

### List of Figures.

<u>Figure No.</u>	<u>Title</u>	<u>Page No.</u>
1.1	Structure and synthesis of glucocorticoids in the Adrenal Cortex.	2
1.2	Schematic representation of the molecular mechanism of steroid hormone action.	16
1.3	Cell nuclear corticosterone levels measured in rat brain region and pituitary.	26
3.1a	Effect of chronic corticosterone on $^{32}\text{P}$ incorporation into rat brain cerebral cortical slices in day 20.	136
3.1b	Effect of chronic corticosterone on $^{32}\text{P}$ incorporation into rat brain stem slices in day 20.	136
3.1c	Effect of chronic corticosterone on $^{32}\text{P}$ incorporation into rat brain hippocampal slices in day 20.	137
3.2a	Effect of Adrenalectomy and Cort. replacement (5days each) on $^{32}\text{P}$ incorporation into rat brain cortical slices after ADX at 20 day.	141
3.2b	Effect of Adrenalectomy and Cort. replacement (5days each) on $^{32}\text{P}$ incorporation into rat brain stem slices after ADX at 20 day.	141
3.3a	Effect of Adrenalectomy (15days) on $^{32}\text{P}$ incorporation into rat brain cortical slices after ADX at 20 day.	143
3.3b	Effect of Adrenalectomy (15days) on $^{32}\text{P}$ incorporation into rat brain stem slices after ADX at 20 day.	143
3.3c	Effect of Adrenalectomy (15days) on $^{32}\text{P}$ incorporation into rat brain hippocampal slices after ADX at 20 day.	144
3.4a	Effect of Adrenalectomy and Cort. replacement (30days each) on $^{32}\text{P}$ incorporation into rat brain cortical slices after ADX at 20 day.	146
3.4b	Effect of Adrenalectomy and Cort. replacement (30 days each) on $^{32}\text{P}$ incorporation into rat brain stem slices after ADX at 20 day.	146
3.4c	Effect of Adrenalectomy and Cort. replacement (30 days each) on $^{32}\text{P}$ incorporation into	147

rat hippocampal slices after ADX at 20 day.

3.5a	Effect of metapirone treatment and Cort. repalcement on <sup>32</sup> P incorporation into rat cortical slices.	149
3.5b	Effect of metapirone treatment and Cort. repalcement on <sup>32</sup> P incorporation into rat cortical slices.	149
S	Standard Fatty acid profile	153
3.6	Effect of Chronic corticosterone treatment on Na+K+ATPase in 10 day old rat brain region membranes.	165
3.6b	Effect of Chronic corticosterone treatment on 5'nucleotidase in 10 day old rat brain region membranes.	165
3.6c	Effect of Chronic corticosterone treatment on acetyl choline esterase 10 day old rat brain region membranes.	166
3.7a	Effect of Chronic corticosterone treatment on Na+K+ATPase in 20 day old rat brain region membranes.	168
3.7b	Effect of Chronic corticosterone treatment on 5'nucleotidase in 20 day old rat brain region membranes.	168
3.8a	Effect of adrenalectomy and corticosterone replacement on Na+K+ATPase in rat brain region membranes.	172
3.8b	Effect of Adrenalectomy & corticosterone replacement on 5'nucleotidase in rat brain region membranes.	172
3.8c	Effect of Adrenalectomy & corticosterone replacement on acetylcholine esterase rat brain region membranes.	173
3.9	Schematic representation of a coronal slice from hippocampus of a rodent.	195
3.10	Histological features of rat brain hippocampus of young sham,young ADX, aging sham and aging ADX.	197
3.11	Histological features of dentate gyrus area of hippocampus young sham,young ADX, aging sham and aging ADX rat brain.	198
3.12	Histological features of CA <sub>4</sub> area of hippocampus in young sham,young ADX, aging sham and aging ADX rat brain.	200
3.13	Histological features of CA <sub>3</sub> area of hippocampus in young sham,young ADX, aging sham and aging ADX rat brain.	202

3.14	Histological features of CA <sub>2</sub> area of hippocampus in young sham, young ADX, aging sham and aging ADX rat brain.	204
3.15	Histological features of CA <sub>1</sub> area of hippocampus in young sham, young ADX, aging sham and aging ADX rat brain.	205