

8967 P

## Regression Immunity to Jensen's Sarcoma After Cysteine Injection

JESSE L. CARR. (Introduced by C. L. Connor.)

*From the Division of Pathology, University of California Medical School, San Francisco.*

The production of immunity to subsequent inoculations of Jensen's sarcoma was described.<sup>1</sup> To determine the duration of this immunity, white rats, inoculated with tumor which subsequently regressed following injections of cysteine hydrochloride, have been inoculated with fresh emulsions of Jensen's sarcoma each month since February 1, 1936. Inoculations have been attempted once a month for 7 months on each of 8 rats immunized by the regression of the tumors 7 months previously. In no case has there been an acceptance of the inoculation by the animal, all being consistently immune to this particular type of sarcoma. In a group of 4 other animals immunized at this same time by the regression of Jensen's sarcoma, inoculations of the Emge sarcoma have also failed to take.

In order to ascertain the mass of tumor regression necessary to produce subsequent immunity, an experiment was devised in which 20 rats were inoculated with Jensen's sarcoma. Fifteen of these animals developed tumors. Seven to 9 days after inoculation, when the tumors in 5 of these rats were 1.0 cm. in diameter, they were injected with a single dose of 50 mg. of cysteine hydrochloride in 1 cc. water. Similar injections were made 11 to 14 days after inoculation in another group of 5 rats when the tumors had grown to 2.0 cm. in diameter, and in a third group of 5 rats, 18 to 24 days after inoculation, when the tumors were 3.0 cm. in diameter. Complete regression occurred within 14 days in all these injected tumors. Three attempts, at approximated 2-week intervals, from 3 weeks to 2 months after the cysteine injection, to reinoculate the Jensen rat sarcoma into each of these animals have failed. It is not feasible to inject tumor masses smaller than 1.0 cm. in diameter with cysteine because the tissue mass cannot be accurately distinguished as tumor since it may be a small area of infection or necrosis resulting from the attempted inoculation.

<sup>1</sup> Connor, C. L., Carr, J. L., and Ginzton, L. PROC. SOC. EXP. BIOL. AND MED., 1936, **34**, 374.