worm, experiments were then carried out to determine whether such serums, given after infection, would inhibit development of the cysticerci. Accordingly rats were fed, by stomach tube, equal portions of a uniform suspension of onchospheres, and pooled serum from immune rats (infected with *C. fasciolaris*) was injected intraperitoneally, in proportion to body weight, at varying intervals after infection. Control animals of one group received normal rat serum, and those of another group were not given serum.

The results of 3 experiments with more than 140 animals show that the immune serums were effective in arresting the development of *C. fasciolaris,* when administered within about 9 days after the rats were fed onchospheres. At autopsy 28 days later cysts were completely, or almost completely absent in the animals of these groups, while numbers of large cysts (3 to 6 mm. diameter) were present in the livers of the rats of control groups. Cyst development was but slightly hindered in the animals of groups to which immune serum was given later than 9 days after infection.

The results of one experiment are given in Table I.

TABLE I.
Figures give the average number of cysts in liver.

Group	Injected with†	Days after Infection	No. of Rats	Cysts Living	Cysts Dead
Control			7	52	43
"	Normal rat serum	4	7	112	38
A.	Serum from infected rats	4	7	0.3	17
B.	" " " "	5	7	2	27
C.	" " " "	6	8	1	44
D.	" " " "	7	7	9‡	80
E.	" " " "	8	7	0.7	81
F.	" " " "	10	7	60	75

† 1 cc. of serum per 100 gm. body weight.
‡ 1 rat with 57 cysts raised this average from a fraction to 8.7.

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Effect of Certain Extracts on Basal Metabolism of Guinea Pigs.

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Urine from patients with toxic goiter was obtained in 5 gallon lots from such patients, concentrated and extracted with petroleum ether as well as alcohol. An equal amount of urine from presu-

mably normal people was obtained, concentrated and extracted in the same manner, to be used as control extracts. Equal amounts of the extract from the urine of patients with toxic goiter and the urine of normal people were fed to guinea pigs of the same weight, which had had a sufficient number of metabolic readings to determine a normal base line. The animals were starved 16 to 22 hours before the metabolic determination which was usually done every second day.

The apparatus used was a closed chamber system, utilizing the Benedict principle of measuring oxygen consumption with a spirometer without regard to the output of carbon dioxide, which was taken up by passage of the gaseous mixture through soda lime.

Various extracts of concentrated urine from normal adults and from patients with toxic goiter were made. The only ones which seemed potent from the standpoint of influence on basal metabolism were the extracts made with petroleum ether. However, the presence of so many toxic elements in our alcoholic extracts of urine does not allow us to form any conclusions regarding this particular extract. It was found that the animals to which the extract of urine from patients with toxic goiter was given sustained a slight increase in basal metabolism. The highest level was an average of plus 18% with observations over a period of 3 weeks. Each of another series of 3 animals was fed 8 mg. desiccated thyroid per kilo per day. One was fed over a period of 3 weeks with a petroleum ether extract of urine from supposedly normal adults, another fed in a similar manner with a petroleum ether extract of urine from a patient with toxic goiter, whereas the third animal was given nothing except the desiccated thyroid. Each animal was fed the same amount of a standard balanced diet, the same periods of starvation preceding each basal determination. The animal which was fed thyroid alone, had an average basal metabolic reading of +15% above its preliminary base line, the animal which was fed thyroid and extract of urine from a patient with toxic goiter had an average of +26%, whereas the third animal which was fed thyroid and extract of normal urine had an average metabolic reading of —1. The weight loss was 6%, 12%, and 9% respectively. It appeared, therefore, that the extract of urine from the patient with toxic goiter increased the toxicity of the desiccated thyroid, whereas the extract of urine from normal people had tended to counteract the effect of the desiccated thyroid.

While studying the effect of variation in diet upon the basal metabolism of guinea pigs, it was discovered that a diet consisting

chiefly of lettuce and cabbage, especially the former, caused a decrease in the metabolic level in spite of the fact that there was a drop in weight while the animals were fed lettuce or cabbage alone.

Since lettuce or cabbage alone constitutes an unbalanced diet, we made various extracts of lettuce (which seemed to produce a greater depression than cabbage) with ether, alcohol and water and fed each to guinea pigs. When animals were then fed on a balanced diet it was found that an alcoholic or aqueous extract of lettuce would cause a depression of the animal's basal metabolism. The ether extract did not appear to be so effective. Each animal was fed extract from an amount of lettuce equal to about ½ to 1 pound of the green vegetable per kilo of body weight per day. On several occasions the average metabolic curve under such feedings averaged between —10% and —20% below the preliminary base line. Most of these animals showed a slight gain in weight during the observations.

When desiccated thyroid is fed along with the lettuce extract there appears to be a definite tendency for the extract to diminish the effect of the thyroid, but in no instance did the extract completely counteract the effect of the thyroid. However, it appears to be more difficult to protect the animal against thyroxin by this means.

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Experimental Trichiniasis Infections in Monkeys.*

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Apparently no experimental infections with *Trichinella spiralis* have been attempted in monkeys. In a summer's program of work at the Gorgas Memorial Laboratory, Panama, the following 7 species of Central American monkeys were found susceptible to infection with this parasite: the white-throated monkey, *Cebus capucinus,* the black spider, *Ateles dariensis,* the red spider, *Ateles geoffroyi,* the brown and black howler, *Alouatta palliata palliata* and *A. palliata inconsonans,* the marmoset, *Leontocebus geoffroyi,* the yellow titi, *Saimiri örstedii,* and the night monkey, *Aotus zonalis.*

All infections were given according to the body weight of the

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