Table. 2-1. Effect of FMAC on 0, 4, 8 weeks body weight of CCl_4 chronic treated rats.

Group	Doses (g/kg/day)	Body weight (g)		
		0 week	4 weeks	8 weeks
Control		244.5 ± 5.1	341.0 ± 8.0	449.3 ± 7.1
CCl_4 + VEH		245.3 ± 5.4	313.7 ± 6.7$^{\#}$	399.2 ± 16.3$^{\#}$
CCl_4 + SIL	0.2	244.3 ± 4.2	312.6 ± 7.2$^{\#}$	420.5 ± 21.9
CCl_4 + FMAC	0.5	248.4 ± 4.7	301.2 ± 7.0$^{\#\#}$	401.8 ± 10.39
CCl_4 + FMAC	1.0	247.8 ± 5.1	308.5 ± 9.2$^{\#}$	407.2 ± 10.94

CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. SIL 0.2g/kg/day or FMAC (0.5 or 1.0 g/kg/day) was administered orally from week 4 to the end of the experiment.Values are mean ± S.E. (n = 12) $P^{\#}<0.05$, $P^{\#\#}<0.01$ compared with the control group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

Table. 2-2. Effect of FMAC on liver SOD, Catalase, GSH-Px activity. in CCl_4 chronic treated rats.

Group	Doses (g/kg/day)	SOD (U/mg protein)	Catalase (U/mg protein)	GSH-Px (U/mg protein)
Control		30.28 ± 1.5	54.43 ± 1.8	1264.5 ± 45.9
CCl_4 + VEH		14.46 ± 1.2$^{###}$	38.71 ± 2.6$^{###}$	984.6 ± 17.6$^{##}$
CCl_4 + SIL	0.2	15.70 ± 2.7	42.68 ± 1.6	1019.2 ± 25.6
CCl_4 + FMAC	0.5	16.42 ± 1.2	47.37 ± 4.0	997.4 ± 33.7
CCl_4 + FMAC	1.0	15.57 ± 1.0	47.83 ± 3.0	1072.0 ± 87.2

CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. SIL 0.2g/kg/day or FMAC (0.5 or 1.0 g/kg/day) was administered orally from week 4 to the end of the experiment.Values are mean ± S.E (n = 12). $P^{##}<0.01$, $P^{###}<0.001$ compared with the control group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

Table. 2-3. List of liver genes expression in CCl_4 chronic treated rats.

Gene Name	ID	A	B	B / A
		CCl_4 / control ratio	CCl_4 / FMAC ratio	ratio
Signal transducation				
Ctsl--cathepsin L	H3028F03	5.614	2.087	0.37
Gnb2l1--guanine nucleotide binding pro	H3083H02	6.306	2.713	0.43
Gnb2l1--guanine nucleotide binding pro	H3027D10	5.191	2.34	0.45
Abl1--v-abl Abelson murine leukemia on	H3019F05	4.602	2.145	0.47
Ran--RAN, member RAS oncogene family	H3154A03	4.471	2.281	0.51
Gnai2--guanine nucleotide binding prot	H3106F07	4.273	2.173	0.51
Matrix				
Col3a1--procollagen, type III, alpha 1	H3124H10	9.813	2.196	0.22
Col1a1--procollagen, type I, alpha 1	H3119H03	7.855	2.272	0.29
Acp5--acid phosphatase 5, tartrate res	H3007G06	6.35	2.135	0.34
Calr--calreticulin	H3021G11	6.051	2.039	0.34
Ero1l-pendin--ERO1-like	H3125G05	6.432	2.222	0.35
Lbp--lipopolysaccharide binding protein	H3086G08	6.031	2.088	0.35
Krt2-8--keratin complex 2, basic, gene	H3014H12	5.035	1.75	0.35
Actx--melanoma X-actin	H3018D09	6.137	2.299	0.37
Lypla1--lysophospholipase 1	J1043F12	4.329	1.733	0.40
Actg--actin, gamma, cytoplasmic	H3114E08	6.326	2.541	0.40
Hbb-b1--hemoglobin, beta adult major c	H3123E05	4.705	1.944	0.41
Syn1--synapsin I	H3028D10	5.042	2.187	0.43
Got2--glutamate oxaloacetate transaminase	H3157D01	4.424	1.955	0.44
Tuba2--tubulin alpha 2	H3024D08	4.334	1.982	0.46
Apoa1--apolipoprotein A-I	H3043A10	5.179	2.383	0.46
P4hb--prolyl 4-hydroxylase, beta polyp	H3125C05	5.161	2.353	0.46
Cbx5--chromobox homolog 5 (Drosophila	J0001F06	4.342	2.187	0.50

Table. 2-3. (continued)

Protein				
H19--H19 fetal liver mRNA	H3133G06	11.203	2.004	0.18
Rps6--ribosomal protein S6	L0264E06	6.162	2.052	0.33
Rpl3--ribosomal protein L3	H3011F03	6.295	2.213	0.35
Rpl26--ribosomal protein L26	H3126H12	5.79	2.044	0.35
Rps24--ribosomal protein S24	H3145D11	5.793	2.046	0.35
Rpl5--ribosomal protein L5	H3028D03	5.123	1.869	0.36
Rps19--ribosomal protein S19	H3146B07	6.862	2.459	0.36
Rpl37a--ribosomal protein L37a	H3134G11	5.925	2.307	0.39
Rpl41--ribosomal protein L41	H3157D06	5.906	2.302	0.39
Rpl7--ribosomal protein L7	H3147G04	5.403	2.084	0.39
Rplp1--ribosomal protein, large, P1	H3140H04	6.347	2.547	0.40
Rps7--ribosomal protein S7	H3122C10	6.042	2.503	0.41
Rpl13a--ribosomal protein L13a	H3136G06	5.434	2.239	0.41
Plf--proliferin	C0118D06	4.548	1.866	0.41
Arbp--acidic ribosomal phosphoprotein	H3118D03	6.081	2.547	0.42
Rps4x--ribosomal protein S4, X-linked	H3120D10	6.079	2.558	0.42
Rpl3--ribosomal protein L3	H3112F08	5.575	2.367	0.42
Rps12--ribosomal protein S12	H3112B02	6.61	2.751	0.42
Rps17--ribosomal protein S17	H3118G04	6.273	2.632	0.42
Rps5--ribosomal protein S5	H3112G01	6.223	2.656	0.43
Rps8--ribosomal protein S8	H3119A09	5.263	2.277	0.43
Rps16--ribosomal protein S16	H3115B08	5.712	2.532	0.44
Rps28--ribosomal protein S28	H3099D03	5.345	2.376	0.44
Rps15--ribosomal protein S15	H3150B01	6.028	2.75	0.46
Rps3--ribosomal protein S3	H3124H06	5.669	2.652	0.47
Rpl9--ribosomal protein L9	H3112A09	4.469	2.151	0.48
Trt--translationally regulated transcr	H3113H02	4.443	2.12	0.48
Rps16--ribosomal protein S16	H3112H10	5.711	2.764	0.48
Rpl36--ribosomal protein L36	H3117D06	4.94	2.351	0.48
Pabpc1--poly A binding protein, cytopl	H3107F01	3.418	1.639	0.48
Rpl29--ribosomal protein L29	H3004G11	3.839	1.898	0.49

Table. 2-3. (continued)				
Rpl23--ribosomal protein L23	H3013F03	4.822	2.435	0.50
Ubc--ubiquitin C	H3124H08	4.059	2.015	0.50

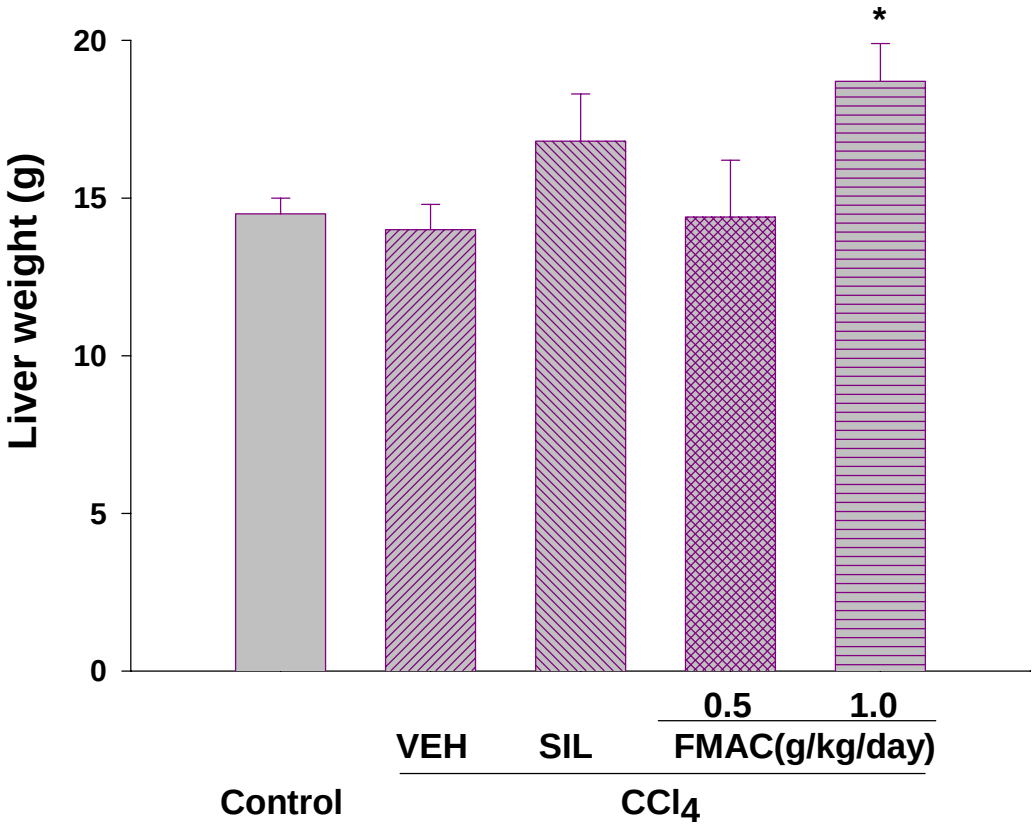


Fig. 2-1.

Effect of the FMAC on CCl_4 chronic treated rats liver weight. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Data are Values are mean ± S.E. (n = 12) $^{*}P<0.05$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

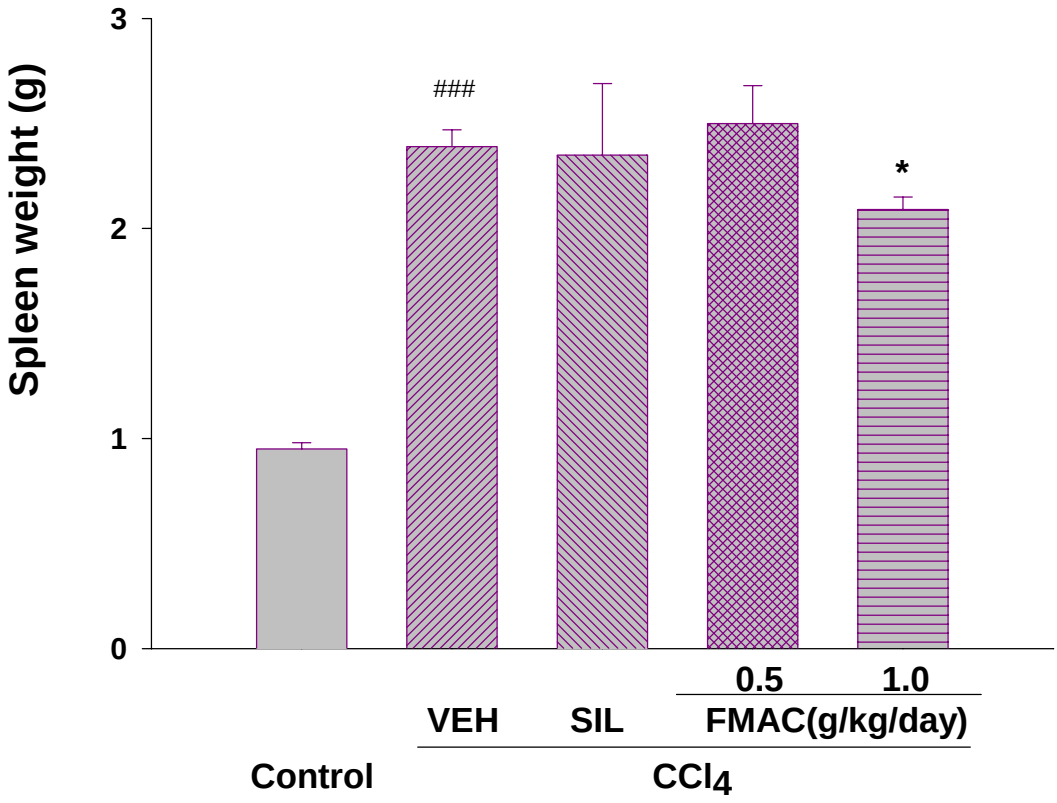


Fig. 2-2.

Effect of the FMAC on spleen weight of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

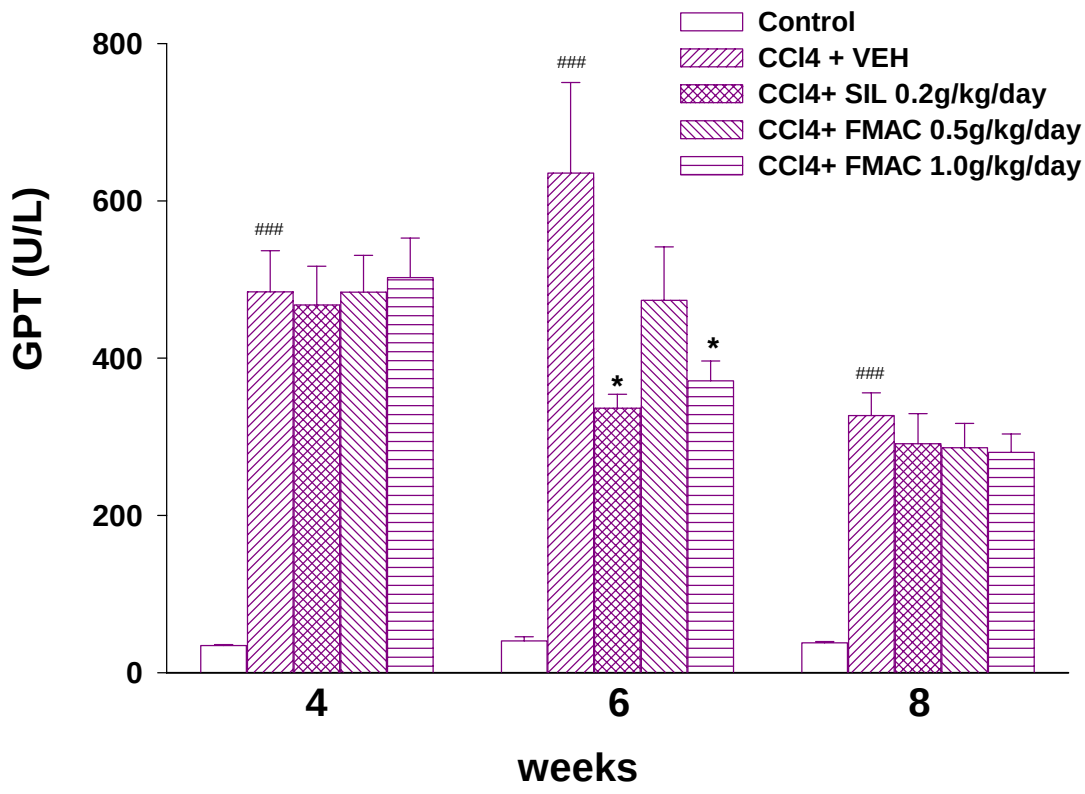


Fig. 2-3.

Effect of the FMAC on GPT activities of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

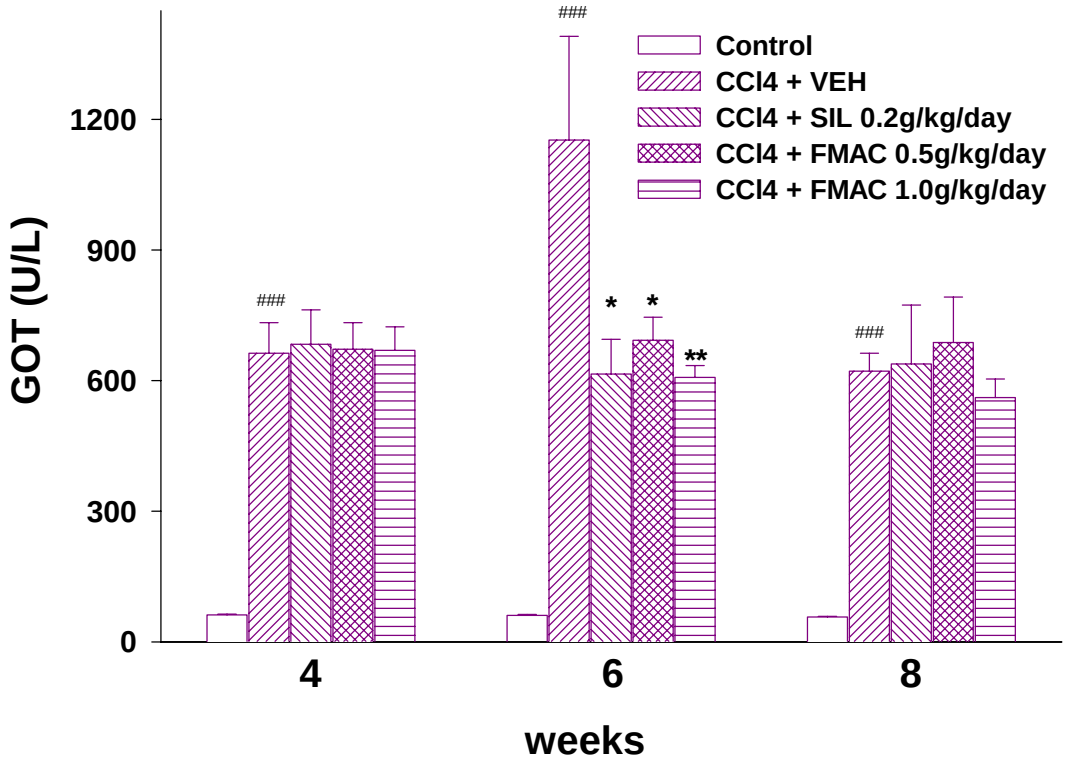


Fig. 2-4.

Effect of the FMAC on GOT activities of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$, $^{**}P<0.01$ compared with the CCl_4+ VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

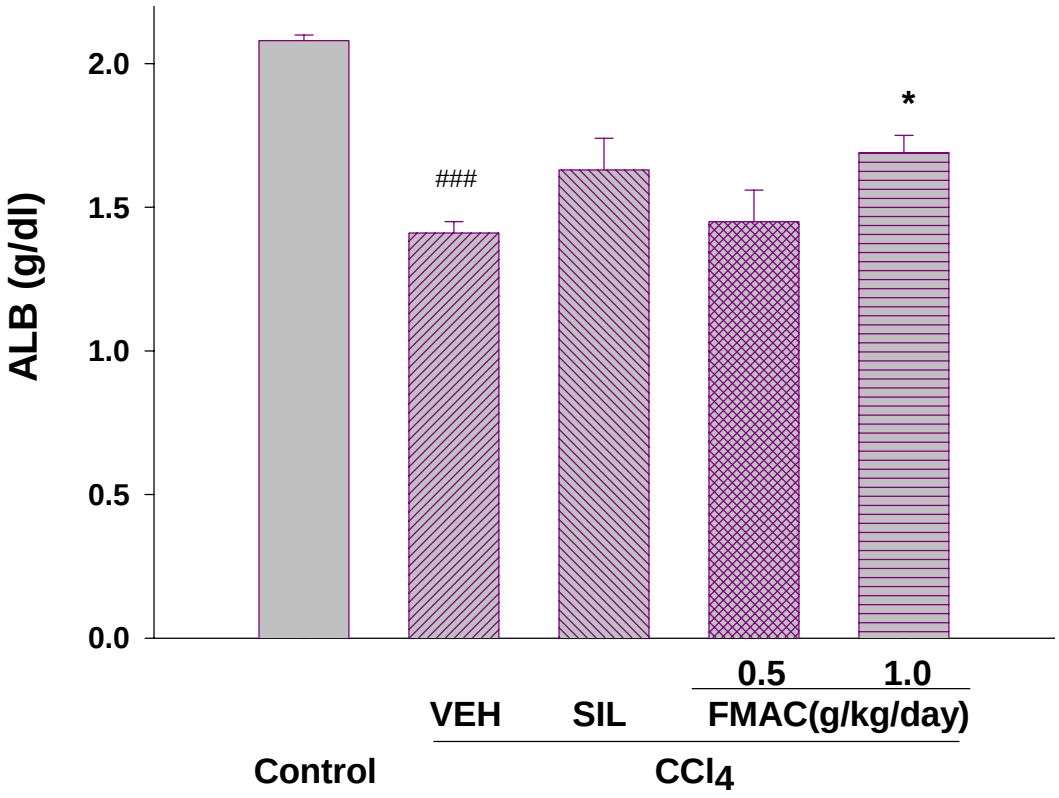


Fig. 2-5.

Effect of the FMAC on serum albumin (ALB) concentration of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

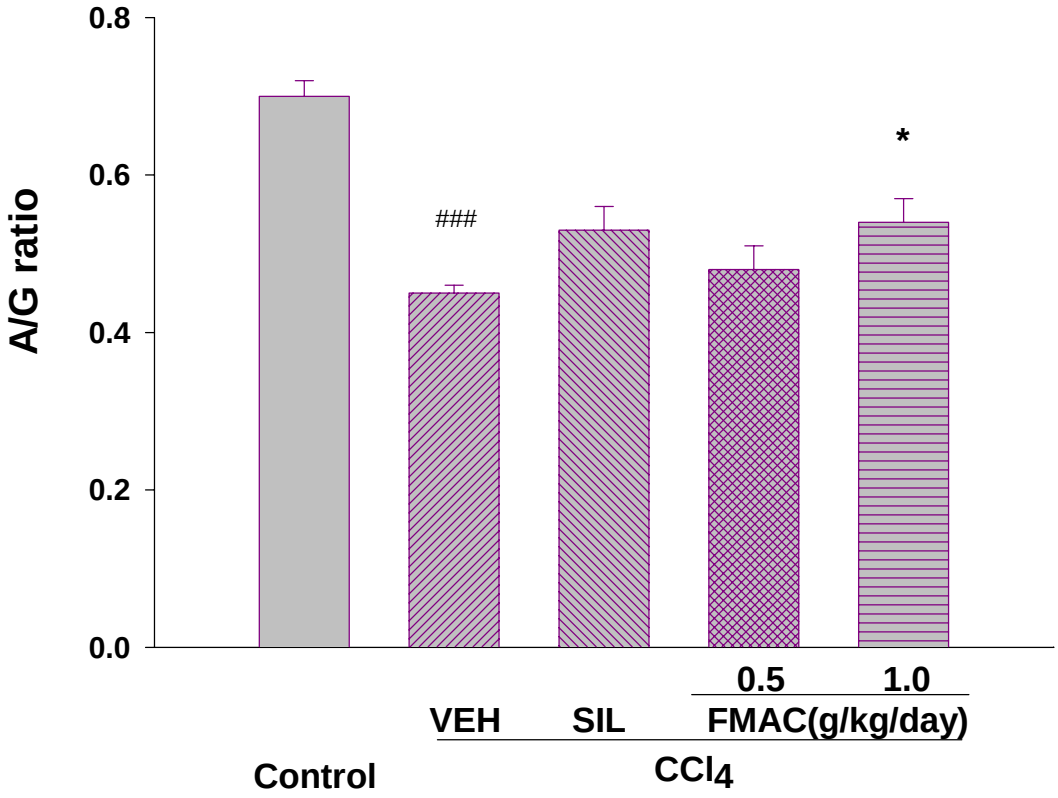


Fig. 2-6.

Effect of the FMAC on serum A/G ratio of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

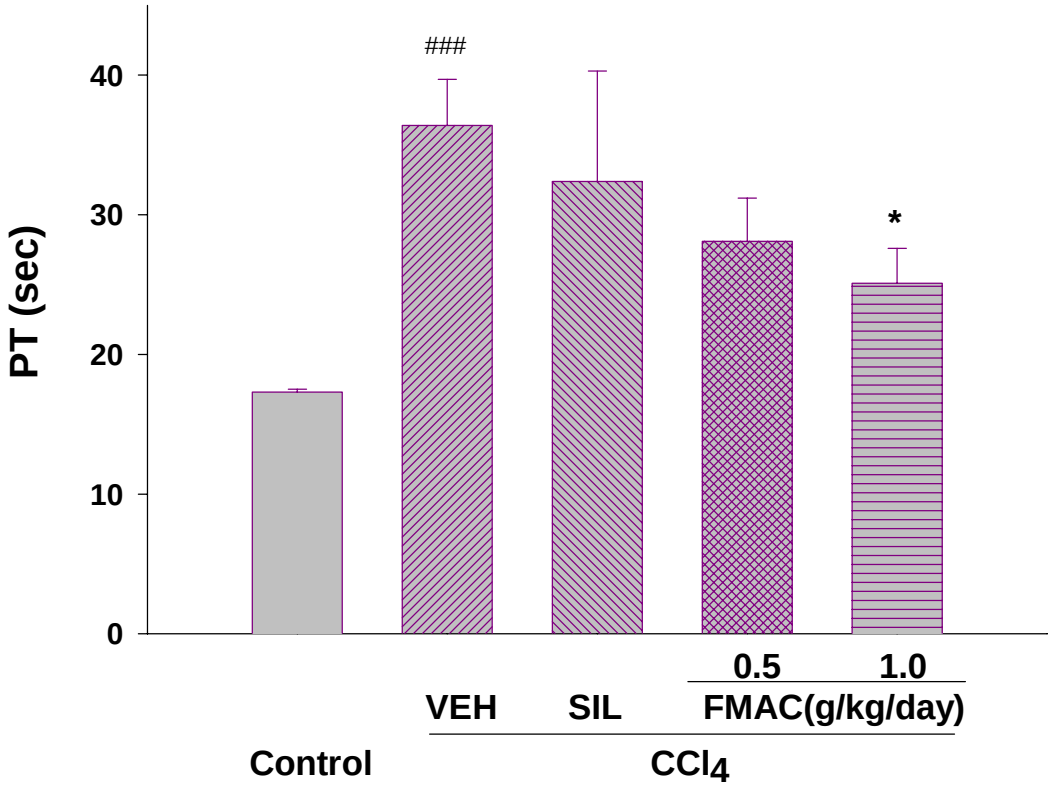


Fig. 2-7.

Effect of the FMAC on prothrombin time of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

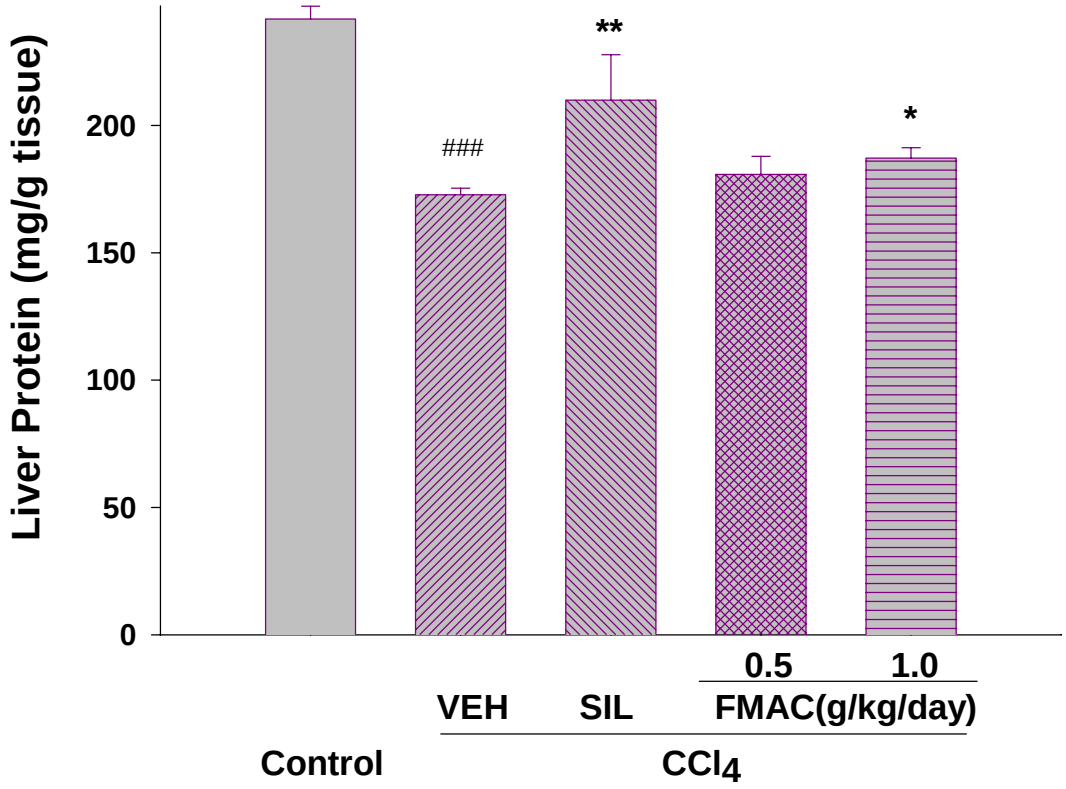


Fig. 2-8.

Effect of the FMAC on liver protein contents of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{*}P<0.05$,. $^{**}P<0.01$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

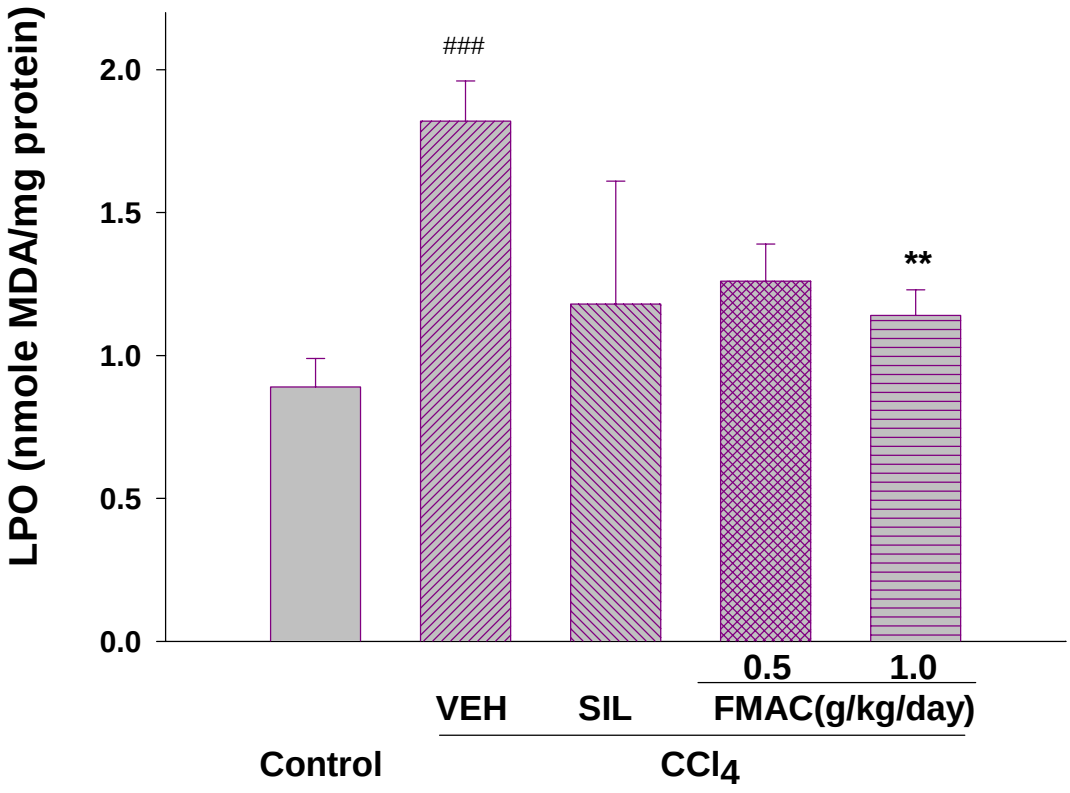


Fig. 2-9.

Effect of the FMAC on liver lipid peroxidation (LPO) of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{###}P<0.001$ compared with the control group. $^{**}P< 0.01$compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

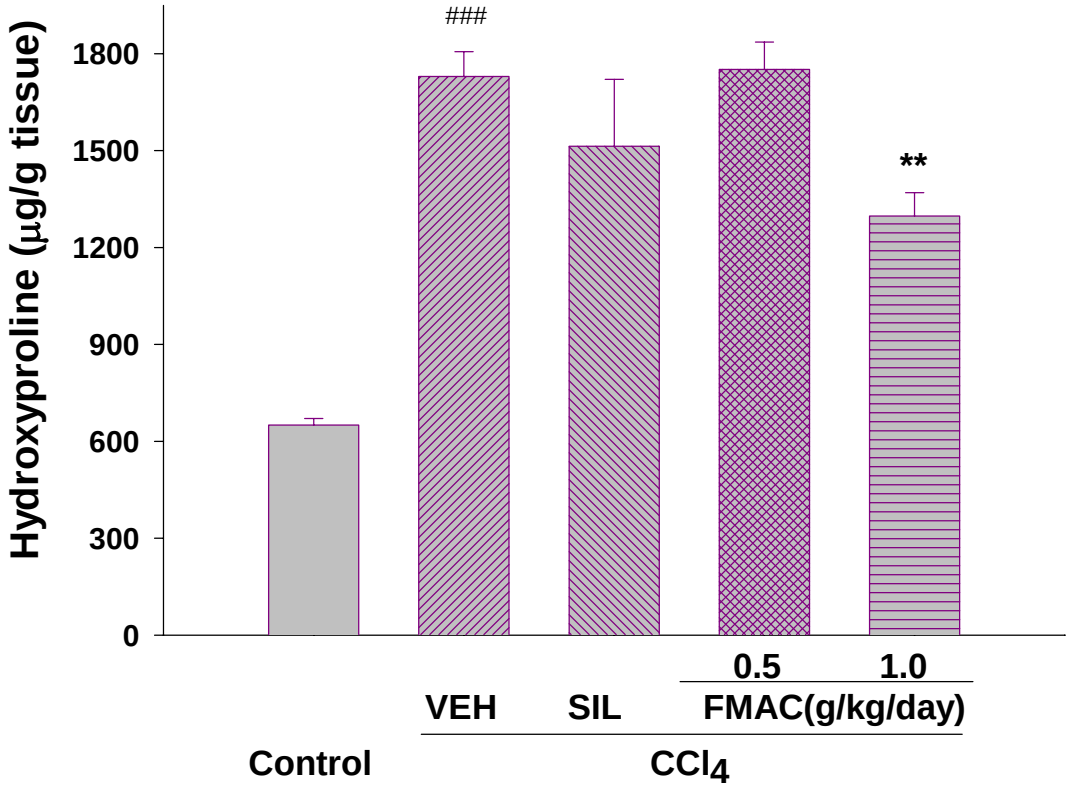


Fig. 2-10.

Effect of the FMAC on liver hydroxyproline contents of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n=12). $^{###}P<0.001$ compared with the control group. $^{**}P<0.01$ compared with the CCl_4 + VEH group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*

.

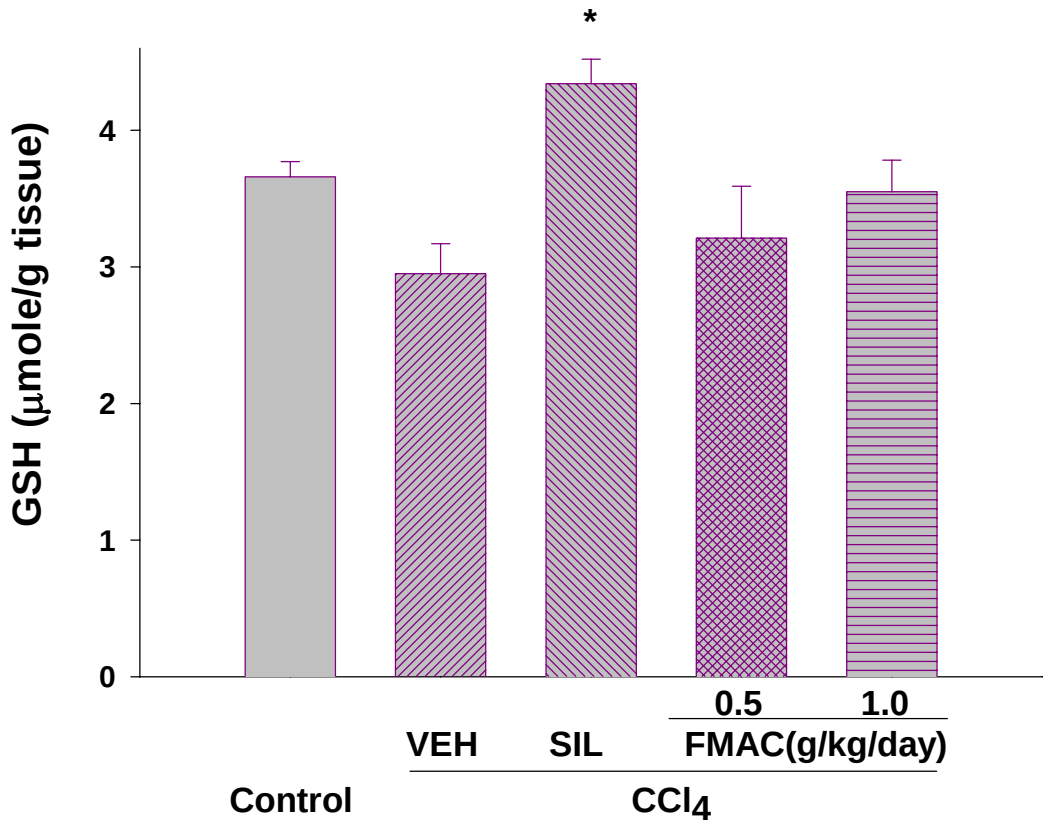
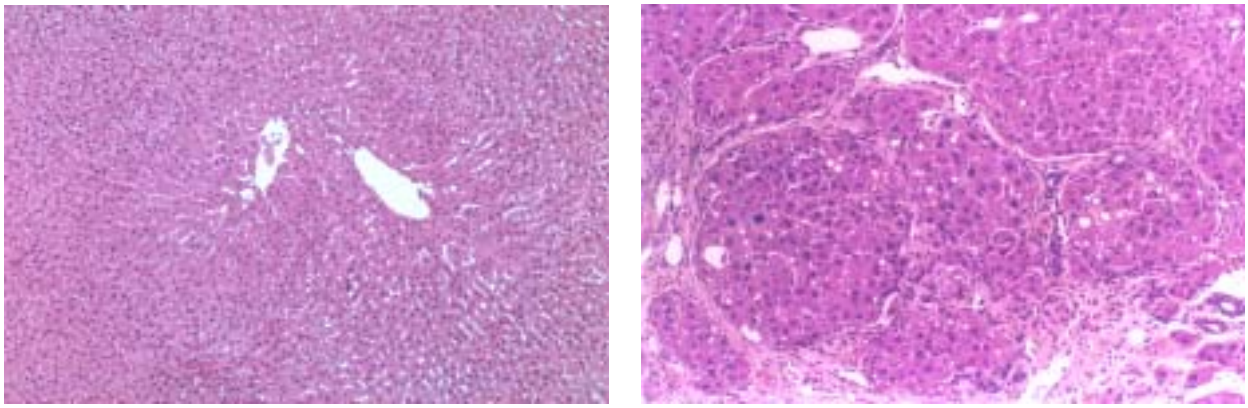
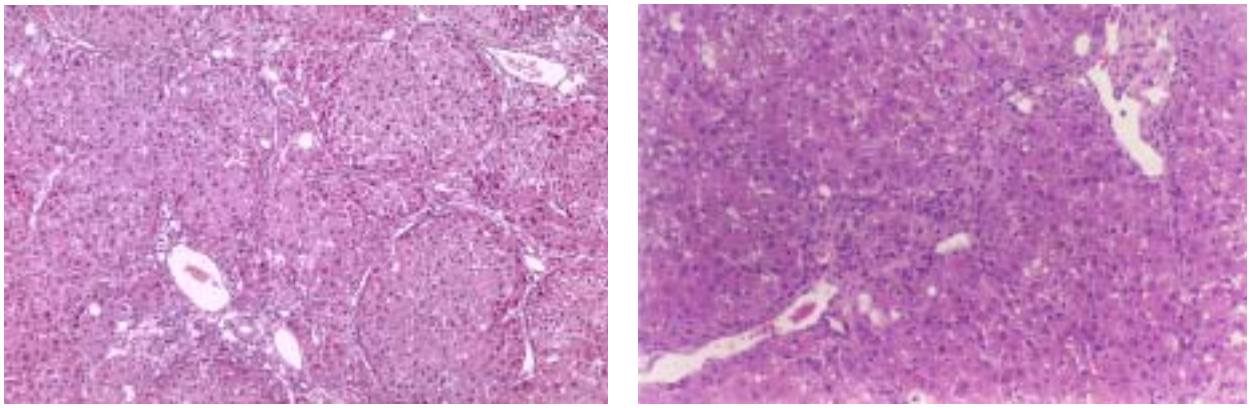


Fig. 2-11.

Effect of the FMAC on liver glutathione contents of CCl_4 chronic treated rats. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC (0.5 or 1.0 g/kg/day) or Silymarin (0.2g/kg) was administered orally from week 4 to the end of the experiment. Values are mean ± S.E. (n = 12). $^{*}P<0.05$ compared with the CCl_4 group. VEH: vehicle; SIL: Silymarin; FMAC: filtrate of fermented mycelia of *Antrodia camphorata*



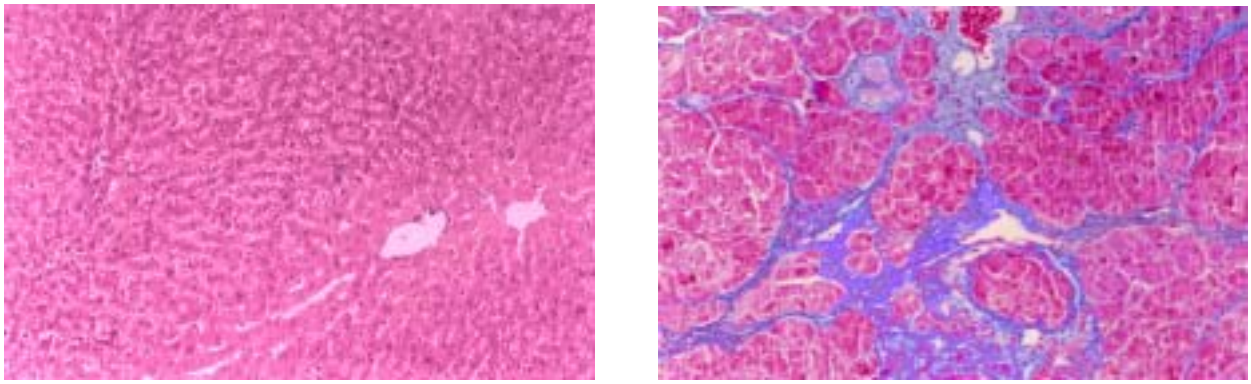
(A) (B)



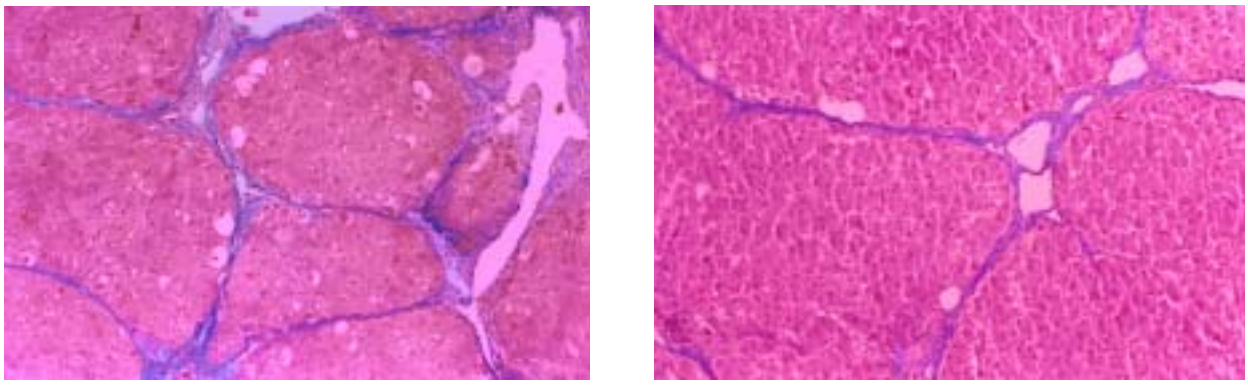
(C) (D)

Fig. 2-12.

The photomicrographs of liver section taken from rats and stained with hematoxylin-eosin. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC or Silymarin was administered orally from week 4 to the end of the experiment. (A) Normal control (B) CCl_4, Note that inflammatory cell infiltration, massive fatty changes and centribular necrosis was observed. (C) CCl_4+ Silymarin (D) CCl_4+ FMAC 1.0 g/kg/day



(A) (B)



(C) (D)

Fig. 2-13.

The photomicrographs of liver section taken from rats and stained with Masson's trichrome. CCl_4 was administered by gavaging twice a week at a dose of 0.5 ml/rat for 8 weeks. FMAC or Silymarin was administered orally from week 4 to the end of the experiment. (A) Normal control (B) CCl_4. Note that displaying bundles of collagen surrounding the lobules, with hemorrhage and necrosis was observed. (C) CCl_4 + Silymarin (D) CCl_4 + FMAC 1.0 g/kg/day