Number of animals used	Age (days)	Daily dosage	Equivalent in fresh glandular substance (grams)	Duration of period of injection	Results in experimental animals*
4	18	¼ cc	7.5	1 wk. (2)	Negative
				2 wks. (2)	"
4	20	2 cc	60.0	1 wk. (2)	"
				2 wks. (2)	"
4	25	½ cc	15.0	1 wk. (2)	"
				2 wks. (2)	"
4	32	¼ cc	7.5	1 wk. (2)	"
				2 wks. (2)	Corpora lutea present.
4	33	4 cc	120.0	1 wk. (4)	Corpora lutea present.
4	35	1 cc	30.0	1 wk. (4)	Spermatogenesis. Corpora lutea.
2	42	1 cc	30.0	1 wk. (2)	Spermatogenesis. Corpora lutea.

* Corpora lutea were present in none of the control animals. At the 42-day stage, however, a small percentage of the tubules of the controls contained a few spermatozoa.

pituitary gland also showed considerable hypertrophy in some of the youngest animals examined.

It is concluded that extracts of the adrenal cortex, which contain according to recent observations the hormone of the cortical tissues, produce precocious sexual maturity in the albino rat. The effect is most pronounced and first produced in the female.

E. L. COREY
S. W. BRITTON

PHYSIOLOGICAL LABORATORY,
UNIVERSITY OF VIRGINIA

ANTIUREASE[1]

ANTIENZYMES, such as antirennin, antipepsin, antitrypsin, anticatalase, antiemulsin, antiamylase and others, have been described in enzyme literature, but there always has been considerable doubt of their existence. In some cases, as with anticatalase, the substance is nothing more than an inhibitor occurring naturally in animal tissues. The production of antipepsin by injecting pepsin into animals is very improbable since pepsin is rapidly destroyed at the pH of the blood.

We believed that crystalline urease would be especially suitable for the production of an antiurease in animals for the following reasons: It is extraordinarily active; it is stabilized by blood serum and it poisons animals even in small doses by converting the animal's urea to ammonium carbonate.

Urease, recrystallized from 30 per cent. alcohol and of the highest obtainable activity, was injected into young rabbits of from 2 to 2½ kilograms in weight. When given by ear vein as little as 0.3 mg caused convulsions after a few minutes and death after 1 or 2 hours. When the urease was injected intraperitoneally the rabbit was usually found dead in 10 to 12 hours. Subcutaneous injection caused death within 36 to 48 hours. It has been possible to immunize rabbits by starting with subcutaneous, or intraperitoneal injections of 0.02 to 0.04 mg and increasing the dose gradually. The amount of urease has been increased as high as 4 or 5 mg of crystalline urease at a single injection without causing any loss in weight and any visible symptoms other than slight swellings at the sites of injection. Serum from these immunized rabbits, when incubated with crystalline urease, greatly inhibits the ability of the urease to hydrolyze urea. Even as little as 0.015 cc of the immune serum has an unmistakable effect. When normal rabbits are given protective doses of immune serum intraperitoneally, they have been shown to be unaffected by twice the lethal dose of crystalline urease.

Since antiurease can be determined easily by chemical means and, unlike toxin-antitoxin, is independent of animal experimentation for its demonstration and estimation, we expect this work to lead eventually to a more complete understanding of the phenomena of immunological reactions.

JAMES B. SUMNER
J. STANLEY KIRK

[1] From the Department of Physiology and Biochemistry, Medical College, Cornell University, Ithaca.

BOOKS RECEIVED

BROWNELL, HERBERT. *Physical Science.* Pp. xiv + 313. 125 figures. McGraw-Hill. $2.50.

JONES, HENRY A. and SAMUEL L. EMSWELLER. *The Vegetable Industry.* Pp. viii + 431. 154 figures. McGraw-Hill. $2.25.

MILLARD, E. B. *Physical Chemistry for Colleges.* Third edition. Pp. ix + 522. 87 figures. McGraw-Hill. $3.75.

NATIONAL RESEARCH COUNCIL OF JAPAN. *Japanese Journal of Geology and Geography.* Transactions and Abstracts. Volume VIII. No. 4. Pp. ii + 241 + 359. Illustrated. The Council, Tokyo.

SHIRLEY, MARY M. *The First Two Years; a Study of Twenty-Five Babies.* Volume I. Postural and Locomotor Development. Pp. xv + 227. 15 figures. 10 plates. University of Minnesota Press. $2.00.

TING, V. K. and Y. C. SUN, editors. *Palaeontologia Sinica.* Series D; Volume VII; Fascicle ii: On an Adolescent Skull of Sinanthropus Pekinensis in Comparison with an Adult Skull of the Same Species and with Other Hominid Skulls, Recent and Fossil, by Davidson Black. Pp. 144 + viii. 16 plates. 37 figures. The Geological Survey of China, Peking.

YONGE, C. M. *A Year on the Great Barrier Reef.* Pp. xx + 246. 69 plates. 17 diagrams. Putnam. $6.00.