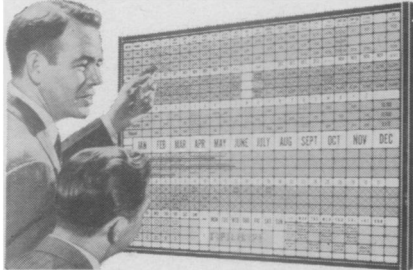


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**MEDICINE****Early, Brief Use of Drugs Aids Marrow Transplants**

► **TRANSPLANTATION** of bone marrow, necessary in leukemia and in other conditions affecting this soft tissue that forms blood cells, may be more successful when accompanied by early, brief injections of the drug methotrexate than when these drug dosages are prolonged or delayed.

A report in the British scientific journal *Nature*, 196:1110, 1962, tells of success with marrow implants with mice, which have first been irradiated to reduce their immunity to the foreign substance from other mice.

Previous reports on the use of methotrexate have indicated possible help in overcoming the immunity problem in skin and kidney transplants, as well as in bone marrow injections, but problems of timing and quantity of the drug remain to be solved.

Drs. H. L. Lochte Jr., A. S. Levy, D. M. Guenther, E. D. Thomas and J. W. Ferree, all of Mary Imogene Bassett Hospital (affiliated with Columbia University) at Cooperstown, N. Y., working under a grant from the U.S. Public Health Service, reported the present study.

One puzzle has been why the "immunologically competent cells of the foreign marrow are not paralyzed in the presence of excess host antigen tissue," the investigators said.

They found that when methotrexate was given as late as 14 days after the bone marrow injections, a number of deaths occurred and the effectiveness was slight even among the surviving animals.

The observations suggested to the experimenters that when the reaction of immunologically competent cells can be restrained during a short interval by drug injection, either of two things happen: These cells may pass through their life-spans and die without injuring the host, or they and their progeny acquire tolerance to their environment without first having injured it and themselves by reaction.

Pieces of the immunological puzzle standing in the way of transplants are hopefully taking shape.

• Science News Letter, 83:20 January 12, 1963

**Do You Know?**

Fragile *tissues* soon may be glued together rather than stitched.

"Third sound" is a series of vibrations on a *liquid* at frigid temperatures in contrast to "first sound" which one hears.

*Prolin* will be a new effective rat and mouse killer.

The Salina strawberry *clover* is a new type that can survive in wet soils.

The *Spaceworker* is a carefully balanced, frictionless machine which approximates weightlessness in space by allowing a man to turn completely with a slight movement.

• Science News Letter, 83:20 January 12, 1963

**Questions**

**ANTHROPOLOGY**—What method of dating was used to make new datings of early man? p. 21.

**ASTRONOMY**—How is polarization of radio signals created? p. 22.

**BIOLOGY**—What marine animal almost exterminated trout in the Great Lakes? p. 25.

**GENERAL SCIENCE**—What is the most neglected area of scientific research today? p. 19.

**GEOPHYSICS**—How will scientists eventually find out the intensity of cosmic rays near the earth? p. 23.

**ZOOLOGY**—How often do koala bears breed? p. 26.

**SCIENCE NEWS LETTER**

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