

Table S5. Differences in serum levels of lipoprotein classes and subclasses between HVs and patients with MS with low and high adiponectin levels.

| Variable (mg/dL) | HV | | | MS | | |
|------------------|---------------------------|----------------------------|--------------------|---------------------------|----------------------------|---------|
| | Low adiponectin (N=33) | High adiponectin (N=32) | p-value | Low adiponectin (N=33) | High adiponectin (N=32) | p-value |
| VLDL | | | | | | |
| VLDL-C | 23.21 (14.70, 26.92) | 13.52 (9.53, 17.75) | 0.0005 | 24.73 (16.59, 38.00) | 23.39 (13.08, 40.59) | 0.7628 |
| VLDL1-C | 7.76 (4.85, 10.13) | 4.20 (2.93, 5.60) | 0.0006 | 9.50 (5.97, 15.88) | 6.95 (4.53, 14.49) | 0.5417 |
| VLDL2-C | 3.12 (2.04, 4.16) | 1.82 (1.27, 2.73) | 0.0010 | 3.20 (2.09, 5.94) | 3.21 (1.48, 6.52) | 0.7035 |
| VLDL3-C | 4.26 (2.44, 4.85) | 2.03 (1.24, 3.35) | 0.0003 | 4.55 (2.82, 7.15) | 4.89 (1.97, 7.93) | 0.8337 |
| VLDL4-C | 5.55 (4.06, 6.86) | 3.83 (2.08, 5.14) | 0.0033 | 5.97 (4.41, 8.32) | 6.50 (3.99, 8.92) | 0.7930 |
| VLDL5-C | 1.15 (0.75, 1.58) | 1.14 (0.95, 1.48) | 0.5815 | 1.04 (0.68, 1.51) | 1.28 (0.92, 1.77) | 0.1470 |
| VLDL-FC | 9.74 (6.69, 11.96) | 6.49 (4.85, 7.89) | 0.0007 | 10.79 (8.15, 16.00) | 10.70 (6.46, 15.77) | 0.7779 |
| VLDL1-FC | 2.70 (1.80, 3.83) | 1.14 (0.62, 1.75) | < 0.0001 | 3.24 (2.32, 5.48) | 2.83 (1.08, 4.53) | 0.3348 |
| VLDL2-FC | 1.18 (0.85, 1.84) | 0.51 (0.32, 0.98) | 0.0006 | 1.54 (0.84, 2.57) | 1.38 (0.42, 2.69) | 0.5461 |
| VLDL3-FC | 1.74 (0.97, 2.37) | 0.80 (0.53, 1.21) | 0.0009 | 2.10 (1.39, 3.34) | 2.13 (0.77, 3.39) | 0.6134 |
| VLDL4-FC | 2.40 (1.73, 3.10) | 1.71 (0.98, 2.24) | 0.0031 | 2.71 (2.11, 3.72) | 3.24 (1.75, 4.45) | 0.6042 |
| VLDL5-FC | 0.53 (0.35, 0.89) | 0.62 (0.41, 0.88) | 0.7828 | 0.65 (0.44, 1.02) | 0.81 (0.55, 0.99) | 0.5461 |
| VLDL-TG | 73.67 (52.61, 97.97) | 40.86 (31.49, 58.49) | < 0.0001 | 92.33 (68.83, 139.95) | 92.58 (47.12, 123.98) | 0.3186 |
| VLDL1-TG | 30.04 (22.83, 48.25) | 14.92 (9.28, 25.83) | < 0.0001 | 48.34 (33.54, 77.59) | 43.56 (20.97, 61.16) | 0.2325 |
| VLDL2-TG | 10.59 (7.34, 15.92) | 5.94 (4.10, 9.05) | 0.0003 | 13.29 (9.34, 20.65) | 13.16 (6.85, 22.29) | 0.4311 |
| VLDL3-TG | 9.67 (6.52, 14.08) | 5.22 (3.92, 8.39) | 0.0007 | 12.00 (8.46, 18.45) | 13.02 (5.32, 19.86) | 0.5997 |
| VLDL4-TG | 8.66 (6.47, 10.19) | 5.77 (4.32, 7.87) | 0.0029 | 10.31 (8.80, 13.64) | 10.50 (6.49, 13.55) | 0.7379 |
| VLDL5-TG | 2.44 (2.07, 3.01) | 2.60 (2.24, 2.84) | 0.6366 | 2.92 (2.48, 3.75) | 3.06 (2.70, 3.48) | 0.5075 |
| VLDL-PL | 20.36 (13.84, 25.65) | 12.55 (9.71, 16.34) | 0.0003 | 22.76 (18.22, 34.68) | 22.77 (12.32, 31.99) | 0.3722 |
| VLDL1-PL | 5.67 (4.06, 7.96) | 2.41 (1.26, 3.94) | < 0.0001 | 7.82 (5.07, 12.30) | 6.85 (3.35, 10.27) | 0.2325 |
| VLDL2-PL | 2.89 (2.18, 4.37) | 1.54 (1.12, 2.38) | 0.0002 | 3.49 (2.40, 5.32) | 3.25 (1.67, 5.71) | 0.3549 |
| VLDL3-PL | 3.64 (2.31, 5.00) | 1.83 (1.38, 2.82) | 0.0003 | 4.38 (3.16, 6.47) | 4.65 (1.96, 7.04) | 0.4909 |
| VLDL4-PL | 4.74 (3.44, 5.24) | 3.27 (1.99, 4.15) | 0.0015 | 5.17 (4.27, 6.87) | 5.71 (3.43, 7.19) | 0.9216 |
| VLDL5-PL | 1.46 (1.15, 2.04) | 1.42 (1.13, 1.74) | 0.5996 | 1.67 (1.09, 2.12) | 1.83 (1.49, 2.16) | 0.3617 |
| VLDL-apoB | 8.02 (5.69, 10.18) | 5.15 (3.40, 6.61) | 0.0007 | 9.20 (7.46, 13.36) | 10.00 (5.54, 13.35) | 0.7280 |
| IDL | | | | | | |
| IDL-C | 17.97 (12.73, 20.55) | 11.59 (8.80, 15.63) | 0.0007 | 17.50 (14.04, 25.22) | 21.90 (11.66, 27.79) | 0.5906 |
| IDL-FC | 5.04 (3.49, 5.95) | 3.14 (2.40, 4.48) | 0.0005 | 4.90 (3.80, 7.04) | 6.01 (3.23, 8.00) | 0.6698 |

| Variable (mg/dL) | HV | | | MS | | |
|------------------|---------------------------|----------------------------|--------------------|---------------------------|----------------------------|---------------|
| | Low adiponectin (N=33) | High adiponectin (N=32) | p-value | Low adiponectin (N=33) | High adiponectin (N=32) | p-value |
| IDL-TG | 9.55 (6.45, 15.53) | 5.95 (3.63, 7.68) | 0.0005 | 13.83 (9.85, 23.45) | 12.84 (6.04, 21.74) | 0.5331 |
| IDL-PL | 8.42 (6.75, 10.68) | 6.45 (5.54, 7.79) | 0.0007 | 9.42 (6.47, 11.74) | 9.96 (6.50, 12.80) | 0.9164 |
| IDL-apoB | 6.54 (4.50, 7.23) | 4.42 (3.21, 5.57) | 0.0013 | 6.59 (4.99, 8.57) | 7.56 (5.08, 9.26) | 0.6650 |
| LDL | | | | | | |
| LDL-C | 145.49 (123.08, 162.27) | 132.32 (121.78, 152.50) | 0.2704 | 111.23 (79.10, 134.74) | 119.64 (103.46, 152.17) | 0.1280 |
| LDL1-C | 29.09 (25.01, 36.00) | 32.46 (27.43, 37.55) | 0.1643 | 22.07 (16.38, 26.45) | 29.09 (24.14, 36.66) | 0.0004 |
| LDL2-C | 22.62 (15.92, 29.65) | 26.53 (25.29, 32.60) | 0.0152 | 15.42 (10.13, 20.19) | 19.32 (14.17, 22.47) | 0.0856 |
| LDL3-C | 22.44 (19.82, 29.08) | 24.69 (21.73, 29.09) | 0.3937 | 15.27 (7.12, 20.38) | 19.91 (13.44, 24.59) | 0.0346 |
| LDL4-C | 22.49 (17.58, 27.92) | 17.82 (14.35, 21.82) | 0.0030 | 17.07 (8.94, 21.23) | 18.35 (15.32, 24.86) | 0.1894 |
| LDL5-C | 21.48 (15.29, 26.40) | 12.82 (10.32, 16.42) | < 0.0001 | 17.25 (12.77, 23.77) | 17.56 (13.10, 22.68) | 0.8440 |
| LDL6-C | 20.21 (18.11, 28.63) | 17.12 (15.25, 20.89) | 0.0022 | 22.38 (17.55, 30.23) | 21.36 (16.02, 27.30) | 0.3583 |
| LDL-FC | 43.98 (37.84, 48.24) | 41.37 (38.37, 47.17) | 0.8491 | 35.25 (26.40, 40.63) | 38.05 (33.11, 46.61) | 0.0615 |
| LDL1-FC | 9.25 (8.12, 10.93) | 9.73 (8.72, 11.48) | 0.2299 | 7.51 (6.10, 8.46) | 9.54 (7.79, 11.70) | 0.0003 |
| LDL2-FC | 7.81 (5.32, 9.39) | 8.78 (8.40, 10.63) | 0.0092 | 5.56 (4.64, 7.30) | 6.77 (5.61, 8.04) | 0.0369 |
| LDL3-FC | 7.63 (6.10, 9.09) | 7.95 (7.54, 9.54) | 0.0930 | 5.74 (3.80, 6.86) | 6.85 (5.24, 7.84) | 0.0192 |
| LDL4-FC | 6.79 (6.07, 7.98) | 5.89 (4.94, 7.01) | 0.0341 | 5.48 (3.72, 6.67) | 6.13 (5.05, 7.63) | 0.0702 |
| LDL5-FC | 6.16 (5.11, 7.18) | 4.46 (3.75, 5.53) | 0.0002 | 5.38 (4.43, 6.67) | 5.30 (4.77, 6.99) | 0.6987 |
| LDL6-FC | 6.16 (5.32, 7.08) | 5.47 (4.81, 6.18) | 0.0163 | 6.30 (5.59, 7.67) | 6.49 (4.99, 7.33) | 0.4992 |
| LDL-TG | 20.79 (18.07, 24.52) | 18.34 (16.05, 22.08) | 0.0983 | 22.36 (20.16, 26.93) | 24.54 (21.71, 30.71) | 0.1985 |
| LDL1-TG | 6.38 (5.28, 7.49) | 6.29 (4.74, 7.59) | 0.7628 | 7.03 (5.84, 8.16) | 7.97 (6.71, 9.66) | 0.0224 |
| LDL2-TG | 2.64 (2.21, 2.93) | 2.79 (2.15, 3.34) | 0.2848 | 2.36 (2.00, 2.71) | 2.90 (2.36, 3.30) | 0.0205 |
| LDL3-TG | 2.51 (1.92, 2.82) | 2.60 (2.22, 3.16) | 0.1622 | 2.23 (1.75, 2.68) | 2.73 (2.01, 3.14) | 0.0754 |
| LDL4-TG | 2.80 (1.91, 3.20) | 1.90 (1.48, 2.69) | 0.0080 | 2.85 (1.99, 3.48) | 2.98 (2.65, 4.25) | 0.2619 |
| LDL5-TG | 2.80 (1.94, 3.61) | 1.64 (1.12, 2.13) | 0.0003 | 3.11 (2.35, 4.12) | 3.00 (2.16, 4.31) | 0.9216 |
| LDL6-TG | 2.81 (2.51, 3.86) | 2.68 (2.20, 3.10) | 0.1471 | 3.98 (2.80, 4.86) | 3.87 (2.89, 4.41) | 0.3154 |
| LDL-PL | 79.41 (67.88, 87.13) | 73.41 (67.79, 83.31) | 0.4159 | 62.46 (47.06, 74.91) | 67.97 (60.71, 83.94) | 0.0722 |
| LDL1-PL | 16.25 (13.73, 19.15) | 17.80 (14.91, 20.83) | 0.1545 | 12.73 (10.76, 14.56) | 16.39 (14.03, 20.30) | 0.0003 |
| LDL2-PL | 12.52 (8.79, 15.62) | 14.56 (13.58, 17.45) | 0.0079 | 8.62 (6.16, 11.04) | 10.79 (7.78, 12.59) | 0.0483 |
| LDL3-PL | 12.12 (10.79, 15.59) | 13.42 (11.83, 15.81) | 0.2819 | 8.77 (4.68, 11.26) | 11.11 (8.16, 13.57) | 0.0253 |
| LDL4-PL | 12.03 (9.73, 14.61) | 9.69 (7.90, 11.90) | 0.0018 | 9.56 (5.42, 11.50) | 10.36 (8.86, 13.77) | 0.1683 |
| LDL5-PL | 11.74 (8.41, 13.79) | 7.33 (5.85, 9.11) | < 0.0001 | 9.59 (7.52, 12.60) | 9.69 (7.59, 12.63) | 0.9112 |

| Variable (mg/dL) | HV | | | MS | | |
|------------------|---------------------------|----------------------------|--------------------|---------------------------|----------------------------|---------------|
| | Low adiponectin (N=33) | High adiponectin (N=32) | p-value | Low adiponectin (N=33) | High adiponectin (N=32) | p-value |
| LDL6-PL | 11.82 (10.50, 14.81) | 10.38 (9.39, 12.01) | 0.0120 | 12.65 (10.70, 16.26) | 12.64 (9.95, 14.76) | 0.3865 |
| LDL-apoB | 86.78 (74.95, 100.04) | 77.95 (71.55, 91.22) | 0.0682 | 72.84 (58.44, 91.11) | 82.29 (73.03, 94.55) | 0.1895 |
| LDL1-apoB | 15.10 (13.04, 17.81) | 16.62 (13.74, 19.62) | 0.1399 | 12.21 (11.12, 14.41) | 15.71 (13.35, 19.38) | 0.0003 |
| LDL2-apoB | 12.28 (9.20, 15.54) | 14.59 (13.34, 16.94) | 0.0160 | 9.64 (6.80, 11.51) | 10.91 (8.62, 13.28) | 0.0652 |
| LDL3-apoB | 13.47 (11.65, 16.42) | 14.27 (12.33, 16.43) | 0.4505 | 10.00 (5.49, 12.43) | 11.77 (9.26, 15.02) | 0.0224 |
| LDL4-apoB | 14.42 (11.66, 17.17) | 10.72 (8.68, 13.62) | 0.0005 | 12.30 (7.40, 15.15) | 12.37 (10.28, 16.86) | 0.1642 |
| LDL5-apoB | 14.98 (10.46, 18.04) | 8.94 (6.94, 11.52) | < 0.0001 | 12.75 (9.92, 18.17) | 13.00 (9.92, 17.21) | 0.7379 |
| LDL6-apoB | 16.84 (15.10, 22.74) | 13.82 (11.83, 16.47) | 0.0011 | 18.97 (15.56, 25.90) | 17.19 (13.36, 23.33) | 0.4010 |
| HDL | | | | | | |
| HDL-C | 59.00 (53.04, 65.65) | 71.82 (64.69, 82.81) | < 0.0001 | 52.23 (45.11, 58.58) | 54.36 (48.97, 66.09) | 0.1643 |
| HDL1-C | 16.64 (13.67, 18.38) | 25.88 (18.79, 32.20) | < 0.0001 | 14.52 (12.09, 17.96) | 16.65 (13.96, 21.02) | 0.0652 |
| HDL2-C | 8.47 (7.71, 8.93) | 10.91 (9.57, 13.31) | < 0.0001 | 7.69 (6.50, 8.80) | 8.61 (7.47, 10.07) | 0.0394 |
| HDL3-C | 11.26 (10.46, 13.13) | 13.13 (11.61, 14.06) | 0.0051 | 10.36 (9.25, 11.41) | 10.75 (9.72, 12.50) | 0.1471 |
| HDL4-C | 23.02 (18.24, 25.09) | 21.59 (18.05, 23.98) | 0.2704 | 18.42 (15.99, 22.09) | 19.16 (16.01, 22.71) | 0.8956 |
| HDL-FC | 14.26 (12.86, 15.62) | 18.34 (16.23, 21.00) | < 0.0001 | 12.79 (11.43, 14.61) | 13.87 (12.84, 16.60) | 0.0111 |
| HDL1-FC | 5.01 (4.36, 5.45) | 7.06 (5.43, 8.45) | < 0.0001 | 4.18 (3.37, 5.07) | 4.63 (4.14, 5.84) | 0.0206 |
| HDL2-FC | 2.47 (1.97, 2.85) | 2.85 (2.62, 3.41) | 0.0006 | 2.17 (1.92, 2.69) | 2.38 (2.17, 2.73) | 0.0652 |
| HDL3-FC | 2.91 (2.39, 3.24) | 3.07 (2.71, 3.47) | 0.1526 | 2.31 (1.93, 2.97) | 2.66 (2.27, 3.17) | 0.0787 |
| HDL4-FC | 5.02 (4.21, 5.66) | 4.73 (3.76, 5.66) | 0.3828 | 4.04 (3.63, 4.83) | 4.67 (3.89, 5.23) | 0.1765 |
| HDL-TG | 9.66 (8.66, 11.02) | 10.14 (8.66, 12.57) | 0.3381 | 10.72 (8.60, 12.98) | 12.79 (10.34, 14.06) | 0.0330 |
| HDL1-TG | 2.71 (2.09, 3.47) | 3.84 (2.70, 5.06) | 0.0041 | 2.81 (2.20, 3.81) | 3.75 (3.44, 5.44) | 0.0065 |
| HDL2-TG | 1.56 (1.27, 2.02) | 1.67 (1.53, 2.20) | 0.2968 | 1.85 (1.51, 2.42) | 2.23 (1.83, 2.69) | 0.0341 |
| HDL3-TG | 2.14 (1.77, 2.73) | 2.16 (1.56, 2.41) | 0.3756 | 2.60 (1.95, 3.07) | 2.71 (2.15, 3.25) | 0.2878 |
| HDL4-TG | 3.60 (3.34, 4.12) | 2.83 (2.10, 3.73) | 0.0012 | 3.74 (3.22, 4.62) | 3.82 (3.38, 4.74) | 0.5861 |
| HDL-PL | 80.86 (74.34, 88.47) | 96.57 (89.80, 109.66) | < 0.0001 | 72.70 (63.47, 80.93) | 80.45 (69.46, 89.27) | 0.0537 |
| HDL1-PL | 19.04 (16.74, 22.11) | 31.79 (22.25, 39.44) | < 0.0001 | 18.38 (14.18, 20.57) | 20.77 (17.18, 26.47) | 0.0217 |
| HDL2-PL | 12.98 (11.66, 14.46) | 16.55 (14.36, 20.15) | < 0.0001 | 12.01 (10.23, 13.84) | 14.17 (11.29, 16.84) | 0.0294 |
| HDL3-PL | 17.99 (16.12, 20.19) | 20.30 (18.27, 21.72) | 0.0050 | 16.57 (15.23, 17.92) | 18.38 (15.41, 19.81) | 0.1489 |
| HDL4-PL | 30.04 (26.35, 33.51) | 29.46 (26.19, 32.64) | 0.4584 | 26.64 (22.58, 30.71) | 26.23 (24.08, 30.64) | 0.6508 |
| HDL-apoA-I | 159.24 (147.25, 171.76) | 181.45 (167.49, 192.62) | 0.0003 | 148.31 (134.79, 164.49) | 152.44 (142.31, 173.08) | 0.0643 |
| HDL1-apoA-I | 23.55 (19.48, 27.90) | 41.00 (27.07, 53.20) | < 0.0001 | 22.15 (17.59, 27.38) | 26.67 (20.94, 33.67) | 0.0284 |

| Variable (mg/dL) | HV | | | MS | | |
|------------------|---------------------------|----------------------------|---------------|---------------------------|----------------------------|---------|
| | Low adiponectin (N=33) | High adiponectin (N=32) | p-value | Low adiponectin (N=33) | High adiponectin (N=32) | p-value |
| HDL2-apoA-I | 18.04 (16.56, 19.81) | 22.64 (19.47, 25.75) | 0.0001 | 17.24 (15.14, 18.83) | 18.38 (15.93, 21.73) | 0.1939 |
| HDL3-apoA-I | 28.76 (27.23, 33.09) | 32.58 (29.62, 35.43) | 0.0113 | 27.22 (24.66, 31.10) | 30.27 (26.00, 33.36) | 0.1123 |
| HDL4-apoA-I | 86.74 (73.91, 92.49) | 79.49 (69.91, 88.35) | 0.1010 | 73.68 (68.33, 83.94) | 77.01 (70.09, 87.02) | 0.4388 |
| HDL-apoA-II | 36.22 (32.78, 39.60) | 35.31 (33.68, 38.33) | 0.4466 | 33.77 (30.77, 36.85) | 34.06 (31.61, 38.53) | 0.6180 |
| HDL1-apoA-II | 2.36 (1.88, 2.81) | 3.85 (2.35, 4.95) | 0.0008 | 2.01 (1.53, 2.41) | 2.27 (1.82, 3.28) | 0.2054 |
| HDL2-apoA-II | 3.91 (3.49, 4.20) | 4.34 (3.62, 4.84) | 0.0261 | 3.51 (2.76, 4.20) | 3.80 (3.01, 4.72) | 0.5593 |
| HDL3-apoA-II | 7.48 (6.96, 8.20) | 7.21 (6.84, 7.86) | 0.2008 | 7.08 (6.26, 8.19) | 7.38 (6.44, 8.73) | 0.5288 |
| HDL4-apoA-II | 22.38 (18.96, 24.56) | 19.00 (16.97, 22.14) | 0.0057 | 19.23 (17.35, 22.50) | 19.08 (16.95, 21.72) | 0.6746 |

Data are presented as median (q1, q3). Differences between HVs and MS patients with low and high adiponectin were tested using the Mann-Whitney U test. Adiponectin levels in HV and MS below the median (15.1 µg/mL and 13.0 µg/mL, respectively) were defined as low and those ≥15.1 µg/mL and ≥13.0 µg/mL, respectively, as high adiponectin. *p*-values < 0.0005 are considered statistically significant after a Bonferroni correction for multiple testing and are depicted in bold. ApoA-I, apolipoprotein A-I; apoA-II, apolipoprotein A-II; apoB, apolipoprotein B; BMI, body mass index; C, cholesterol; FC, free cholesterol; HV, healthy volunteer; HDL, high-density lipoprotein; IDL, intermediate-density lipoprotein; LDL, low-density lipoprotein; MS, metabolic syndrome patient; PL, phospholipid; *r*, Spearman's correlation coefficient; TG, triglyceride; VLDL, very low-density lipoprotein.