

Table S1 The differentially expressed metabolites in hepatitis B animal model using metabolomics strategy.

| No. | Ion mode | Rt(min) | Name | Formula | m/z | HMDB | Trend in model group | Regulated by syringin |
|-----|----------|---------|---------------------|------------|--------|-----------|----------------------|-----------------------|
| 1 | M-H | 0.46 | Ornithine | C5H12N2O2 | 131.08 | HMDB00214 | up | ✓ |
| 2 | M+H | 0.75 | L-Lysine | C6H14N2O2 | 147.11 | HMDB00182 | up | ✓ |
| 3 | M+H | 0.96 | Citric acid | C6H8O7 | 215.02 | HMDB00094 | up | ✓ |
| 4 | M+H | 1.39 | Uric acid | C5H4N4O3 | 169.04 | HMDB00289 | low | ✓ |
| 5 | M-H | 1.71 | L-glutamine | C5H10N2O3 | 145.06 | HMDB00641 | low | ✓ |
| 6 | M+H | 2.11 | Glucose | C6H12O6 | 181.07 | HMDB00122 | low | |
| 7 | M+H | 2.22 | Dimethyl succinate | C6H10O4 | 147.06 | HMDB33837 | up | ✓ |
| 8 | M+H | 2.43 | N,N-dimethylglycine | C8H11N | 144.08 | HMDB01020 | up | ✓ |
| 9 | M+H | 2.82 | D-Proline | C5H9NO2 | 116.07 | HMDB03411 | up | ✓ |
| 10 | M-H | 3.49 | Glutamyl-Serine | C8H13N2O6 | 232.07 | HMDB28828 | up | |
| 11 | M-H | 3.59 | Metyrosine | C10H13NO3 | 196.10 | HMDB14903 | low | |
| 12 | M+H | 3.88 | Carnitine | C7H15NO3 | 184.10 | HMDB00062 | up | ✓ |
| 13 | M-H | 4.03 | Heptylmalonic acid | C10H18O4 | 201.11 | HMDB59719 | up | ✓ |
| 14 | M-H | 4.29 | Taurocholic acid | C26H45NO7S | 514.28 | HMDB00036 | up | ✓ |
| 15 | M+H | 4.56 | 3-Oxodecanoic acid | C14H26O3 | 265.17 | HMDB10730 | low | |
| 16 | M+H | 5.35 | Glycocholic acid | C26H43NO6 | 488.30 | HMDB00138 | up | |
| 17 | M-H | 5.48 | Pyruvic acid | C3H4O3 | 87.01 | HMDB00243 | low | ✓ |
| 18 | M+H | 6.05 | L-Phenylalanine | C9H11NO2 | 166.08 | HMDB00159 | up | ✓ |
| 19 | M-H | 6.35 | LysoPC(15:0) | C23H48NO7P | 480.31 | HMDB10381 | low | ✓ |
| 20 | M+H | 6.68 | Biliverdin | C33H34N4O6 | 583.26 | HMDB01008 | up | ✓ |
| 21 | M+H | 6.87 | LysoPE(16:0/0:0) | C21H44NO7P | 476.28 | HMDB11503 | low | |
| 22 | M-H | 7.23 | Arachidonic acid | C20H32O2 | 303.23 | HMDB01043 | up | ✓ |
| 23 | M+H | 7.41 | LysoPE(0:0/20:0) | C25H52NO7P | 510.36 | HMDB11481 | low | ✓ |
| 24 | M-H | 7.51 | LysoPC(18:1(9Z)) | C26H52NO7P | 520.34 | HMDB02815 | low | ✓ |
| 25 | M-H | 7.83 | LysoPC(P-16:0) | C24H50NO6P | 478.33 | HMDB10407 | low | |
| 26 | M-H | 8.05 | LysoPC(17:0) | C25H52NO7P | 508.34 | HMDB12108 | low | ✓ |
| 27 | M+H | 8.19 | Oleamide | C18H35NO | 282.28 | HMDB02117 | up | ✓ |
| 28 | M-H | 8.41 | LysoPC(16:0) | C24H50NO7P | 494.33 | HMDB10382 | low | ✓ |
| 29 | M-H | 8.55 | LysoPC(18:0) | C26H54NO7P | 522.36 | HMDB10384 | low | ✓ |
| 30 | M-H | 8.80 | Palmitoleic acid | C16H30O2 | 253.22 | HMDB03229 | up | ✓ |
| 31 | M+H | 9.02 | 8-HETE | C20H32O3 | 321.24 | HMDB04679 | low | ✓ |
| 32 | M+H | 9.46 | Triethyl citrate | C12H20O7 | 299.11 | HMDB34263 | up | |
| 33 | M-H | 9.81 | LysoPE(18:0/0:0) | C23H48NO7P | 480.31 | HMDB11130 | low | ✓ |

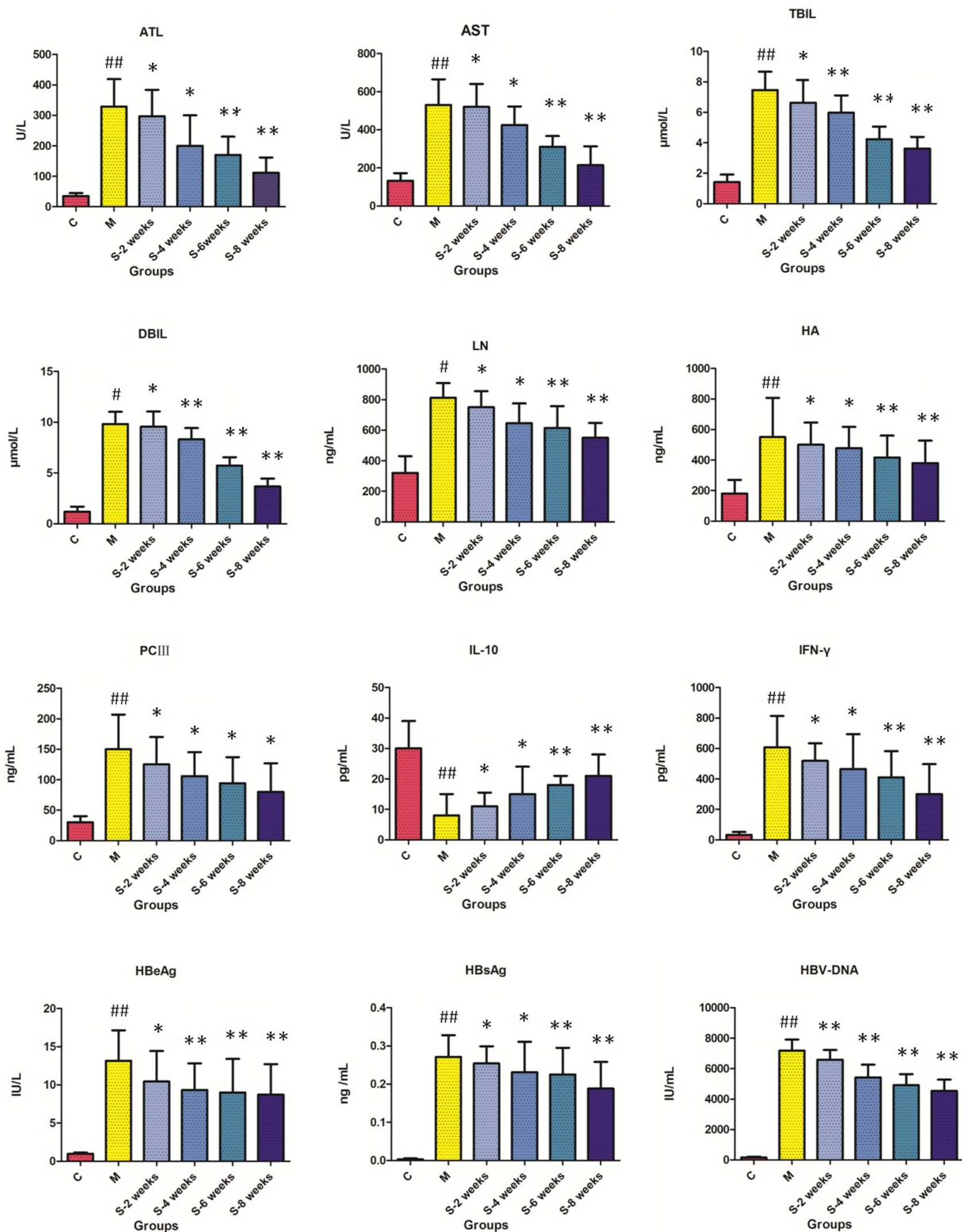


Figure S1 Biochemistry analysis of liver lesion and the anti-HBV effect of syringing. Model group vs control group:

#p < 0.05, ##p < 0.01; Model group and syringin-treated group: *p < 0.05; **p < 0.01.

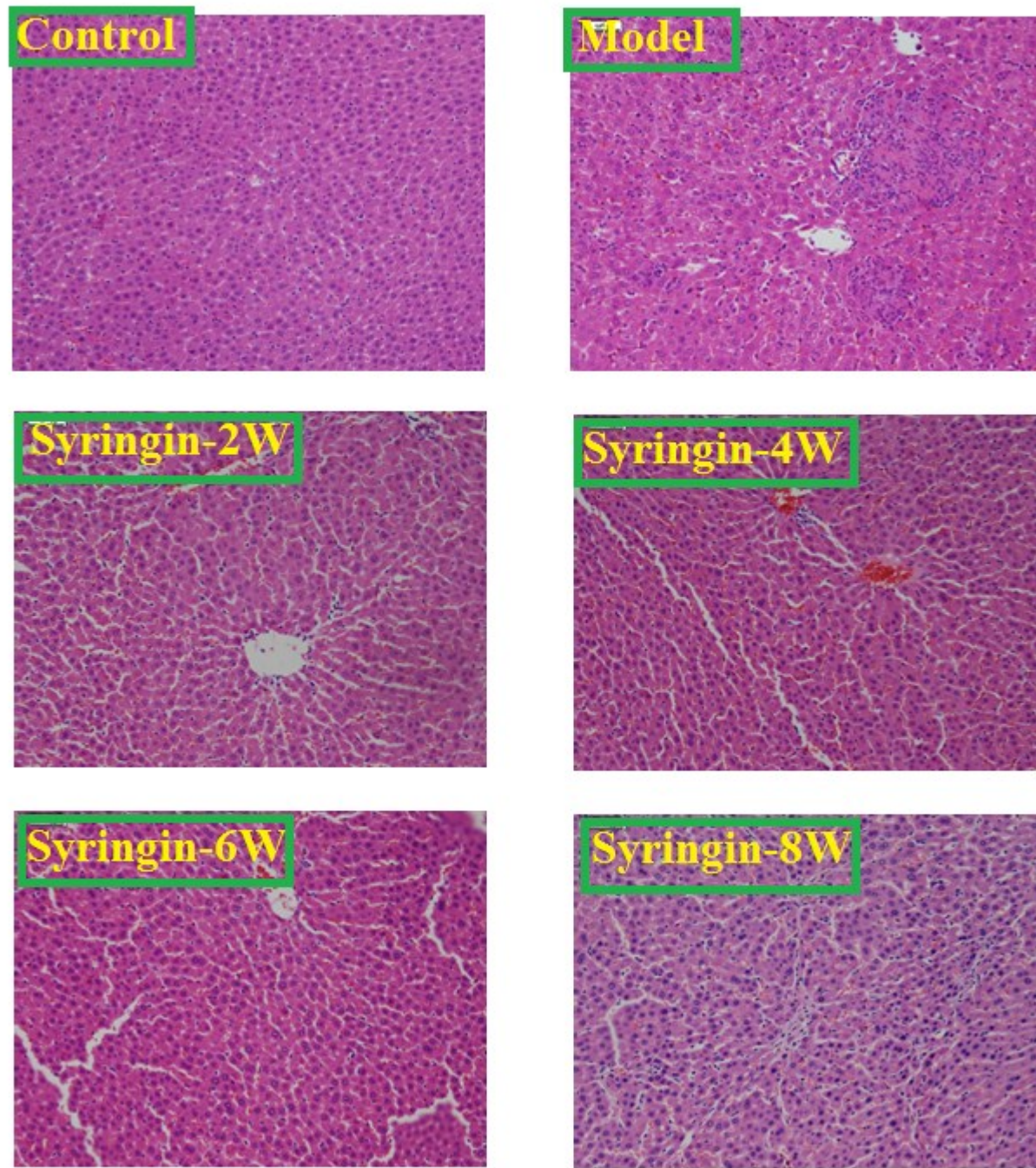


Figure S2 Compared with control group, liver tissue from the model group exhibits unordered hepatocyte cords and hepatic lobule structure, cell morphology swelling, abnormal cell nuclear atrophy, severe fatty degeneration and fibrosis, spotty or focal necrosis and obvious inflammatory cells infiltration. Hemorrhagic necrosis with foci of lymphomonocytic infiltration around fibrosis tissue can be easily seen. Syringin gradually improved the pathological changes of liver tissue, and by the eighth week, there were mainly mild fibrotic lesions.