

*Statement of Results
Submitted to Miss Reynolds
for writing the completion 1968.*

7757 03 004 - Progress

This work unit is completed. The final report has been received 7 Oct 1968
through the European Office of Aerospace Research. This work has investigated the control of secondary syndrome following marrow transplantation and whole-body irradiation with various immunosuppressive measures. In one study drugs were used to attempt to reduce the immune reactivity of allogeneic cells used to restore the irradiated recipients. The schedule of drugs was chosen that the regime might be used in clinical trials in man. Drugs used were Azothioprine, Mitomycin C, and Actinomycin D. Conclusion was pretreatment of cells used for transplantation did not alter the graft versus host reaction. The clinical experience has demonstrated that in man the secondary syndrome of the reaction of graft versus host caused by allogeneic bone marrow given to irradiated subjects are considered to be of two main types. There is an acute syndrome of early onset. On the other hand there is a chronic syndrome of slow onset where the immunologically competent systems of the host and of the graft are depressed by mechanisms which the investigators describe in mice. Attempts were made to study the possibility of restoring the immune capacity. The investigators also tried to treat the graft versus host reaction by giving immunosuppressive drugs to the allogeneic chimera. Positive results were obtained in mice and in monkeys and they have applied this method to treat human beings. The patients were suffering from acute leukemia and were given whole-body radiation of 800 rads followed by injection of nucleated cells aspirated from allogeneic donors. Chimeric patients were then treated with Amyl-methotrexate or cyclophosphamide or horse anti-human antilymphocyte antisera. The total number of human cases observed are yet too small to allow firm conclusions to be made from this treatment.