virus following administration of normal allantoic fluid.

Similar interference experiments conducted in mice by the intranasal injection of partially inactivated virus preparations, followed 5 hours later by the active agent, have given results indicating that the same phenomenon may be demonstrated in this species. Protection against as much as 250 50-per-cent.-mortality doses was noted.

Interference of one virus with another has been observed repeatedly. The viruses may be quite unrelated or very closely related, as is the case with neurotropic and non-neurotropic strains of influenza Type A virus.[2] Interference of inactivated bacteriophage with the active agent of the same strain has been observed recently[3] and the present results extend these observations to the influenza viruses. It seems very likely from the data presented that virus having been inactivated during the process of cultivation may cause such interference phenomena and account for the difficulties encountered in the propagation of some strains of influenza virus. A more extensive report will be published elsewhere.

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THE EFFECT OF CASTRATION AND TESTOSTERONE PROPIONATE ON d-AMINO ACID OXIDASE ACTIVITY IN THE MOUSE[1]

IN recent reports from this laboratory we have indicated the effect of castration and testosterone propionate on the activity of three hydrolytic enzymes.[2, 3] We now wish to report findings with respect to an oxidative enzyme, d-amino acid oxidase.

The mice were of an inbred stock, Buffalo-Marsh strain.[4] Castration and implantation of the testosterone propionate[5] pellets were performed when the mice were 18 ± gms body weight. The enzyme activity was determined by a modification of Elvehjem's method. The pyruvic acid formed in the presence of arsenite was determined by the 2,4 dinitrophenylhydrazone method.

The results in Table 1 demonstrate that the mouse kidney loses part of its ability to oxidatively deaminate d-alanine as a result of castration. The administration of testosterone propionate not only restores this property but increases it above normal. These data provide further evidence for our program to elucidate the nature and purpose of the protein anabolic properties of certain steroids originally observed in this laboratory in castrate dogs.[6]

TABLE 1

THE EFFECT OF CASTRATION AND TESTOSTERONE PROPIONATE ON THE d-AMINO ACID OXIDASE ACTIVITY OF MOUSE KIDNEY

Treatment*	No.	Weight of kidneys gms	Pyruvic acid formed			
			Total		Per gram	
			micro-moles	Per cent.	micro-moles	Per cent.
Castrate ..	6	0.259	20.1	−70	75	−54
Normal ...	5	0.402	65.5	..	164	..
Cast. and T. P.	3	0.545	108.0	+64	198	+21
Normal and L. P.	3	0.537	102.0	+55	190	+16

* Body weight at castration 18 ± gms. Treatment for 130 ± days.

The substrates incubated with mouse liver brei in no instance showed the presence of pyruvate. Either the mouse liver possesses no d-amino acid oxidase or it has a different mechanism than the rat for metabolizing pyruvate. We have been able consistently to find pyruvate in good amounts in substrates incubated with rat liver brei according to exactly the same procedure used for the mouse experiments. This difference in enzyme activity between the two species is not too surprising, for we have noted marked differences in the arginase and phosphatase activities in these same species.

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DIFFERENTIAL INHIBITION BETWEEN NORMAL AND TUMOR (CROWN GALL) TISSUE IN BEET ROOTS

A DISTINCT difference has been found by the authors in the action of resorcinol and of cyanide upon the rate of oxygen uptake in the tissues of normal beets and of beet root tumors induced by inoculation with *Phytomonas tumefaciens*.

With normal beet tissue an inhibition of 12 to 14 per cent. is obtained with 0.0166M resorcinol, whereas in tumor tissue this amounts to 20 to 23 per cent.

2 C. H. Andrewes, *Brit. Jour. Exp. Path.*, 23, 214, 1942.

3 S. E. Luria and M. Delbrück, *Arch. Biochem.*, 1: 207, 1942.

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2 C. D. Kochakian and L. C. Clark, Jr., *Jour. Biol. Chem.*, 143: 795, 1942.

3 C. D. Kochakian and R. P. Fox, *Endocrinology*, 30: S1033, 1942.

4 The mice were provided by the Biological Station, Springville, N. Y., through the courtesy of Drs. W. S. Murray and S. G. Warner.

5 The testosterone propionate (Perandren) was supplied by the Ciba Pharmaceutical Products, Inc., through the kindness of Dr. E. Oppenheimer.

6 C. D. Kochakian and J. R. Murlin, *Jour. Nutrition*, 10: 437, 1935; *Am. Jour. Physiol.*, 117: 642, 1936; C. D. Kochakian, *Endocrinology*, 21: 750, 1937.