the media. *Lactobacillus plantarum* and *Saccharomyces carlsbergensis* were inhibited in a synthetic medium by isoniazid concentrations of less than 10^{-2} M. This inhibition was competitively reversed by pyridoxine, pyridoxamine, and pyridoxal. In reversing isoniazid inhibition of *Lactobacillus*, pyridoxamine, and pyridoxal were from 1000 to 4000 times more effective, than pyridoxine. 2. Two strains of *E. coli* were inhibited with isoniazid with partial reversal with pyridoxine and derivatives. Larger amounts of the metabolite were required and the reversal was not as typically competitive. 3. No reversal of isoniazid inhibition could be obtained with vit. B_6 or its derivatives in any of the *Mycobacteria* tested. If isoniazid acts as an antagonist of pyridoxine or its derivatives in the *Mycobacteria*, it is not a simple substrate competition or uptake phenomenon.

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Failure of Grafted Ovaries to Assume Adrenalcortical Function in Rats.* (20622)

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It has been shown that under specific conditions the ovary of the mouse can and does assume life-sustaining corticoadrenal functions(1,2). Working independently and in different laboratories, the authors have made autoplastic intrasplenic ovarian grafts in young adult and in immature rats in an effort to determine the effectiveness of such a graft on post adrenalectomy survival time in the rat.

The recent article by Lichton, Goldblatt, and Stolpe(3) prompts us to make our data available.

Methods. The animals used were of sturdy albino stock of no specific strain origin, and in each case were fed standard laboratory diets. The experiments on the young adult rats were performed by Hill, and those experiments on the immature rats were done by Bernstorf. The mature rats were bilaterally spayed, and at the same time the left ovary was grafted into the spleen. At various intervals following recovery, the right adrenal was removed. The left and second adrenal was removed approximately 2 weeks following first adrenal removal (Table I). Following the completion of adrenalectomy, the weights of all animals were recorded every few days. If the animals were discovered soon after death they were examined for remnants of adrenal tissue and for the general condition of the graft. The immature rats were spayed at weaning, and 17 of the 19 animals used

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TABLE I. Body Weight and Length of Postadrenalectomy Survival in 22 Mature Graft-Bearing rats.

Body wt in g: Day postadrenalectomy 1	6	13	15	Last wt: Day	g	No. of survival days
177	170	146	149	20	115	20
194	174	170	165	20	144	20
—	—	—	—	—	—	1*
—	—	—	—	—	—	1*
178	172	160	149	—	—	20
215	203	202	200	34	186	34
159	157	140	141	24	131	28
157	143	127	122	16	116	16
167	152	161	157	24	134	28
—	—	—	—	—	—	1†
168	157	143	141	21	115	21
Day postadrenalectomy 2	6	13	17			
182	169	167	—	—	—	16
178	170	175	172	24	140	24
153	144	137	126	21	115	21
203	185	180	169	48	157	48
203	193	190	173	19	150	19
161	150	137	124	21	109	21
168	162	150	137	23	123	23
192	179	176	164	24	144	28
193	190	210	206	24	208	24
163	151	147	130	23	90	23
154	140	142	129	19	114	23

* Operated on by technician, died 1st post op. day and excluded from results.
† Eviscerated through surgical opening.

were given an ovarian autograft into the spleen. Two animals were left without ovarian graft as controls. This entire group was adrenalectomized in 2 stages on days 30 and 34 following the grafting of the ovary into the spleen. All animals were weighed at the time of removal of the final adrenal, and again after 5 days. At death the animals were observed for adrenal tissue and the grafts of ovaries were weighed (Table II).

Data and discussion. In the adult rat series, 17 of 22 animals died within 30 days after adrenalectomy, with an average survival time of 22 days. Three animals died on the first post operative day (see footnote to Table I), and therefore are excluded. Two animals survived adrenal removal for periods of 34 and 48 days, respectively, and if included in the average survival time, they augment it upwards by only 2 days.

The immature animals had an average survival time of 10 days, with the ungrafted adrenalectomized controls having a survival of 7.5 days.

We note with interest that the average survival period of all of our ovarian grafted rats is quite in line with the average survival time of the adrenalectomized control animals of Lichton *et al.* Furthermore, all of our animals were observed to carry macroscopic grafts at the time of removal of the second adrenal (left), and in most of the immature animals the graft was weighed following death.

It is impossible to explain the differences in the results obtained by us and those obtained by Lichton and coworkers(3). For the present those differences must be ascribed to one or more unknown factors, which it is hoped will be cleared by subsequent studies. We believe it is significant that our results bear such remarkable correlation especially when the work was done in 2 different laboratories, with an intervening period of more than 2 years in the 2 sets of experiments, and by 2 separate investigators on 2 totally unrelated groups of rats. We take note of the effectiveness of ovaries in mice in prolonging life after adrenalectomy(1,2). Likewise we are well

TABLE II. Body and Ovarian Graft Weights and Length of Postadrenalectomy Survival in 19 Immature Graft-Bearing Rats.

Body wt in g: Day postadrenalectomy 0	5	Graft wt in mg	No. of survival days
111.8	106.4	8.7	7.0
114.3	118.7	13.4	12.5
104.6	115.7	31.2	12.5
119.8	122.2	77.8	10.0
117.0	110.4	72.5	22.5
118.4	120.9	4.3	12.0
116.0	117.3	14.9	12.0
102.4	108.8	69.2	13.5
123.2	105.8	39.4	7.5
109.5	109.1	28.4	10.5
102.0	122.5	—	—
104.5	105.4	22.7	11.0
102.9	99.7	54.2	7.0
97.7	98.8	67.1	7.5
88.9	83.6	64.8	8.5
94.4	85.0	66.3	8.5
110.0	96.8	97.6	8.0
Adrenalectomized controls			
101.5	86.2	—	7.5
90.0	88.5	—	7.5

aware of the androgenic potentialities of the mouse ovary(4,5).

Deanesly(6) and subsequent workers have extended Hill's original observations, finding an androgenic activity in the rat ovary. However, in no case has the rat exhibited the same quality of androgenic activity in its ovaries as that found in the mouse. Likewise the androgenic response in the mouse ovary is much more closely correlated with temperature changes than is the rat ovary. Too often it is assumed that, because of gross similarity, and sometimes a physiologic similarity, that those reactions occurring in one species will occur in the other species.

Summary. Two separate investigators, working in different laboratories at different times and with unrelated rat colonies have correlative data which shows, within the limits of the experiments, that spleen grafted ovaries will not noticeably extend the post adrenalectomy life of the host animal. The difference between the positive response in mice and the negative response in rats is noted. Histology of the grafted tissue was not correlated with the physiological response obtained.

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Interval Between Inoculations as a Factor in Interference between Neurotropic Viruses. (20623)

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In recent studies(1,2) reported from this laboratory it was found that 3- to 4-week-old rats, which are ordinarily highly susceptible to Western equine encephalomyelitis (WEE) virus, were much less susceptible to the virus, following nasal instillation, if St. Louis encephalitis (SLE) virus had been inoculated by the same route 72 hours previously. The purpose of the studies reported here was to determine the interval that must elapse between the intranasal inoculation of SLE virus and the subsequent inoculation of WEE virus for interference to occur and also to determine how long the interfering effect persisted.

Materials and methods. The 2 viruses used have been described previously(1). Two different methods were employed in preparing the different virus suspensions used. They were prepared from virus-infected brains of 2- to 4-week-old Swiss mice by either grinding the brains in a mortar with alundum and sufficient cold, inactivated, undiluted rabbit serum to make a 10% suspension of infected brains or by homogenizing the infected brains in a Waring blendor together with sufficient of the above diluent to make a 10% suspension. The suspensions were centrifuged at about 2000 RPM for 5 minutes to sediment gross particles. The supernatant fluid was removed, distributed in 2 ml amounts in screw-capped vials and "quick-frozen" by rolling the vials in a mixture of dry-ice and alcohol. The vials were then stored in a CO_2 cabinet until needed. Virus suspensions were titrated intracerebrally in 3- to 4-week-old Swiss mice after storage for different intervals in the CO_2 cabinet. Two suspensions of each of the 2 viruses were used. One suspension of SLE virus was titrated after 5 days storage at about —70°C and the second after 11 days. The LD/50 titer(5) in each case was $1 \times 10^{-8.5}$. One suspension of WEE virus was titrated 4 days after storage and the second

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