These results thus lend support to the hypothesis(1) that conduction along the fibrillar structure which connects the base of individual cilium in the pellicle of the organism is similar to conduction along nerve fibers, and is dependent upon AChE activity for function(6).

Attempts were made to localize, by histochemical methods, the AChE activity of *Tetrahymena*. It was thought that such procedures would visualize a pattern on the pellicle which would be identical with the pattern of the fibrillar system as revealed by the silver technic(7). Cells were therefore treated according to the procedures for histochemical localization of AChE as described by Gomori(8) and as by Koelle(9). The stain however, in all cases, diffused to a great extent and became located in cytoplasmic granules, which actually contained no AChE activity (Table I).

Summary. AChE activity in the ciliate *Tetrahymena geleii* S is localized in the fibrillar system of the pellicle. Upon differential centrifugation, a fraction was obtained which contained only enzymatic activity from the pellicle. This fraction contained the entire amount of AChE activity of the cell.

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Implantation of Ureters into Completely Isolated Loops of Small Intestine.* (18426)

WALTER L. MERSHEIMER, ALBERT J. KOLARSICK, AND HENRY KAMMANDEL.
(Introduced by Israel S. Kleiner.)

From the Department of Surgery, New York Medical College and Flower and Fifth Avenue Hospitals.

The problem of constructing an artificial urinary bladder has become increasingly more urgent because of the performance of large numbers of radical operations, particularly pelvic viscerectomy.

Reports have appeared concerning the use of partially or completely isolated loops of small intestine to serve as a urinary reservoir (1-4). Our method of performing ureteroileal-cutaneous implantation has not previously been reported and our investigation would indicate that it is superior to the older technics.

The procedure we have successfully performed is as follows: With the dog under intravenous sodium pentothal anesthesia, a left rectus muscle splitting incision is used to enter the abdomen. A loop of terminal ileum approximately 10 cm in length is isolated and the continuity of the small intestine is restored by end to end anastomosis. The proximal end of the isolated ileal loop is closed by the Parker-Kerr technic. The ureters are transected close to the bladder and the distal ends ligated. The ureters are implanted through the same seromuscular tunnel in the antimesenteric border of the isolated loop of the intestine. The distal open end of the

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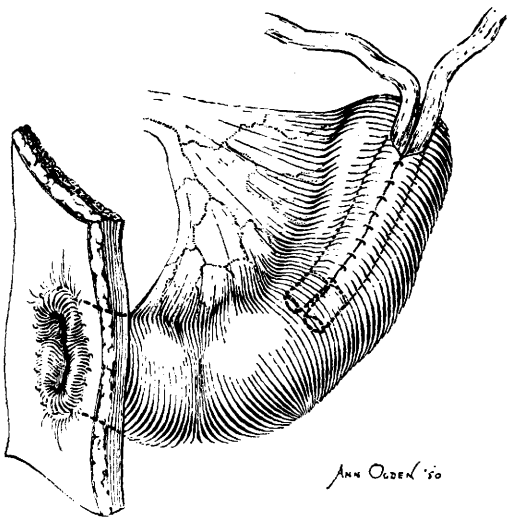

FIG. 1.

loop is brought through a stab wound in the abdominal wall as an ileostomy. The method is illustrated in the accompanying diagram.

In the small series of animal experiments there has been survival up to 18 months. Sacrifice of the 18-month dog and postmortem examination showed normal kidneys and pelvis without evidence of infection, and slightly dilated ureters. The isolated loop of ileum, the uretero-intestinal anastomoses and the ileostomy all appeared normal. Microscopic sections of the kidney did not show any significant lesions. Studies of the blood nonprotein nitrogen and urea nitrogen, urinalyses and intravenous pyelography prior to sacrifice of this dog were within normal limits.

A similar method was used to transplant the left ureter on two additional dogs. At the time of re-operation the left kidney and ureter compared favorably with the non-operated right kidney and ureter, both sides appearing within normal limits.

Conclusion. A new and successful method of uretero-ileal-cutaneous implantation is described. The method offers advantages: (1) no contact of ureteral orifices with the fecal stream, which should reduce the incidence of infection; (2) it avoids the undesirable features of a wet colostomy, and should be applicable to the patient undergoing pelvic viscerectomy.

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Hemagglutination of Tuberculin Sensitized Sheep Cells in Hansen's Disease (Leprosy). (18427)

MAX LEVINE.

From the Bureau of Laboratories, Territorial Department of Health, Honolulu, Hawaii.

The hemagglutination test of Middlebrook and Dubos(1), as modified by Scott and Smith(2), provides a relatively readily available laboratory tool for studying the serological response of patients infected with tubercle bacilli. The following brief report indicates that this technic may be especially applicable for measuring a serological response in Hansen's disease.

Materials and methods. The technic employed for determination of hemagglutination titers was that described by Scott and Smith except that 0.25% sensitized sheep red cell suspensions were employed; the reacting volume was 1.0 ml compared with 0.8 ml in their report; and the initial test titer was 1:4. Some observations were also made on the effect of agitating the reacting mixture in a Kahn shaking machine for 15 minutes, then centrifuging and immediately reading, on the agglutination titer as compared with the technic of Middlebrook and Dubos and Scott and Smith which consists of incubation for 2 hours at 37°C followed by standing overnight before reading. There was an excellent correlation between the two methods of determining the

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