in the tubers of *Corydalis tuberosa*. It was subsequently examined by several investigators, but not in a pure state until Dobbie and Lauder[2] analyzed the pure alkaloid and its salts and assigned to it the formula $C_{22}H_{28}O_4N$. Freund and Josephy[3] found that the alkaloid was better represented by the formula $C_{22}H_{27}O_4N$, which is now generally adopted. A dozen other

[1] Wackenroder, cited by *Kastner's Archiv.*, 1826, viii, 423.

[2] Dobbie, J. J., and Lauder, A., *J. Chem. Soc.*, 1892, lxi, 244.

[3] Freund, M., and Josephy, W., *Annalen*, 1893, cclxxvii, 1.