

pressure maximum may or may not contribute to the greater systolic collapse, depending on the degree to which physiological compensation operates in a particular heart.

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A New Tri-atomic Alcohol from the Urine of Pregnant Women.

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A new alcohol differing from the pregnandiol of Marrian¹ and Butenandt² and also from the crystalline ovarian hormone isolated by Doisy,³ Thayer and Veler, Butenandt,⁴ Laquer⁵ and Marrian⁶ has been obtained from the urine of pregnant women.

This alcohol has been isolated in the form of snow white crystals. The melting point by the open beaker method of 5 different preparations was 273°, 273°, 273°, 272.3°, 272° (uncorrected). The crystals melted sharply without decomposition.

The molecular weight determination by Rast's micro procedure gave an average value of 294. The iodine numbers of 3 different preparations were 85.3, 86.2, and 88.5. The average of these values, 86.7, permits one to calculate a molecular weight of 292.8 if one double bond is assumed.

Determination of the number of hydroxyls in 2 samples by the procedure of Peterson and West⁷ indicates that 3 atoms of oxygen exist in this form. Found 124, 129; theory 129 gms. of $\text{CH}_3\text{C}=\text{O}$ per mole. The average molecular weight of the triacetyl derivative is 410. M. P. 126° uncorrected.

The specific rotation of a 0.322% solution in 95% ethyl alcohol at 28° in a 2 dm. tube with a sodium flame was +68.3°. Another sample (0.148%) gave a value of +72.8°.

¹ Marrian, G. F., *Biochem. J.*, 1929, **23**, 1090.

² Butenandt, A., *Ber. d. deut. chem. Ges.*, 1930, **63**, 659.

³ Doisy, E. A., Thayer, S. A., Veler, C. D., *J. Biol. Chem.*, 1930, **86**, 499.

⁴ Butenandt, A., *Naturwissenschaften*, 1929, **17**, 879.

⁵ Dingemans, E., de Jongh, S. E., Kober, S., and Laquer, E., *Deut. Med. Wochenschr.*, 1930, **56**, 301.

⁶ Marrian, G. F., *Biochem. J.*, 1930, **24**, 435.

⁷ Peterson, V. L., and West, E. S., *J. Biol. Chem.*, 1927, **74**, 379.

Qualitative analysis did not detect sulfur, halogens or nitrogen. Quantitative micro analysis: carbon 75.15%; hydrogen 8.22%. Calculated for $C_{18}H_{24}O_3$, carbon 74.95%; hydrogen 8.39%; mol. wt. 288.

Physiological Activity. Injections of minute quantities (recrystallized 10 times) of this new alcohol cause opening of the vagina of sexually immature rats and mice. Subcutaneous administration to spayed adult rats produces cornification as judged by the vaginal smears. Cornified cells appear usually on the fourth or fifth day following the injections counting the day of injection as the first. The presence of numerous cornified cells continues for several days. The response to this substance is quite different from the response to theelin. Theelin, like purified extracts of hog liquor folliculi, generally shows the peak of its action on the third day with a rapid return to the dioestrous type of smear.

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Physiological Reactions of Goldfish with Severed Spinal Cord.

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So far as the writer is aware, the work of Koppányi and Weiss,¹ and Percy and Koppányi² on goldfish, and that of Nicholas³ on *Fundulus* embryos (none of which has been published in full), constitute all that has been done on spinal cord section in teleosts. The first two of these papers report functional regeneration of the severed cord. Nicholas definitely failed to secure any restoration of function or of anatomical continuity.

To further test the matter, a study of the results of spinal section in the goldfish (*Carassius auratus*) has been undertaken. To date, 25 small goldfish have been subjected to operation on the spinal cord. The animals were anesthetized with chloretone, transluminated in a dark room, and the spinal cord presumably cut with a knife in the region marked by the beginning of the dorsal fin. Subsequent histological examination has proved cord section in the majority of these.

¹ Koppányi and Weiss, *Anz. d. Akad. d. Wissen. Wien*, 1922, **59**, 206.

² Percy and Koppányi, *Proc. Soc. Exp. Biol. and Med.*, 1924, **22**, 17.

³ Nicholas, *Proc. Nat. Acad. Sci.*, **13**, 695, and personal communication.