

Pacific Coast Section.

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Transplants of Adrenal Cortex Into Rat Ovaries.

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We have reported¹ that transplantation of adrenal cortex into the ovary at the same time that bilateral adrenalectomy was performed proved successful in maintaining the life in 5 out of 12 piebald rats, and suggested² that if the operation were carried out in 2 stages some weeks apart—(a) removal of one adrenal and transplantation of a portion of it into an ovary, (b) removal of the second adrenal

TABLE I.

Rat	Date of 1st stage of oper.	Weight at 1st stage gm.	Date of 2nd stage of oper.	Date of removal of transplant	Weight at time of removal of transplant gm.	Date of death following insufficiency symptoms
W 5462*	9/29/30	148	10/20/30	12/15/30	210	12/18/30
G 5900	10/28/30	127	11/12/30	1/ 2/31	200	1/12/31
B 5901	10/28/30	143	11/12/30	1/ 2/31	205	1/15/31
BH 5902	10/28/30	114	11/12/30	1/ 2/31	180	1/13/31
BH 6202†	11/ 4/30	128	11/20/30	1/21/31	251	2/ 4/31
G 5801‡	10/27/30	203	11/13/30	1/21/31	204	—

¹ Pencharz, R. I., Olmsted, J. M. D., and Giragossintz, G., *Science*, 1930, **72**, 175.

² Pencharz, R. I., Olmsted, J. M. D., and Giragossintz, G., in press.

* Mated 11/27/30. Note that following removal of transplant pregnancy did not prevent insufficiency symptoms and death.

† Mated 11/12/30. Gave birth to 11 young 12/13/30.

‡ Mated 11/19/30. Litter of 8, 12/12/30. Inasmuch as this rat failed to show insufficiency symptoms following removal of transplant, it was killed 2/8/31. An accessory adrenal was found. This is only the second case of an undoubted accessory found by us.

some time following the first operation—we believed the operation would be successful in a greater number of cases. In this paper we report that in 6 attempts at transplantations with this method all were successful.

All the rats used in the above experiments were virgin animals, 3 to 5 months old at the time of the initial operations, and all transplants were made during dioestrous. The transplant was successful in each case. All 6 rats were in excellent health and showed no insufficiency symptoms at the time of removal of the ovary containing the adrenal transplant 50 to a little over 60 days following removal of the second adrenal, *i. e.*, a much longer interval than the longest survival period of our successfully adrenalectomized rats;² all except one, in which accessory adrenal tissue was found, showed typical insufficiency symptoms and died 3 to 13 days after removal of the transplant. It is to be noted that the operation did not interfere with normal pregnancy, and that pregnancy did not prevent insufficiency symptoms and death when the transplant was removed.

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A New Method of Determining Solubilities Based on Stability of Phthalate Buffers of Low pH at Low Temperatures.

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The disconcerting finding that buffers of potassium acid phthalate-HCl become more alkaline on standing led to a consideration of the cause of this change and to the discovery of a new method of determining solubilities.

The buffers were made according to the directions given by Clark.¹ The immediate determination of the pH of these buffers by the quinhydrone electrode gave values close to those expected, but subsequent pH determinations showed that a change had taken place on standing. This was particularly true at 13°C., whereas at 20°C. the changes were not great. A deposition of crystals could be observed accompanying the change in the pH of the buffers and this crystallization seemed to be proportional to the degree of change in the pH values. After the effect had been noticed in one set of buffers a new series was made up and the pH values determined by

¹ Clark, W. M., *Determination of Hydrogen Ions*. 1928.