

C O N T E N T S

	<u>Page</u>
INTRODUCTION	1
MATERIALS AND METHODS	11
Animals	11
Anæsthetizing the animals	11
Tumour induction	11
Serum	12
Cell suspension	13
<u>In vivo</u> lymphocyte activation	13
Blastogenesis	14
DNA synthesis	15
Depletion of T cells by neonatal thymectomy and anti-thymocyte serum treatment	16
Thymectomy	17
Raising of anti-thymocyte serum (ATS)	17
Treatment with ATS	18
Assay for angiogenesis and tumour growth in the anterior chamber of eye of mouse	19
<u>In vitro</u> incubation of tumour piece with lymphocytes prior to grafting in the anterior eye chamber	20

	<u>Page</u>
Measurement of ³ H-thymidine incorporation by the tumour pieces incubated <u>in vitro</u> with lymphocytes	21
Repeated injection of Con A in tumour bearing animals	22
Measure of the effects of repeated injections of Con A in normal mice ...	22
Histological preparation ...	22
Detection of anti-Con A antibody by Ouchterloni method	23
Adoptive transfer of activated lymphocytes at the tumour site ...	23
Removal of suppressor T cells by cyclophosphamide treatment and subsequent stimulation of the residual cells with Con A	24
Cytotoxicity assay	26
Test for T cell nature of the effector lymphocytes by cytolytic assay ...	27
RESULTS	29
Angiogenesis and tumour growth in the anterior eye chamber of syngeneic mice in presence of Con A activated and non-activated lymphocytes	29
Angiogenesis and tumour growth induced by tumour explants incubated <u>in vitro</u> with activated and non-activated lymphocytes	30

	<u>Page</u>
Incorporation of ^3H -thymidine by the cells of tumour explants incubated <u>in vitro</u> with activated or non-activated lymphocytes	31
Study of <u>in situ</u> growth of tumour and effect of adoptive transfer of activated lympho- cytes at the tumour site	32
Effects of repeated <u>in vivo</u> stimulation with Con A on lymphoid system of mouse	33
a) Measure of body & lymphoid organs' weight and the number of viable lymphocytes in lymphoid organs and peripheral blood	33
b) Blastogenesis	34
c) Histological architecture of lymphoid organs before and after every stimula- tion	34
d) Production of antibody to Con A	35
Con A activated lymphocyte mediated killing of tumour target cell in ^{51}Cr release assay	35
Suscrptibility of Con A transformed blasts to anti-thymocyte serum	36
Cyclophosphamide treatment and depletion of suppressor T cells from lymphocyte population responsive towards tumour.	37
Cytotoxicity test	38

			<u>Page</u>
Adoptive transfer of activated cells, depleted of suppressor T cells by cyclophosphamide	....	....	39
DISCUSSION	....	....	40
SUMMARY	....	....	54
APPENDIX			
Figures	....	....	59
Tables	....	....	73
Plates	....	....	90
BIBLIOGRAPHY	....	....	102
