the other results. It would thus appear that the leucocytes mobilized into the blood stream following hemorrhage have the same lipid composition as those previously present.

Summary. Removal of one-quarter of the blood volume of rabbits produced no appreciable change during 48 hours in the phospholipid and free cholesterol content of the white blood cells and no leucocytosis.

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Transfer of Acquired Resistance to Transplantable Leukemia in Mice.*

J. S. POTTER, M. J. TAYLOR AND E. C. MACDOWELL.

From the Carnegie Institution of Washington, Department of Genetics, Cold Spring Harbor, L. I., N. Y.

It has been demonstrated that graduated doses (cell-immunization) of leukemic cells[1] and certain normal tissues[2, 3] can induce resistance to transplantable leukemia in normally susceptible mice. Following cell-immunization injected leukemic cells immediately develop small lesions which soon become necrotic.[4] Lesions do not form immediately following leukemic inoculation of strain C58 mice made resistant by Sto-Li foetal tissues. Once resistance to line I leukemia has been established by means of graduated cell doses it is permanent, while resistance caused by normal tissue implantation may be only temporary with a peak of effectiveness in C58 mice 3 days after implantation of Sto-Li tissue (unpublished data). Of further interest in this problem is the question: Can resistance induced by these 2 methods be transferred to normally susceptible mice?

Accordingly, spleen and liver were removed from cell-immunized mice, minced and injected into susceptible C58 mice. Another

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1 MacDowell, E. C., Taylor, M. J., and Potter, J. S., PROC. SOC. EXP. BIOL. AND MED., 1934, **32**, 84.

2 MacDowell, E. C., Taylor, M. J., and Potter, J. S., *Proc. Nat. Acad. Sci.*, 1935, **21**, 8, 507.

3 Rhoads, C. P., and Miller, D. K., PROC. SOC. EXP. BIOL. AND MED., 1935, **32**, 817.

4 Potter, J. S., and Findley, M. D., PROC. SOC. EXP. BIOL. AND MED., 1935, **32**, 1338.

group of C58 mice was given injections of Sto-Li foetal tissues and 3 days later the spleens were removed from these animals, minced and injected into susceptible C58 mice. Three days after receiving transplants from resistant animals both groups of mice were injected with a normally lethal dose of line I transplantable leukemia. C58 mice treated with normal C58 spleen were also given leukemic inoculations to verify the observed lack of resistance to line I leukemia following implantation of C58 tissue in C58 mice.[2] Control inoculations of normal C58 mice were made to check the potency of the dose of leukemic cells. A summary of the results of these experiments is given in Table I.

TABLE I.
Summary of Experiments on Passage of Resistance to Inoculation with Line I Transplantable Leukemia in Strain C58 Mice.

0.1 cc. minced transplanted tissue	No. of mice	Died	Survived
Spleen of cell-immunized mice	27	1*	26
Liver of cell-immunized mice	5	0	5
Spleen of Sto-Li tissue-immunized mice	10	10 (5.48)†	0
Spleen of normal C58 Mice control	17	17 (5.15)†	0
Untreated controls	16	16 (5.5)†	0

*Died at 2 days negative for leukemia.
†Numbers in parentheses indicate average interval before death in days.
All animals given dose of leukemic cells calculated 1,000,000± from sample counts of the inoculum. Over a period of 3 years 280 normal C58 mice have been given this dilution with no survivors.

These preliminary results demonstrate that resistance to a transplantable leukemia may be transferred from cell-immunized mice to normal mice by implantation of tissue from actively immunized mice. Under the conditions of this experiment resistance induced by normal tissues was not transferable. Quantitative effects, duration of the transferred resistance and use of cell-free material are questions for further experiments.