

**MORE ON THE QUESTION OF THE SPECIES SPECIFICITY OF THE
GONADOTROPIC HORMONE**

INVESTIGATIONS OF *DROSOPHILA* SPP.

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With 26 Figures (34 Images)

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Summary

1. With 4 new species combinations, the development of the transplanted ovaries could be clearly promoted in the foreign species host by simultaneous implantation of the foreign species' own brain/ring gland complexes. By this the earlier presented proof of the species specificity of the gonadotropic hormones of the species *melanogaster* and *funnebris* can be extended to the species *pseudoobscura* and *virilis*.

2. The species specificity of the gonadotropen hormones of the 4 species *melanogaster*, *pseudoobscura*, *funnebris* and *virilis* could also be concluded alone on the basis of the interspecific ovary transplantation.

3. An initial attempt was made to correlate the effective strength of the different types of gonadotropic hormones with the taxonomic relationships of the four examined species of *Drosophila*.

4. Foreign ovaries implanted into females of *female-sterile*- and the hybrid *melanogaster/simulans* clearly showed better development than when transplanted into "normal" *melanogaster* or *simulans* females.

5. After clearly assigning the identity of the "central" part of the ring gland with the corpus allatum of Thomsen, the hypertrophie of the corpus allatum of females of *female sterile* and *melanogaster/simulans* was described, and the existing reciprocal effects between the ovaries and the corpus allatum were experimentally proven. Also, this suggests that better development of foreign ovaries (mentioned in 4.) might possibly be explained by a high hormone level in *female sterile* and *melanogaster/simulans* females, that leads to an attenuation of the species specificity.

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