likely because of the great differences in the concentrations of water in the connective tissue from dehydrated and fasted mice, while the rate of absorption is equal in both groups.

Table 1. TIME (SEC.) FROM THE INJECTION OF A 10 PER CENT URETHANE SOLUTION SUBCUTANEOUSLY TO MALE MICE (0·30 ml./25 gm.) UNTIL THE ANIMALS COULD BE LAID ON THE SIDE WITHOUT RESISTANCE

Pre-treatment	No. of experiments	Mean	Standard error of mean	P
Controls	20	1110	±75	—
Fasted	15	650	±81	<0·001
Dehydrated	19	630	±64	<0·001

Table 2.—TIME (SEC.) FROM THE INJECTION OF A 10 PER CENT URETHANE SOLUTION CONTAINING 500 i.u. HYALURONIDASE/ML. SUBCUTANEOUSLY TO MALE MICE (0·30 ml./25 gm.) UNTIL THE ANIMALS COULD BE LAID ON THE SIDE WITHOUT RESISTANCE

Pre-treatment	No. of experiments	Mean	Standard error of mean	P
Controls	21	435*	±31	—
Fasted	16	390†	±33	>0·1
Dehydrated	17	350*	±33	>0·05

*Significant different from the corresponding figures in Table 1 according to $P < 0·001$.
†Significant different from the corresponding figures in Table 1 according to $P < 0·005$.

Dehydrated and fasted animals are in conditions of stress. Cortisone given in pharmacological doses to mice is followed by an enhanced absorption of urethane[3] while the concentration of hexosamine in the connective tissue is unaltered when compared to controls[4]. However, it is not likely that the enhanced absorption in dehydrated and fasted mice is due to a rise in the production of adrenocorticosteroids. The absorption-enhancing effect of cortisone is still pronounced when experiments are performed with solutions containing hyaluronidase, while dehydrated and fasted animals absorb urethane as normal animals when the injected solutions contain hyaluronidase. While the explanation of the absorption-enhancing effect of cortisone is possibly a reduced self-depression of the subcutaneous absorption[5,6], the enhanced absorption in dehydrated and fasted animals is more likely produced by the above alterations in the amount of connective tissue ground substance. The concentration of water in the connective tissue seems of less or no importance for the rate of subcutaneous absorption of a non-electrolyte such as urethane.

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In Vitro Study of the Anthelminthic Property of *Artemesia monosperma* grown in Egypt

THE various species of the genus *Artemesia* have been subjected to pharmacological investigation for the purpose of ascertaining their useful application as therapeutic agents. As there was no mention in the literature to the physiological activity of the santonin-free, *Artemesia monosperma*, Del.[1], it was deemed of interest to investigate this common Egyptian desert plant for any possible anthelminthic properties. It was decided that investigations should be made *in vitro* to determine the effects of some preparations of the plant on both *Ascaris* and the intestine, and to show whether it possesses a vermicidal or vermifugal property.

Ascaris leonina and strips of the small intestine were carefully taken from freshly killed but infected dogs and kept in Tyrode's solution. The intestinal strips, each about 1 in. long, were suspended in oxygenated Tyrode's solution at a constant temperature of 38°C., using a glass jar bath with an inner vessel of 50 ml. capacity. The same technique was also applied to the *Ascaris* using either the whole worm or its upper part. After recording the normal movements of the intestine and *Ascaris* on a smoked drum-paper, the effect of different doses of alcoholic and watery extracts of *Artemesia monosperma* was tested by the addition of their solutions to the organ bath.

The results obtained showed that both extracts produced inhibition of the intestinal motility and stimulation of the movements of the parasite. The effect became obvious and more pronounced as the concentration of these preparations was increased. When comparison was made between the effective doses of these two extracts, it was noticed that the watery extract was more potent than the alcoholic extract.

Thus it is concluded that although the drug would appear to be non-lethal to the Ascarids, it is obnoxious to them and stimulates the musculature causing excessive and acute movements. Such movements may relinquish their hold on the intestinal mucosa so that they are easily expelled by a subsequent purgative. Moreover, the inhibition of the intestinal motility demands the administration of a purgative, and thus helps the expulsion of the already over-stimulated moving parasites from the intestines.

From this investigation it seems possible that *Artemesia monosperma* possesses highly anthelmintic properties. It is recommended, therefore, to be given in the form of a watery extract, followed after an interval of an hour by a purge which will expel the excited parasites from the intestines.

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Potassium and Lactose in Milk in Relation to the Physiology of Milk Secretion

IN a previous communication,[1] we reported the interrelationships of the concentration of sodium, potassium, lactose and water in samples of milk taken at intervals over a period of three months from shorthorn cows in mid-lactation. It was shown that the water of milk can be represented as a two-phase system: in one phase, referred to as the sodium-lactose phase, potassium is absent and sodium and lactose vary inversely; in the other, referred to as the sodium-potassium phase, lactose is absent and sodium and potassium vary inversely. The relative proportions of the two phases were calculated to be, on average, about 2·5 : 1·0, but it was not possible to deduce from