

# Supplementary Materials

**Table S1.** Identification of 26 common lipid markers in serum of AAI group and control group

| lipid markers      | m/z      | VIP    | <i>P</i> | Fold change<br>(AAI/Control) | Fold change<br>(AAI/1 week) |
|--------------------|----------|--------|----------|------------------------------|-----------------------------|
| PE(0:0/18:2)       | 478.2928 | 1.2900 | 0.0017   | 0.5029                       | 0.4595                      |
| PE(0:0/18:0)       | 482.3241 | 1.2138 | 0.0035   | 0.3895                       | 0.2677                      |
| PE(18:0/0:0)       | 482.3241 | 1.3387 | 0.0002   | 0.4031                       | 0.3276                      |
| PC(0:0/17:0)       | 510.3554 | 1.3657 | 0.0006   | 0.4716                       | 0.3897                      |
| PC(17:0/0:0)       | 510.3554 | 1.0711 | 0.0046   | 0.5463                       | 0.4900                      |
| PC(0:0/19:0)       | 538.3867 | 1.5354 | 0.0002   | 0.4138                       | 0.6136                      |
| PC(19:0/0:0)       | 538.3867 | 1.5509 | 0.0002   | 0.4320                       | 0.5963                      |
| PC(0:0/20:5)       | 542.3241 | 1.7496 | 0.0000   | 0.1395                       | 0.1058                      |
| PC(20:5/0:0)       | 542.3241 | 1.6319 | 0.0000   | 0.1683                       | 0.1221                      |
| Cer(d18:2/23:0)    | 634.6133 | 1.4016 | 0.0010   | 0.2966                       | 0.2901                      |
| PC(O-16:0/16:1)    | 718.5745 | 1.3913 | 0.0009   | 0.4071                       | 0.3741                      |
| PC(O-16:0/20:4)    | 766.5745 | 1.4033 | 0.0008   | 0.4023                       | 0.3858                      |
| PC(P-18:0/18:2)    | 770.6058 | 1.1657 | 0.0091   | 0.4789                       | 0.5105                      |
| PC(O-18:0/20:4)    | 796.6215 | 1.1759 | 0.0057   | 0.5038                       | 0.4705                      |
| GlcCer(d18:1/23:0) | 798.6817 | 1.5428 | 0.0001   | 0.4288                       | 0.8654                      |
| SM(d17:1/24:1)     | 799.6687 | 1.6417 | 0.0000   | 0.3578                       | 0.4266                      |
| SM(d18:2/23:0)     | 799.6687 | 1.7780 | 0.0000   | 0.3034                       | 0.8707                      |
| PC(18:2/19:0)      | 800.6164 | 1.8735 | 0.0000   | 0.2102                       | 0.2156                      |
| SM(d17:1/24:0)     | 801.6844 | 1.6496 | 0.0000   | 0.3622                       | 0.6875                      |
| GlcCer(d18:1/24:0) | 812.6974 | 1.3018 | 0.0018   | 0.4899                       | 0.9215                      |
| PC(18:0/20:2)      | 814.6320 | 1.2318 | 0.0026   | 0.3526                       | 0.4743                      |
| SM(d18:1/24:0)     | 815.7001 | 1.4664 | 0.0004   | 0.4297                       | 0.7708                      |
| PC(P-18:0/22:6)    | 818.6058 | 1.1907 | 0.0095   | 0.4980                       | 0.5911                      |
| PC(20:4/19:0)      | 824.6164 | 1.6120 | 0.0000   | 0.2887                       | 0.2403                      |
| SM(d17:1/26:1)     | 827.7001 | 1.6887 | 0.0000   | 0.3384                       | 0.6722                      |
| SM(d18:1/26:1)     | 841.7157 | 1.5429 | 0.0001   | 0.3442                       | 0.5246                      |

**Table S2.** Identification of 26 common lipid markers in liver of AAI group and control group

| lipid markers | m/z      | VIP    | <i>P</i> | Fold change<br>(AAI/Control) | Fold change<br>(AAI/1 week) |
|---------------|----------|--------|----------|------------------------------|-----------------------------|
| PE(0:0/18:2)  | 478.2928 | 1.3766 | 0.0164   | 0.4895                       | 1.0136                      |
| PE(0:0/18:0)  | 482.3241 | 1.0871 | 0.0226   | 0.4784                       | 0.3392                      |
| PE(18:0/0:0)  | 482.3241 | 1.1151 | 0.0118   | 0.5318                       | 0.4521                      |
| PC(0:0/17:0)  | 510.3554 | 1.4290 | 0.0084   | 0.3845                       | 0.3116                      |
| PC(17:0/0:0)  | 510.3554 | 1.4323 | 0.0067   | 0.3127                       | 0.3090                      |
| PC(0:0/19:0)  | 538.3867 | 2.1675 | 0.0000   | 0.2156                       | 0.4009                      |

|                    |          |        |        |        |        |
|--------------------|----------|--------|--------|--------|--------|
| PC(19:0/0:0)       | 538.3867 | 2.0899 | 0.0002 | 0.2385 | 0.5796 |
| PC(0:0/20:5)       | 542.3241 | 2.3037 | 0.0000 | 0.2191 | 0.2161 |
| PC(20:5/0:0)       | 542.3241 | 1.4656 | 0.0036 | 0.2882 | 0.3256 |
| Cer(d18:2/23:0)    | 634.6133 | 1.5946 | 0.0089 | 0.4274 | 0.5781 |
| PC(O-16:0/16:1)    | 718.5745 | 1.2183 | 0.0161 | 0.3871 | 0.2604 |
| PC(O-16:0/20:4)    | 766.5745 | 1.0897 | 0.0500 | 0.5828 | 0.4995 |
| PC(P-18:0/18:2)    | 770.6058 | 1.2144 | 0.0283 | 0.4605 | 0.3363 |
| PC(O-18:0/20:4)    | 796.6215 | 1.5443 | 0.0053 | 0.4836 | 0.4207 |
| GlcCer(d18:1/23:0) | 798.6817 | 1.6533 | 0.0023 | 0.4990 | 0.7702 |
| SM(d17:1/24:1)     | 799.6687 | 1.3902 | 0.0107 | 0.3971 | 0.2908 |
| SM(d18:2/23:0)     | 799.6687 | 2.2485 | 0.0001 | 0.1557 | 0.3343 |
| PC(18:2/19:0)      | 800.6164 | 1.4455 | 0.0126 | 0.4055 | 0.4328 |
| SM(d17:1/24:0)     | 801.6844 | 1.7671 | 0.0038 | 0.4232 | 0.6477 |
| GlcCer(d18:1/24:0) | 812.6974 | 1.6298 | 0.0036 | 0.5030 | 0.7209 |
| PC(18:0/20:2)      | 814.6320 | 1.2621 | 0.0414 | 0.4822 | 0.4252 |
| SM(d18:1/24:0)     | 815.7001 | 1.6793 | 0.0047 | 0.4738 | 0.6808 |
| PC(P-18:0/22:6)    | 818.6058 | 1.1363 | 0.0414 | 0.5812 | 0.5336 |
| PC(20:4/19:0)      | 824.6164 | 1.3587 | 0.0344 | 0.4233 | 0.5138 |
| SM(d17:1/26:1)     | 827.7001 | 1.9953 | 0.0004 | 0.3232 | 0.4356 |
| SM(d18:1/26:1)     | 841.7157 | 2.0095 | 0.0019 | 0.2407 | 0.2747 |

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