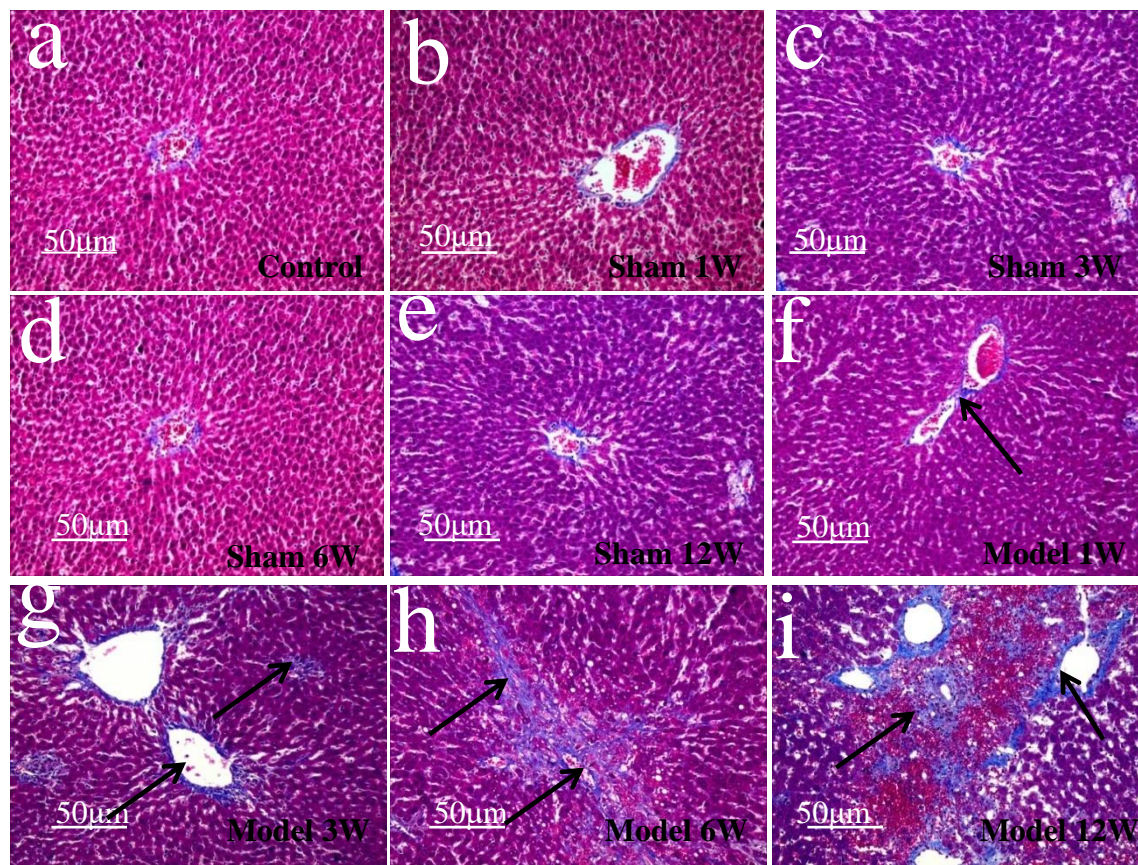


Supplementary Figure 1 The surgical procedure for the establishment of BCS in a rat. Data are representative images of each step of the procedure.

a. Surgical exposing the liver (blue arrow) and inferior vena cava (white arrow). b. Separating the tissues around the superior and inferior vena cava in the liver (blue ellipse). c. Ligating the 4F catheter and the inferior vena cava with sutures (blue arrow). d. Withdrawing the 4F catheter, and then suture the abdomen (blue arrow).



Supplement Figure 2 The Masson staining images of the rat liver tissues in the histopathological examinations. a. Control group. b-e. Four groups of sham-operated, 1W, 3W, 6W, 12W. a-e. Only the collagen fibers of the central vein of the rat liver were stained blue. f. Model group 1W. Only the collagen fibers of the central vein were blue (black arrow). g. Model group 3W. The collagen fibers in the central vein and the scattered flaky hyperplasia fibers around the central vein were stained blue (black arrow). h. Model group 6W. The fiber of necrosis and hyperplasia in the portal area was dyed blue, and blue area was obviously enlarged compared with 4 weeks (black arrow). i. Model group 12W. The portal area was blue in large patches, which was further larger than that of 6W (black arrow). (original magnification $\times 200$). Bar = 50 μm .

Table 1 mRNA expression levels of the TLR4/NF-κB-mediated inflammation-related indicators

		TLR4	NF-κBp65	IL-2	TNF-α	IFN-γ
Control group		1.004±0.139	1.003±0.074	1.001±0.121	1.001±0.126	1.005±0.101
Sham-operated group	1W	1.101±0.127	1.101±0.127	1.108±0.206	1.068±0.222	1.102±0.121
	3W	1.013±0.109	1.013±0.109	1.061±0.168	1.042±0.181	1.082±0.111
	6W	1.045±0.118	1.045±0.118	1.006±0.141	1.047±0.164	1.004±0.084
	12W	1.059±0.115	1.059±0.115	1.025±0.097	1.017±0.157	1.019±0.118
Model group	1W	1.773±0.165 ^{#*}	1.773±0.165 ^{#*}	1.935±0.217 ^{#*}	1.991±0.181 ^{#*}	2.170±0.195 ^{#*}
	3W	6.789±0.692 ^{#*}	6.789±0.692 ^{#*}	6.144±0.681 ^{#*}	12.931±1.424 ^{#*}	9.172±0.902 ^{#*}
	6W	4.671±0.593 ^{#*}	4.671±0.593 ^{#*}	4.372±0.268 ^{#*}	7.629±0.999 ^{#*}	5.131±0.441 ^{#*}
	12W	1.003±0.074 ^{#*}	3.575±0.334 ^{#*}	3.011±0.326 ^{#*}	3.991±0.391 ^{#*}	2.855±0.732 ^{#*}
Statistics		333.288	464.025	426.396	555.318	509.268
P		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Note: [#]Comparisons between subgroups, the differences are statistically significant, *Comparisons between model subgroups, the differences are statistically significantP<0.05.

Table 2 Relative protein expression levels of TLR4/NF-κB-mediated inflammation-related indicators

		TLR4	NF-κBp65	IL-2	TNF-α	IFN-γ
Control group		0.555 ± 0.066	0.317 ± 0.022	0.232 ± 0.029	0.368 ± 0.032	0.369 ± 0.023
Sham-operate d group	1W	0.561 ± 0.059	0.327 ± 0.019	0.229 ± 0.028	0.366 ± 0.026	0.379 ± 0.029
	3W	0.560 ± 0.068	0.313 ± 0.023	0.242 ± 0.029	0.357 ± 0.022	0.359 ± 0.026
	6W	0.561 ± 0.071	0.310 ± 0.030	0.236 ± 0.027	0.369 ± 0.034	0.362 ± 0.020
	12W	0.564 ± 0.070	0.309 ± 0.025	0.234 ± 0.027	0.371 ± 0.028	0.377 ± 0.028
	1W	0.729 ± 0.067 ^{#*}	0.678 ± 0.058 ^{#*}	0.449 ± 0.057 ^{#*}	0.684 ± 0.024 ^{#*}	0.700 ± 0.082 ^{#*}
Model group	3W	1.507 ± 0.086 ^{#*}	1.416 ± 0.087 ^{#*}	1.047 ± 0.058 ^{#*}	1.188 ± 0.051 ^{#*}	1.261 ± 0.073 ^{#*}
	6W	1.162 ± 0.070 ^{#*}	1.192 ± 0.079 ^{#*}	0.848 ± 0.056 ^{#*}	1.050 ± 0.043 ^{#*}	1.069 ± 0.090 ^{#*}
	12W	1.001 ± 0.072 ^{#*}	0.880 ± 0.090 ^{#*}	0.610 ± 0.059 ^{#*}	0.835 ± 0.065 ^{#*}	0.845 ± 0.063 ^{#*}
Statistics		291.836	711.802	608.214	897.062	488.525
P		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Note: #Comparisons between subgroups, the differences are statistically significant,*Comparisons between model subgroups, the differences are statistically significant, P<0.05.

Table 3 Correlation between LPS and mRNA levels of various inflammation-related indicators

	LPS	TLR4	NF- κBp65	IFN-γ	TNF-α	IL-2
LPS	1	0.959*	0.945*	0.939*	0.942*	0.944*
NF-κBp65	0.945*	0.930*	1	0.941*	0.954*	0.966*
IL-2	0.939*	0.952*	0.941*	1	0.982*	0.946*
TNF-α	0.942*	0.953*	0.954*	0.982*	1	0.954*
IFN-γ	0.944*	0.932*	0.966*	0.946*	0.954*	1

Note: *Denotes $p < 0.01$.

Table 4 Correlation between LPS and protein expression of inflammation-related indicators

	LPS	TLR4	NF- κBp65	IFN-γ	TNF-α	IL-2
LPS	1	0.954*	0.929*	0.931*	0.930*	0.936*
TLR4	0.954	1	0.915*	0.900*	0.930*	0.910*
	*					
NF-κBp65	0.929	0.915*	1	0.954*	0.949*	0.961*
	*					
IFN-γ	0.931	0.900*	0.954*	1	0.938*	0.957*
	*					
TNF-α	0.930	0.930*	0.949*	0.938*	1	0.954*
	*					
IL-2	0.936	0.910*	0.961*	0.957*	0.954*	1
	*					

Note: *Denotes $p < 0.01$.

Table 5 Levels of LPS and TLR4/NF-κB mediated inflammation-related indicators in the blood samples from human subjects

	LPS(Eu/ml)	TLR4 (%)	NF-κB (pg/ml)	IL-2(pg/ml)	TNF-α(pg/ml)	IFN-γ(pg/ml)
Control group	8.42±2.33	5.05±1.29	8.15±1.65	21.19±5.01	24.88±4.07	16.60±1.80
Chronic group	20.96±6.70	14.00±3.67	28.75±4.17	65.62±13.26	46.68±7.55	35.87±7.36
Acute group	34.44±10.45#*	24.55±7.0#*	65.17±11.09#*	127.90±26.57#*	77.88±9.61#*	70.90±11.95#*
F	95.541	132.171	524.000	285.085	384.673	340.340

Note: #Acute group vs Chronic group, the differences are statistically significant,*Acute group vs Control group, the differences are statistically significant, P<0.05.