

Results of Statistical Analysis by one way ANOVA using Mini Tab 13.31 Software:

Cytogenetical:

Decreased Mitotic index is significant due to days variance [F=4.1, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased Mitotic index is significant due to series variance [F=10.99, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased Chromosome Aberration is significant due to days variance [F=5.56, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased Chromosome Aberration is significant due to series variance [F=39.5, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased Micronucleated Erythrocyte is significant due to series variance [F=104.95, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased Sperm Head Anomaly is significant due to days variance [F=3.23, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased Sperm Head Anomaly is significant due to series variance [F=14.07, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Biochemical Analysis:

Liver tissue enzymes:

Decreased **AST** activity in liver is significant due to days variance [F=10.15, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AST** activity in liver is significant due to series variance [F=17.03, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **ALT** activity in liver is significant due to days variance [F=5.48, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **ALT** activity in liver is significant due to series variance [F=9.78, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AcP** activity in liver is significant due to days variance [F=25.77, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AcP** activity in liver is significant due to series variance [F=8.96, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AlkP** activity in liver is significant due to days variance [F=5.6, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AlkP** activity in liver is significant due to series variance [F=3.35, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **LPO** in liver is significant due to days variance [F=7.61, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **LPO** in liver is significant due to series variance [F=3.31, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Increased **GSH** content in liver is significant due to days variance [F=10.75, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Increased **GSH** content in liver is significant due to series variance [F=21.76, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Spleen tissue enzymes:

Decreased **AST** activity in spleen is significant due to days variance [F=6.59, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AST** activity in spleen is significant due to series variance [F=9.84, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **ALT** activity in spleen is significant due to days variance [F=3.1, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **ALT** activity in spleen is significant due to series variance [F=14.23, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AcP** activity in spleen is significant due to days variance [F=5.3, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AcP** activity in spleen is significant due to series variance [F=7.89, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **AlkP** activity in spleen is significant due to days variance [F=11.55, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

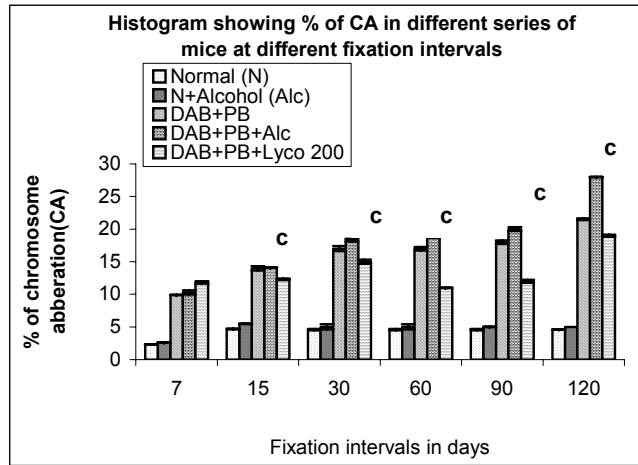
Decreased **AlkP** activity in spleen is significant due to series variance [F=10.97, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Decreased **LPO** in spleen is significant due to days variance [F=14.24, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

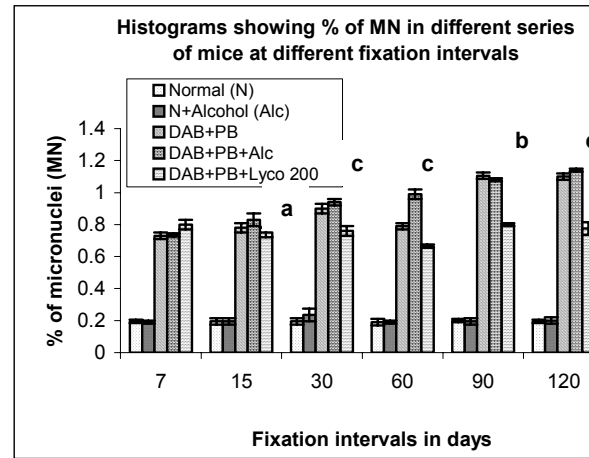
Decreased **LPO** in spleen is significant due to series variance [F=7.02, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

Increased **GSH** content in spleen is significant due to days variance [F=5, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]

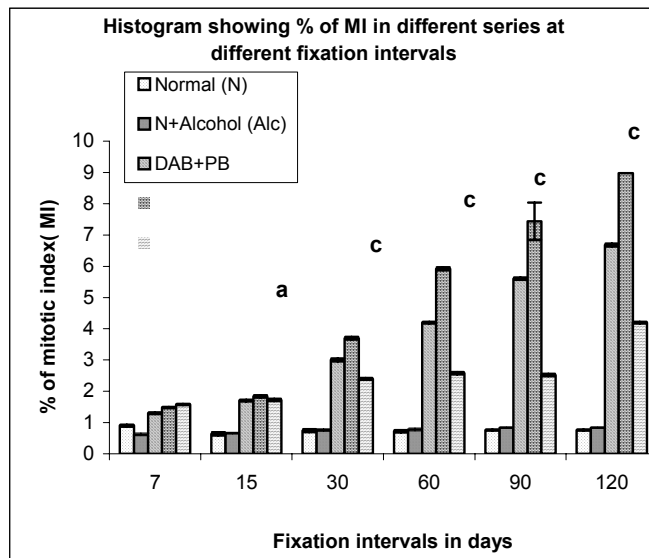
Increased **GSH** content in spleen is significant due to series variance [F=15.79, $P^* < 0.05$, $F_{.05(5,20)} = 2.71$; $F_{.05(4,20)} = 2.87$]



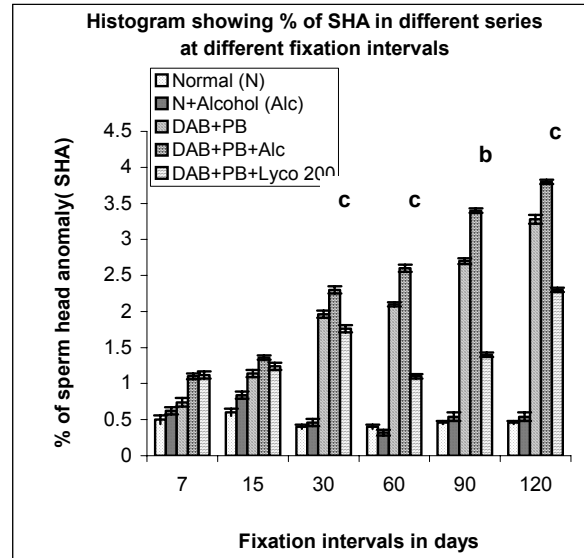
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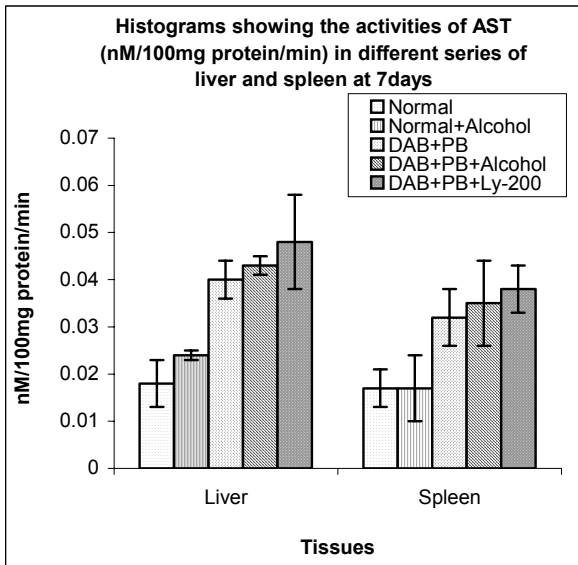
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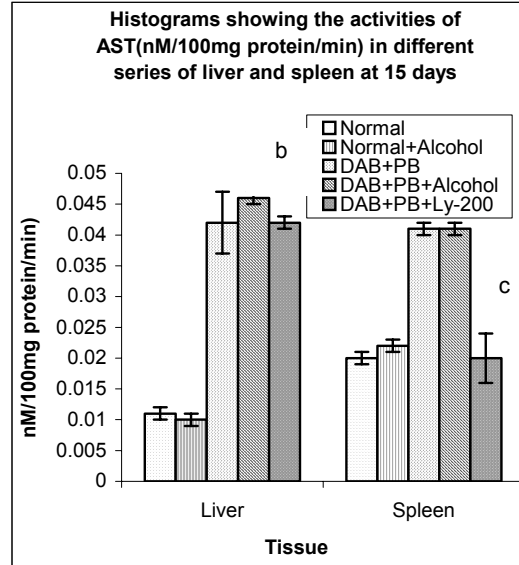
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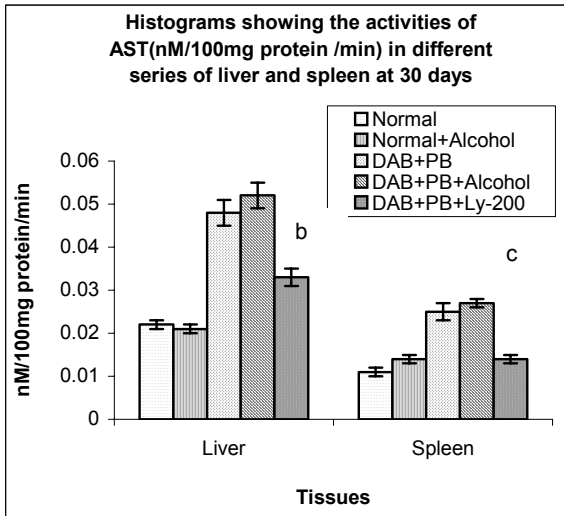
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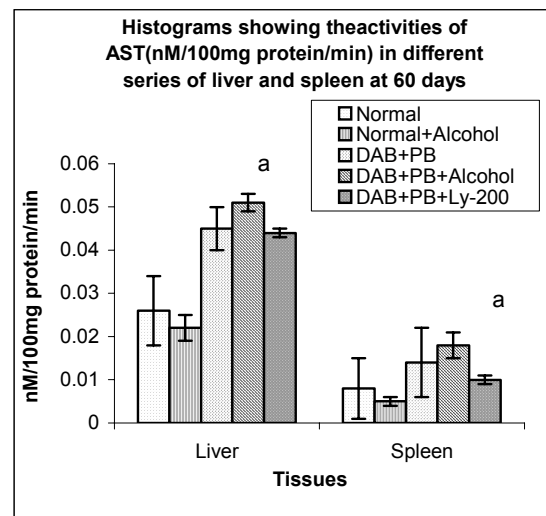
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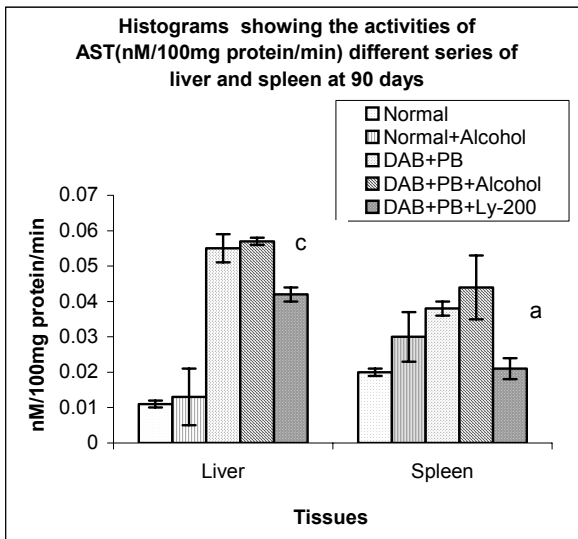
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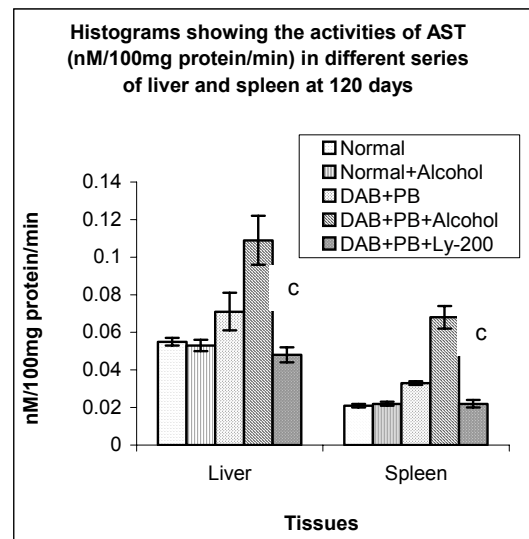
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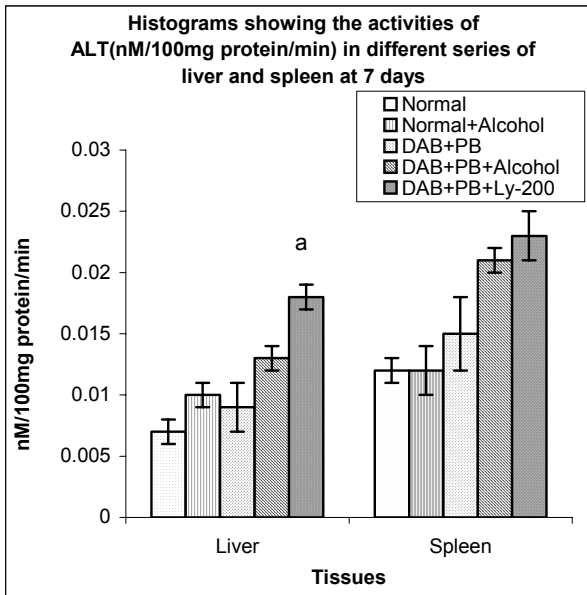
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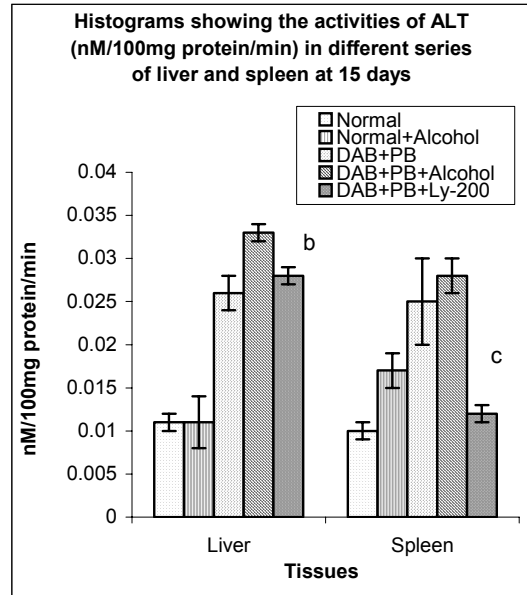
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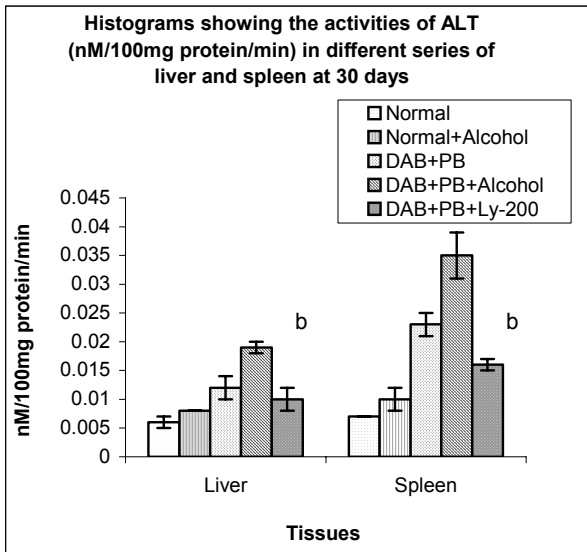
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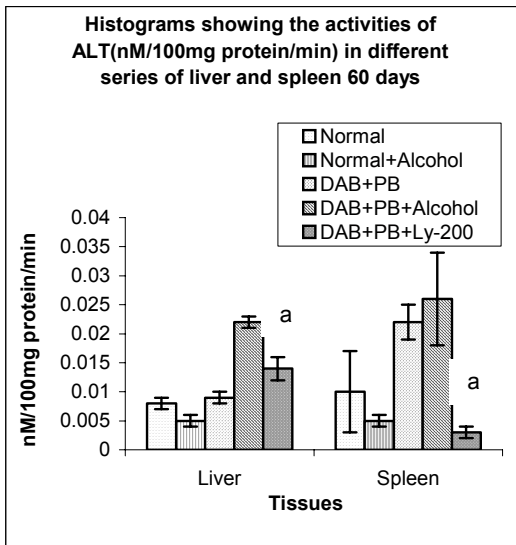
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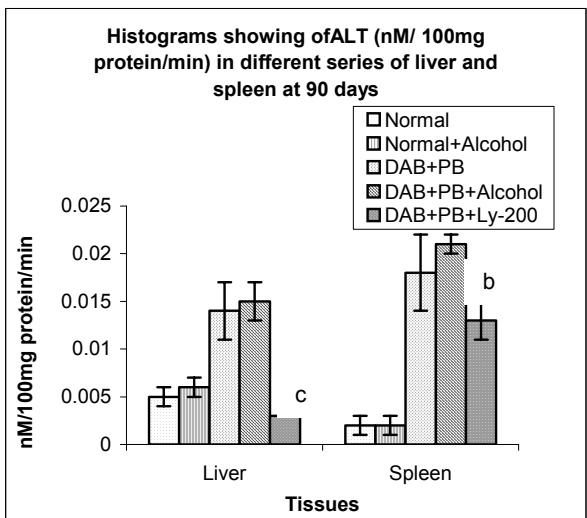
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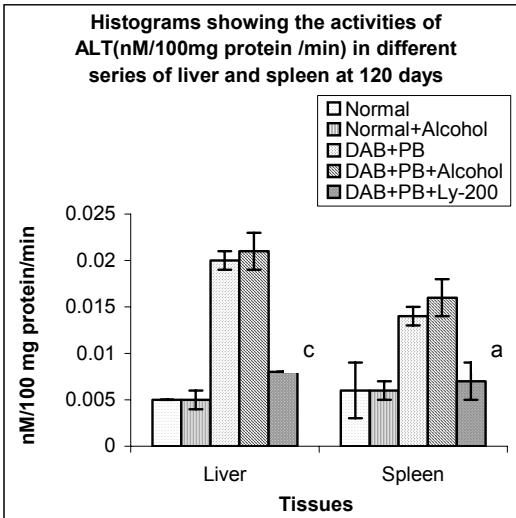
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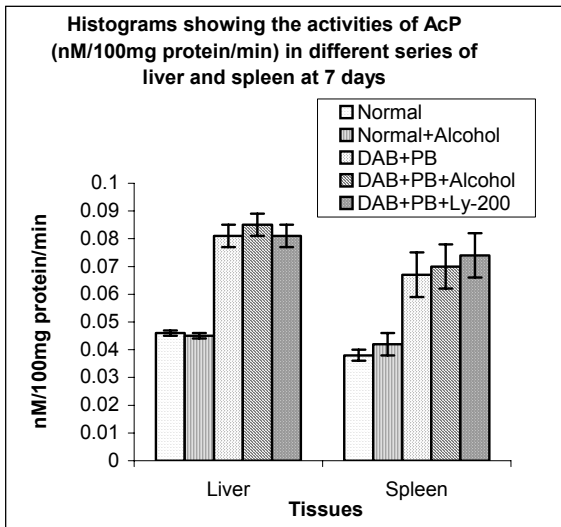
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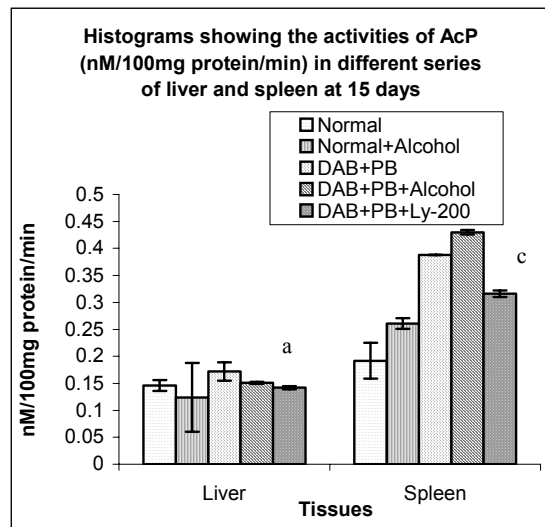
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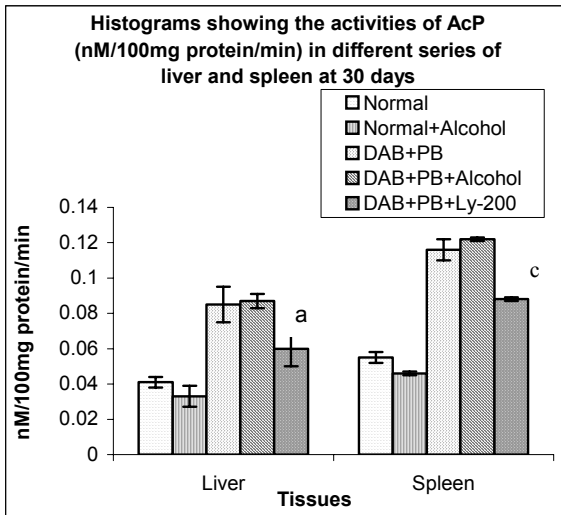
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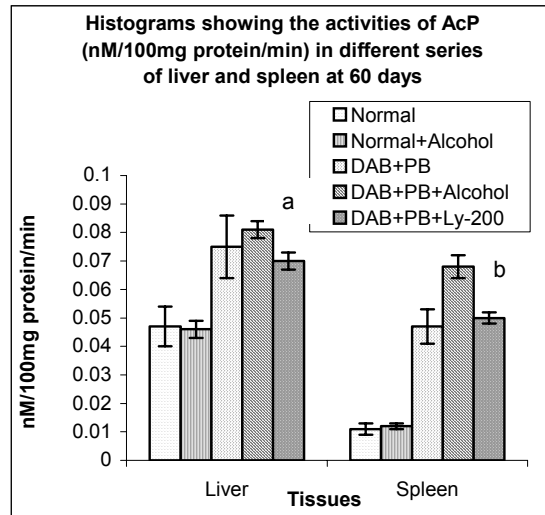
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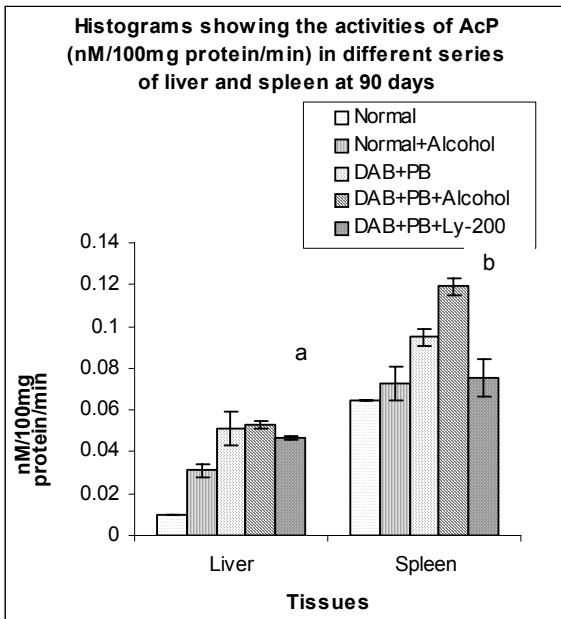
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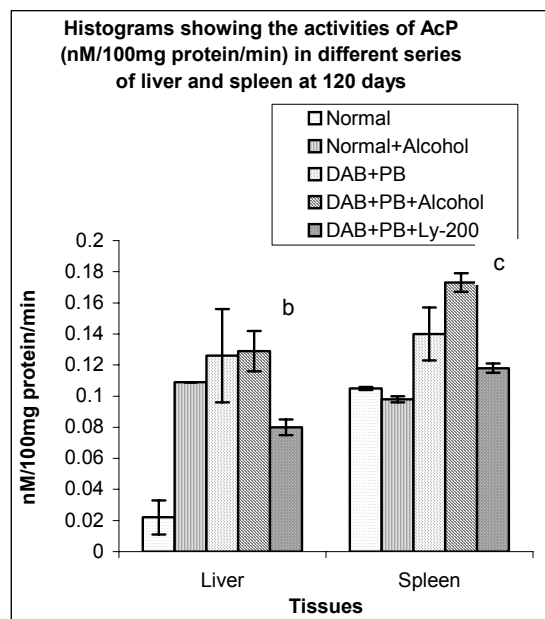
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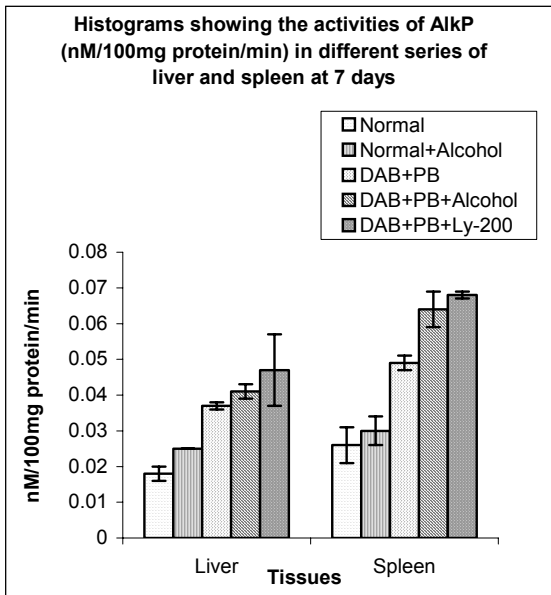
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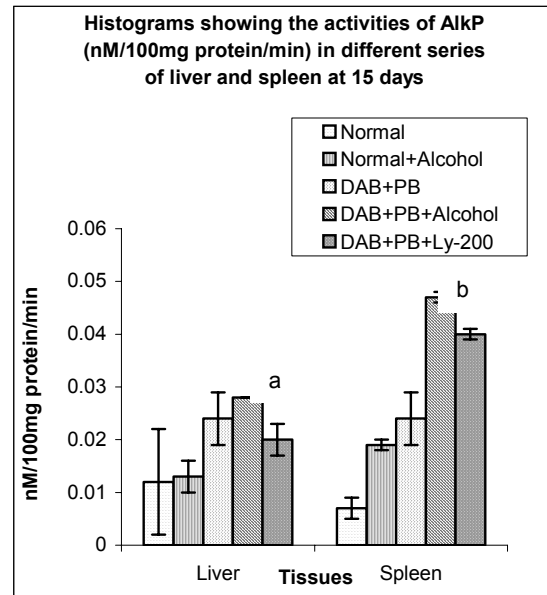
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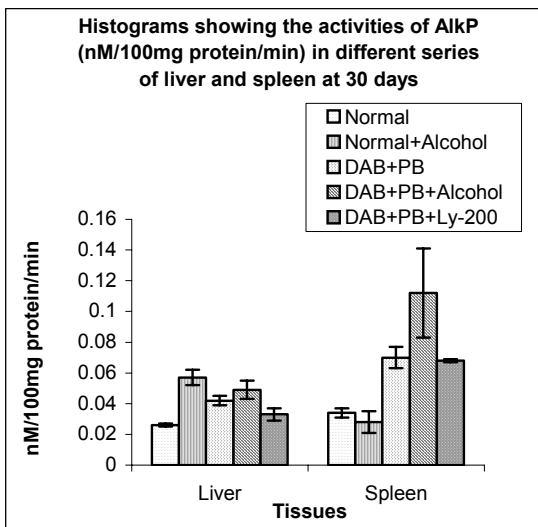
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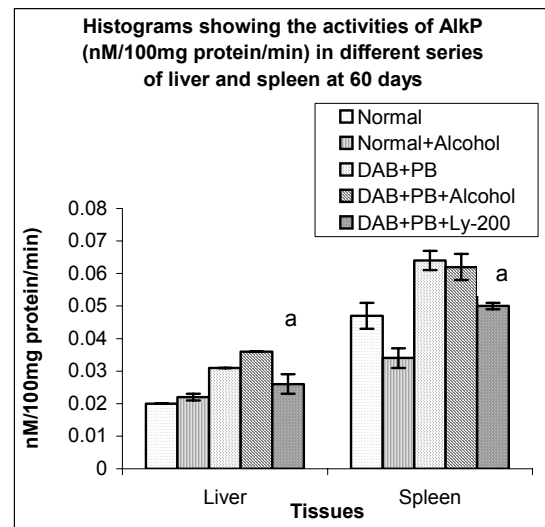
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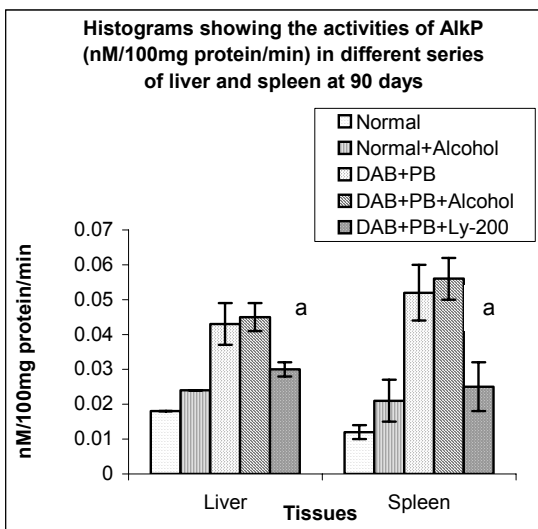
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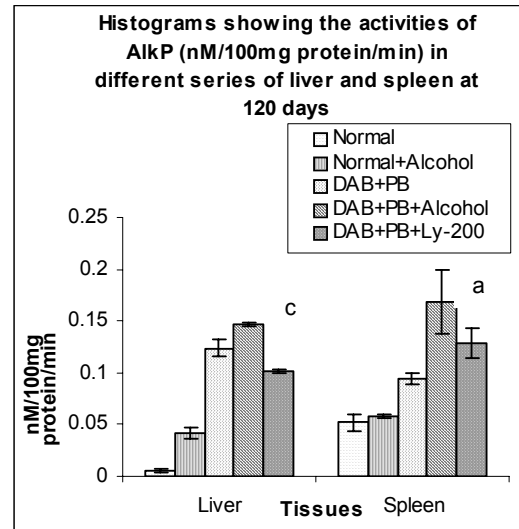
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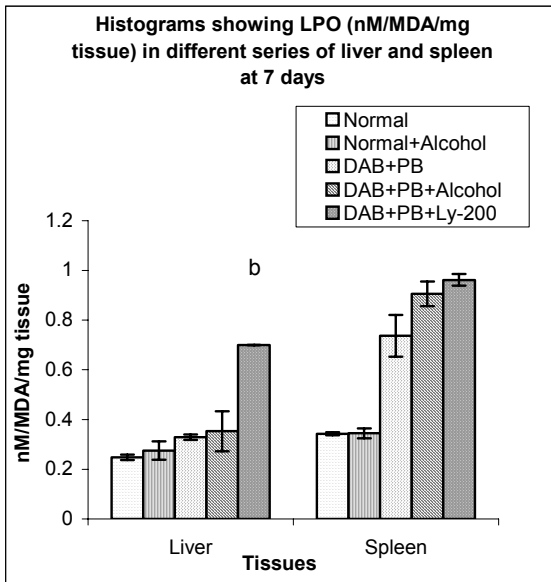
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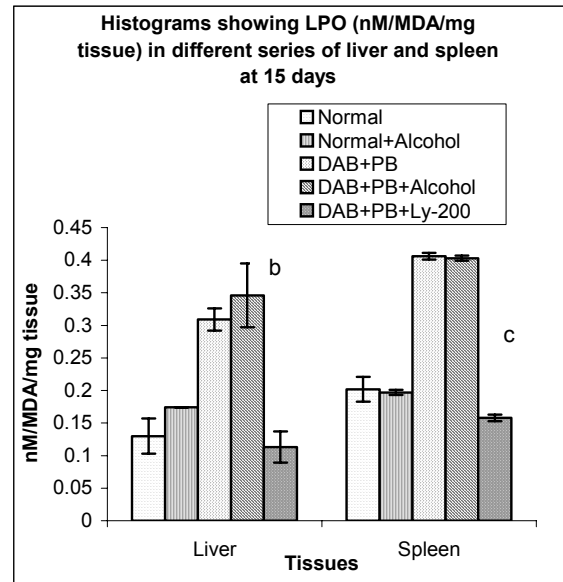
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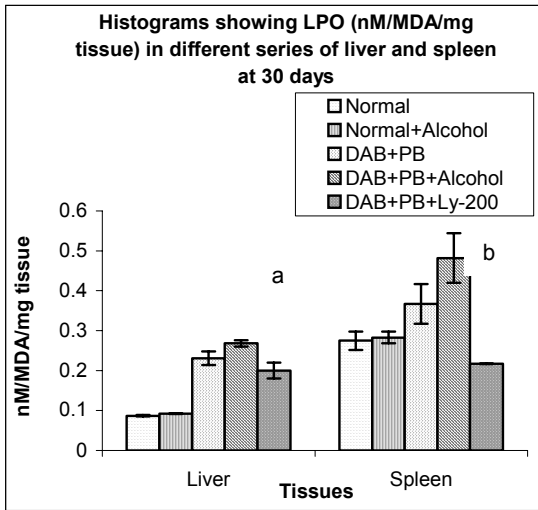
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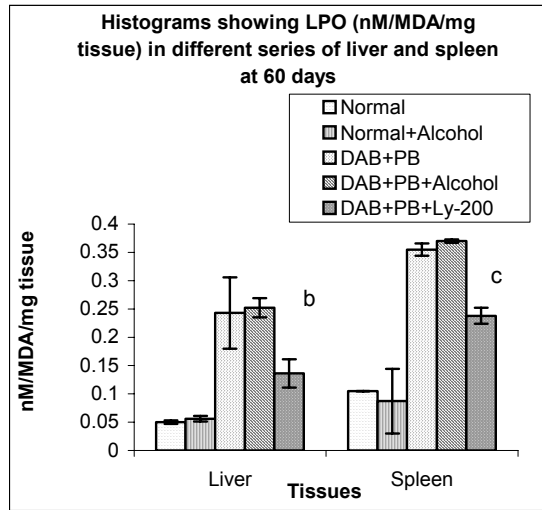
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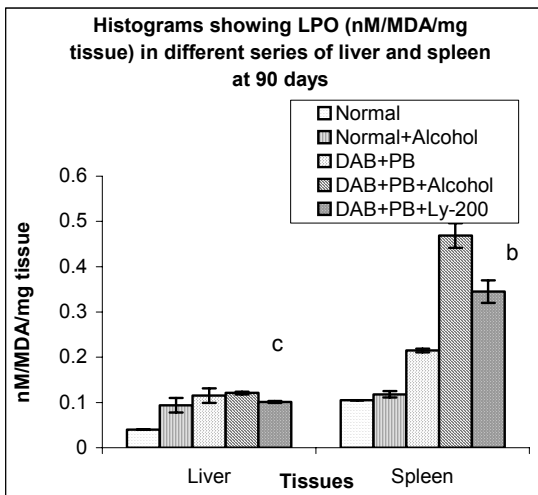
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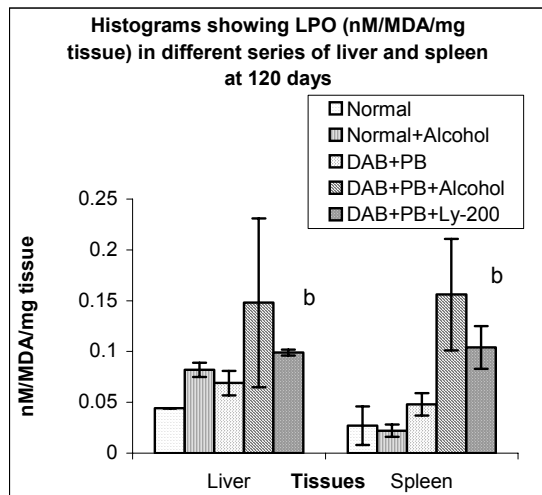
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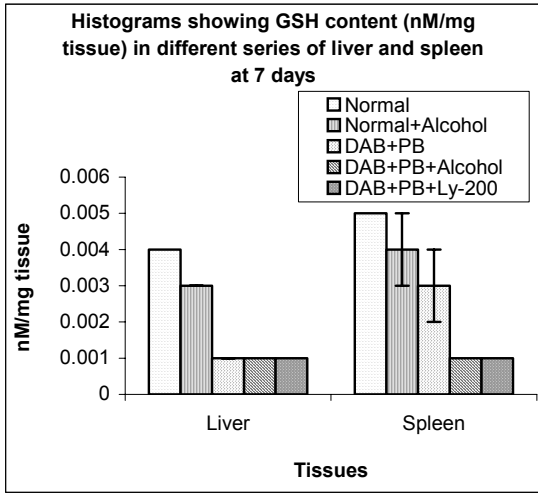
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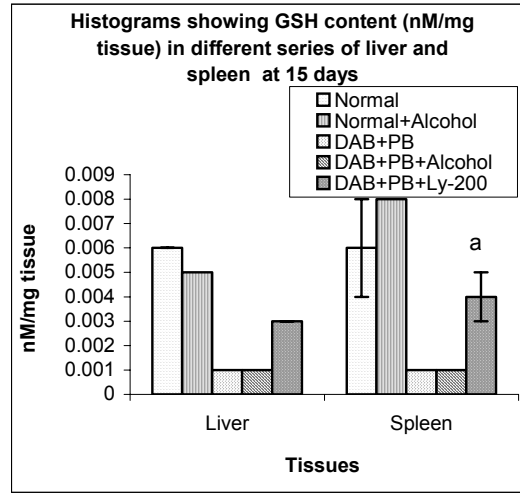
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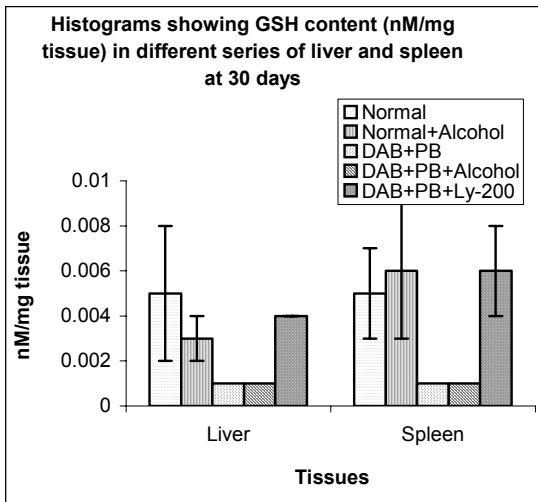
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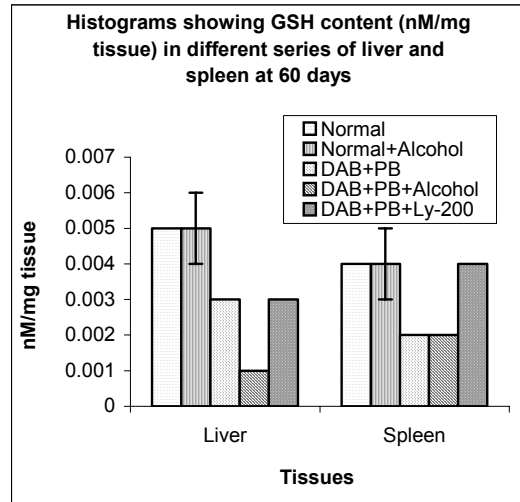
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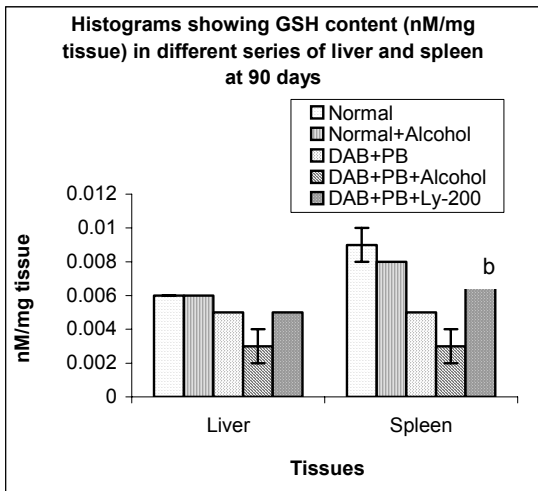
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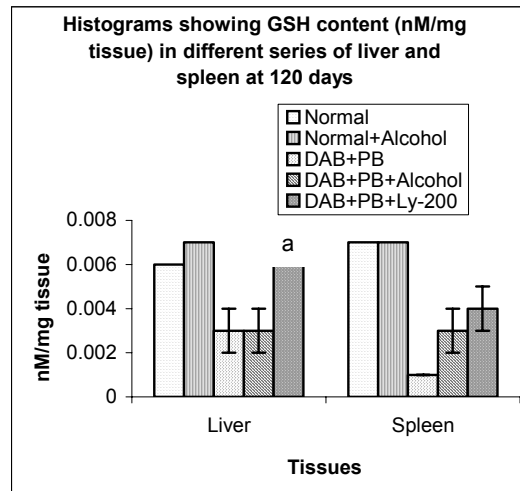
7c



7d



7e



7f

Table – 2	Glutathione reductase ($\mu\text{mol}/\text{min}/\text{mg}$ protein)				Succinate dehydrogenase ($\mu\text{mol}/\text{mg}$ protein)				Catalase (arbitrary unit of enzyme/ min/mg protein)			
	90 days		120 days		90 days		120 days		90 days		120 days	
	Liver	Spleen	Liver	Spleen	Liver	Spleen	Liver	Spleen	Liver	Spleen	Liver	Spleen
Normal	12.00 \pm 0.63	13.00 \pm 0.71	14.00 \pm 1.00	16.00 \pm 1.30	530.00 \pm 1.58	487.00 \pm 0.32	550.00 \pm 1.26	500.00 \pm 0.63	8.80 \pm 0.002	5.50 \pm 0.01	8.70 \pm 0.001	8.70 \pm 0.01
Normal+Alcohol	12.80 \pm 0.10	13.60 \pm 0.13	13.10 \pm 0.16	17.90 \pm 0.03	541.00 \pm 1.26	448.00 \pm 0.63	557.00 \pm 0.63	498.00 \pm 0.95	8.60 \pm 0.001	5.30 \pm 0.01	8.50 \pm 0.001	8.40 \pm 0.01
p-DAB+PB	4.80 \pm 0.06	5.80 \pm 0.95	4.20 \pm 0.11	10.10 \pm 0.13	280.00 \pm 1.90	260.00 \pm 0.58	298.00 \pm 0.63	240.00 \pm 0.26	4.30 \pm 0.001	1.30 \pm 0.03	2.60 \pm 0.002	1.10 \pm 0.00
p-DAB+PB+Alcohol	3.70 \pm 0.09	6.00 \pm 0.95	2.90 \pm 0.03	8.00 \pm 0.63	270.00 \pm 0.63	250.00 \pm 0.95	300.00 \pm 0.95	210.00 \pm 0.30	3.90 \pm 0.004	1.30 \pm 0.01	2.10 \pm 0.001	1.00 \pm 0.01
p-DAB+PB+Lycopodium 200	12.00 \pm 0.55 ^{***}	12.00 \pm 0.95 [*]	11.00 \pm 1.26 ^{**}	15.00 \pm 0.63 ^{**}	470.00 \pm 0.71 ^{**}	390.00 \pm 0.32 ^{**}	420.00 \pm 1.58 ^{**}	410.00 \pm 0.14 ^{***}	6.10 \pm 0.002 ^{***}	3.70 \pm 0.02 ^{**}	7.30 \pm 0.000 ^{***}	4.80 \pm 0.02 ^{**}

Table – 3	Blood glucose (mg/dl)		Blood Hemoglobin(mg/dl)		Blood cholesterol (mg/dl)	
	90 days	120 days	90 days	120 days	90 days	120 days
Normal	82.443 \pm 1.157	100.415 \pm 0.875	14.6 \pm 0.20	14.1 \pm 0.07	53.19 \pm 0.07	61.70 \pm 0.09
Normal+Alcohol	84.105 \pm 0.947	98.746 \pm 0.478	14.5 \pm 0.20	14.4 \pm 0.20	54.05 \pm 0.081	62.01 \pm 0.010
p-DAB+PB	120.15 \pm 0.347	141.257 \pm 0.148	8.60 \pm 0.40	7.8 \pm 0.80	25.53 \pm 0.094	12.77 \pm 0.08
p-DAB+PB+Alcohol	131.247 \pm 1.498	155.121 \pm 0.489	7.90 \pm 0.10	6.3 \pm 0.25	21.28 \pm 0.142	14.89 \pm 0.10
p-DAB+PB+Lycopodium 200	101.05 \pm 0.596 ^{***}	106.416 \pm 0.234 ^{***}	9.0 \pm 0.10 ^{***}	12.1 \pm 0.07 ^{***}	36.17 \pm 0.042 ^{***}	34.04 \pm 0.07 ^{***}

Table – 4	Estradiol (pg/ml)		Testosterone (ng/ml)		Cortisol (ng/ml)	
	90 days	120 days	90 days	120 days	90 days	120 days
Normal	40 \pm 0.84	44 \pm 1.26	3.1 \pm 0.32	3.54 \pm 0.06	4.3 \pm 0.13	4.6 \pm 0.09
Normal+Alcohol	38 \pm 0.63	45 \pm 0.32	3.4 \pm 0.63	3.65 \pm 0.13	4.4 \pm 0.09	4.5 \pm 0.13
p-DAB+PB	21 \pm 0.32	25 \pm 1.00	0.48 \pm 0.01	0.32 \pm 0.01	7.2 \pm 0.16	8 \pm 1.41
p-DAB+PB+Alcohol	23 \pm 0.95	28 \pm 0.45	0.42 \pm 0.02	0.3 \pm 0.06	8 \pm 1.26	10 \pm 1.26
p-DAB+PB+Lycopodium 200	40 \pm 1.58 ^{***}	41 \pm 0.71 ^{***}	1.83 \pm 0.13 ^{***}	1.14 \pm 0.06 ^{***}	8.8 \pm 0.16 [*]	8.1 \pm 0.02 [*]

Table-5 Gelatin Zymographic Analysis of 90 days carcinogens treated and Lyco 200 treated mice by using Gel-Documentation software.

Lane 1

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
101	1	148,103	14	94,931.00	129.17	129.17	672	100	53.85	0.135

Lane 2

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
91	1	161,108	19	18,081.00	122.33	122.33	144	18.55	10.59	0.183
71	2	161,119	30	70,681.00	132.83	132.83	516	72.51	41.4	0.288
33	3	161,162	73	8,716.00	115.83	115.83	72	8.94	5.11	0.702

Lane 3

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
90	1	173,102	13	9,119.00	134	134	72	6.97	5.82	0.125
86	2	173,111	22	9,331.00	111.33	111.33	84	7.13	5.96	0.212
55	3	173,129	40	23,258.00	120.33	120.33	192	17.77	14.85	0.385
37	4	173,149	60	45,783.00	111.33	111.33	372	34.98	29.24	0.577
32	5	173,166	77	43,407.00	63.33	63.33	336	33.16	27.72	0.74

Lane 4

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
117	1	211,94	5	19,045.00	150.08	150.08	132	10.73	10.19	0.048
91	2	211,108	19	111,516.00	136.67	136.67	756	62.83	59.66	0.183
30	3	211,168	79	46,927.00	135.5	135.5	312	26.44	25.11	0.76

Lane 5

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
97	1	224,105	16	10,032.00	137.92	137.92	84	17.45	6.78	0.154
66	2	224,122	33	7,122.00	132.67	132.67	60	12.39	4.81	0.317
43	3	224,139	50	8,480.00	133.33	133.33	72	14.75	5.73	0.481
29	4	224,170	81	16,527.00	148.25	148.25	132	28.74	11.17	0.779
20	5	224,179	90	15,338.00	146.25	146.25	120	26.68	10.36	0.865

Lane 1 denotes normal, Lane-2=p-DAB+PB treated, Lane-3= p-DAB+PB+Aic treated, Lane-4=p-DAB+PB+Lyco-200

Lane-5= Molecular weight marker

Table-6 Gelatin Zymographic Analysis of 120 days carcinogens treated and Lyco 200 treated mice by using Gel-Documentation software.

Lane 1

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
97	1	147,101	20	121,709.00	129.5	129.5	936	100	63.02	0.163

Lane 2

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
100	1	160,99	18	17,118.00	140.58	140.58	120	13.91	7.44	0.146
82	2	160,110	29	103,146.00	139.75	139.75	660	83.8	44.85	0.236
33	3	160,162	81	2,820.00	115.83	115.83	24	2.29	1.23	0.659

Lane 3

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
85	1	173,108	27	7,252.00	98.25	98.25	72	5.23	3.88	0.22
71	2	173,116	35	12,675.00	105.67	105.67	120	9.13	6.79	0.285
57	3	173,124	43	3,939.00	81	81	48	2.84	2.11	0.35
48	4	173,130	49	4,053.00	95.33	95.33	48	2.92	2.17	0.398
35	5	173,154	73	38,918.00	114.17	114.17	288	28.04	20.84	0.593
34	6	173,159	78	6,767.00	66.33	66.33	96	4.88	3.62	0.634
29	7	173,169	88	65,178.00	96.33	96.33	492	46.96	34.9	0.715

Lane 4

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
100	1	213,99	18	2,632.00	109.67	109.67	24	10.46	1.24	0.146
75	2	213,114	33	22,534.00	124.33	124.33	180	89.54	10.58	0.268

Lane 5

MW (kDa)	Band	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Band %	Lane %	Rf
97	1	226,101	20	9,376.00	134.92	134.92	84	11.32	5.85	0.163
66	2	226,119	38	9,428.00	131.5	131.5	84	11.38	5.88	0.309
43	3	226,134	53	12,346.00	101.42	101.42	108	14.9	7.71	0.431
29	4	226,169	88	13,837.00	149.17	149.17	120	16.7	8.64	0.715
20	5	226,177	96	37,876.00	113.92	113.92	336	45.71	23.64	0.78

Lane 1 denotes normal, Lane-2=p-DAB+PB treated, Lane-3= p-DAB+PB+Alc treated, Lane-4=p-DAB+PB+Lyco-200

Lane-5= Molecular weight marker

Pathak S et al: Supportive Evidence for the Anticancerous Potential of Alternative Medicine against Hepatocarcinogenesis in Mice. Forsch Komplementärmed 20074:148–156.

Table-7: Analysis of P53 protein expression in carcinogens and Lyco 200 fed series in 90 days fixation interval by using the gel documentation software.

Lane 1

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	141,138	18	4,922.00	70.38	70.38	160	55.38	0.692

Lane 2

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	159,137	17	11,981.00	117.69	117.69	224	83.66	0.654

Lane 3

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	177,137	17	13,072.00	123.06	123.06	240	84.84	0.654

Lane 4

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	230,135	15	5,625.00	96.38	96.38	112	56.36	0.577

Table-8: Analysis of P53 protein expression in carcinogens and Lyco 200 fed series in 120 days fixation interval by using the gel documentation software.

Lane 1

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	144,242	18	4,572.00	73.06	73.06	126	50.91	0.783

Lane 2

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	162,241	17	9,869.00	112	112	234	75.23	0.739

Lane 3

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	180,241	17	10,029.00	104.11	104.11	234	75.54	0.739

Lane 4

MW (kDa)	Coords	Posn	Volume	Peak	Peak+BkGnd	Area	Lane %	Rf
53	234,239	15	5,753.00	69.72	69.72	216	58.61	0.652

Lane-1= normal, Lane-2=p-DAB+PB treated, Lane-3= p-DAB+PB+Alc treated, Lane-4=p-DAB+PB+Lyco-200