

**YMTHE, Volume 26**

## **Supplemental Information**

### **Exosomes from Endothelial Progenitor Cells**

### **Improve the Outcome of a Murine Model of Sepsis**

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**Table S1 Top 160 MicroRNAs in EPC-exosomes by Next Generation Sequencing**

| <b>Rank</b> | <b>miRNA</b>    | <b>UMIs</b> | <b>Rank</b> | <b>miRNA</b>    | <b>UMIs</b> |
|-------------|-----------------|-------------|-------------|-----------------|-------------|
| 1           | hsa-miR-122-5p  | 545004.67   | 41          | hsa-let-7f-5p   | 5938.00     |
| 2           | hsa-miR-126-3p  | 510846.67   | 42          | hsa-miR-451a    | 5593.00     |
| 3           | hsa-miR-126-5p  | 213417.00   | 43          | hsa-let-7a-5p   | 5451.00     |
| 4           | hsa-miR-21-5p   | 151090.33   | 44          | hsa-miR-29c-3p  | 5315.00     |
| 5           | hsa-miR-16-5p   | 105002.67   | 45          | hsa-miR-369-3p  | 5101.00     |
| 6           | hsa-miR-29a-3p  | 48160.00    | 46          | hsa-miR-320a    | 5082.33     |
| 7           | hsa-miR-27a-3p  | 38231.00    | 47          | hsa-miR-101-3p  | 5019.00     |
| 8           | hsa-miR-30a-5p  | 36556.33    | 48          | hsa-miR-222-3p  | 4870.33     |
| 9           | hsa-miR-221-3p  | 32306.33    | 49          | hsa-miR-199b-3p | 4746.33     |
| 10          | hsa-miR-25-3p   | 29207.67    | 50          | hsa-miR-320c    | 4725.67     |
| 11          | hsa-miR-23a-3p  | 27513.67    | 51          | hsa-miR-30e-5p  | 4561.33     |
| 12          | hsa-let-7i-5p   | 25748.67    | 52          | hsa-miR-30d-5p  | 4440.67     |
| 13          | hsa-miR-151a-3p | 24980.67    | 53          | hsa-miR-134-5p  | 4393.33     |
| 14          | hsa-miR-93-5p   | 23405.00    | 54          | hsa-miR-130a-3p | 3996.67     |
| 15          | hsa-miR-125b-5p | 22758.67    | 55          | hsa-miR-361-5p  | 3984.00     |
| 16          | hsa-miR-24-3p   | 17827.33    | 56          | hsa-miR-26a-5p  | 3925.67     |
| 17          | hsa-let-7b-5p   | 17188.00    | 57          | hsa-miR-660-5p  | 3841.67     |
| 18          | hsa-miR-10b-5p  | 15044.33    | 58          | hsa-miR-186-5p  | 3566.00     |
| 19          | hsa-miR-92a-3p  | 14688.67    | 59          | hsa-let-7c-5p   | 3471.33     |
| 20          | hsa-miR-199a-3p | 14003.67    | 60          | hsa-miR-17-5p   | 3362.67     |
| 21          | hsa-miR-432-5p  | 11401.67    | 61          | hsa-miR-217     | 3243.67     |
| 22          | hsa-miR-191-5p  | 11082.33    | 62          | hsa-miR-148b-3p | 3232.00     |
| 23          | hsa-miR-148a-3p | 10809.33    | 63          | hsa-miR-335-5p  | 3187.33     |
| 24          | hsa-miR-27b-3p  | 10436.33    | 64          | hsa-miR-31-5p   | 3115.00     |
| 25          | hsa-miR-22-3p   | 10289.00    | 65          | hsa-miR-424-5p  | 2951.00     |
| 26          | hsa-miR-100-5p  | 10191.00    | 66          | hsa-miR-192-5p  | 2935.00     |
| 27          | hsa-miR-146a-5p | 10177.00    | 67          | hsa-miR-99a-5p  | 2903.33     |
| 28          | hsa-miR-10a-5p  | 9736.33     | 68          | hsa-miR-20a-5p  | 2872.67     |
| 29          | hsa-miR-127-3p  | 9203.67     | 69          | hsa-miR-181b-5p | 2847.67     |
| 30          | hsa-miR-423-5p  | 8895.00     | 70          | hsa-miR-103a-3p | 2821.00     |
| 31          | hsa-miR-409-3p  | 8318.33     | 71          | hsa-miR-125a-5p | 2815.67     |
| 32          | hsa-miR-155-5p  | 7925.33     | 72          | hsa-miR-378a-3p | 2739.33     |
| 33          | hsa-miR-34a-5p  | 7663.33     | 73          | hsa-miR-494-3p  | 2666.00     |
| 34          | hsa-miR-19b-3p  | 7303.00     | 74          | hsa-miR-510-3p  | 2639.67     |
| 35          | hsa-miR-28-3p   | 6625.33     | 75          | hsa-miR-145-5p  | 2587.67     |
| 36          | hsa-miR-152-3p  | 6556.00     | 76          | hsa-miR-654-3p  | 2553.67     |
| 37          | hsa-miR-382-5p  | 6195.33     | 77          | hsa-miR-142-5p  | 2518.67     |
| 38          | hsa-miR-133a-3p | 6026.67     | 78          | hsa-miR-140-3p  | 2450.00     |
| 39          | hsa-miR-128-3p  | 5991.67     | 79          | hsa-miR-30c-5p  | 2445.33     |
| 40          | hsa-miR-380-3p  | 5963.00     | 80          | hsa-miR-381-3p  | 2433.00     |

| <b>Rank</b> | <b>miRNA</b>         | <b>UMIs</b> | <b>Rank</b> | <b>miRNA</b>    | <b>UMIs</b> |
|-------------|----------------------|-------------|-------------|-----------------|-------------|
| 81          | hsa-miR-26b-5p       | 2432.67     | 121         | hsa-miR-29b-3p  | 1001.00     |
| 82          | hsa-miR-365b-3p      | 2374.67     | 122         | hsa-miR-19a-3p  | 996.67      |
| 83          | hsa-miR-15a-5p       | 2353.33     | 123         | hsa-miR-889-3p  | 974.00      |
| 84          | hsa-miR-1246         | 2319.67     | 124         | hsa-let-7d-3p   | 954.33      |
| 85          | hsa-miR-130b-3p      | 2306.00     | 125         | hsa-miR-382-3p  | 948.00      |
| 86          | hsa-miR-486-5p       | 2267.00     | 126         | hsa-miR-10a-3p  | 875.00      |
| 87          | hsa-miR-7-5p         | 2214.33     | 127         | hsa-miR-154-5p  | 852.33      |
| 88          | hsa-miR-376a-3p      | 2148.67     | 128         | hsa-miR-214-3p  | 852.00      |
| 89          | hsa-let-7e-5p        | 2070.00     | 129         | hsa-miR-142-3p  | 821.67      |
| 90          | hsa-miR-532-5p       | 2062.00     | 130         | hsa-miR-299-5p  | 771.67      |
| 91          | hsa-miR-181a-5p      | 1996.00     | 131         | hsa-miR-487b-3p | 766.33      |
| 92          | hsa-miR-30a-3p       | 1855.00     | 132         | hsa-miR-499a-5p | 747.00      |
| 93          | hsa-miR-136-3p       | 1853.00     | 133         | hsa-miR-485-3p  | 713.33      |
| 94          | hsa-miR-143-3p       | 1801.67     | 134         | hsa-miR-337-5p  | 684.67      |
| 95          | hsa-miR-185-5p       | 1798.33     | 135         | hsa-miR-206     | 678.33      |
| 96          | hsa-miR-15b-5p       | 1778.67     | 136         | hsa-miR-365a-3p | 676.33      |
| 97          | hsa-miR-376c-3p      | 1723.00     | 137         | hsa-miR-425-5p  | 658.00      |
| 98          | hsa-miR-196b-5p      | 1707.33     | 138         | hsa-miR-345-5p  | 655.00      |
| 99          | hsa-miR-320b         | 1675.67     | 139         | hsa-miR-374a-5p | 637.00      |
| 100         | hsa-miR-99b-5p       | 1653.67     | 140         | hsa-miR-584-5p  | 631.33      |
| 101         | hsa-miR-574-3p       | 1617.67     | 141         | hsa-miR-197-3p  | 626.67      |
| 102         | hsa-miR-379-5p       | 1580.33     | 142         | hsa-miR-18a-5p  | 623.33      |
| 103         | hsa-miR-107          | 1538.00     | 143         | hsa-miR-337-3p  | 604.00      |
| 104         | hsa-miR-216a-5p      | 1404.33     | 144         | hsa-miR-361-3p  | 591.67      |
| 105         | hsa-miR-224-5p       | 1346.33     | 145         | hsa-miR-369-5p  | 557.00      |
| 106         | hsa-miR-137          | 1321.33     | 146         | hsa-miR-378c    | 533.33      |
| 107         | hsa-miR-6817-3p      | 1316.33     | 147         | hsa-miR-3976    | 529.00      |
| 108         | hsa-miR-345-3p       | 1256.00     | 148         | hsa-miR-455-5p  | 521.33      |
| 109         | hsa-miR-503-5p       | 1223.67     | 149         | hsa-miR-193a-5p | 516.00      |
| 110         | hsa-miR-323a-3p      | 1196.00     | 150         | hsa-miR-10b-3p  | 513.33      |
| 111         | hsa-miR-629-5p       | 1191.00     | 151         | hsa-miR-625-3p  | 511.33      |
| 112         | hsa-miR-411-5p       | 1170.67     | 152         | hsa-miR-99b-3p  | 498.67      |
| 113         | hsa-miR-1307-3p      | 1167.33     | 153         | hsa-miR-21-3p   | 487.00      |
| 114         | hsa-let-7g-5p        | 1161.67     | 154         | hsa-miR-421     | 485.00      |
| 115         | hsa-miR-423-3p       | 1160.67     | 155         | hsa-miR-218-5p  | 483.00      |
| 116         | hsa-miR-574-5p       | 1156.33     | 156         | hsa-miR-23b-3p  | 481.33      |
| 117         | hsa-miR-194-5p       | 1148.33     | 157         | hsa-miR-484     | 480.00      |
| 118         | hsa-miR-339-5p       | 1102.00     | 158         | hsa-miR-450b-5p | 479.00      |
| 119         | hsa-miR-151b/151a-5p | 1067.33     | 159         | hsa-miR-320d    | 471.00      |
| 120         | hsa-miR-342-3p       | 1045.00     | 160         | hsa-miR-199a-5p | 454.00      |

**Table S2 Top 160 microRNAs in NIH3T3-exosome by Next Generation Sequencing**

| <b>Rank</b> | <b>miRNA</b>      | <b>UMIs</b> | <b>Rank</b> | <b>miRNA</b>    | <b>UMIs</b> |
|-------------|-------------------|-------------|-------------|-----------------|-------------|
| 1           | mmu-miR-199a/b-3p | 216507.33   | 41          | mmu-miR-409-3p  | 7759.33     |
| 2           | mmu-miR-122-5p    | 164033.67   | 42          | mmu-miR-19b-3p  | 7736.33     |
| 3           | mmu-miR-16-5p     | 144452.33   | 43          | mmu-miR-26b-5p  | 7536.67     |
| 4           | mmu-miR-143-3p    | 132905.67   | 44          | mmu-miR-22-3p   | 7293.33     |
| 5           | mmu-let-7i-5p     | 111383.00   | 45          | mmu-miR-130a-3p | 7253.00     |
| 6           | mmu-miR-125b-5p   | 98648.33    | 46          | mmu-miR-92a-3p  | 6308.33     |
| 7           | mmu-miR-21a-5p    | 85768.00    | 47          | mmu-miR-345-3p  | 6305.67     |
| 8           | mmu-miR-29a-3p    | 77377.33    | 48          | mmu-miR-206-3p  | 6245.67     |
| 9           | mmu-let-7b-5p     | 53210.00    | 49          | mmu-miR-101b-3p | 6087.33     |
| 10          | mmu-let-7c-5p     | 49610.33    | 50          | mmu-miR-29b-3p  | 6077.67     |
| 11          | mmu-let-7f-5p     | 45343.00    | 51          | mmu-miR-183-5p  | 5802.33     |
| 12          | mmu-miR-25-3p     | 32673.67    | 52          | mmu-miR-411-5p  | 5799.33     |
| 13          | mmu-miR-125a-5p   | 29558.67    | 53          | mmu-miR-300-3p  | 5637.33     |
| 14          | mmu-let-7e-5p     | 28015.00    | 54          | mmu-miR-378a-3p | 5631.33     |
| 15          | mmu-miR-27a-3p    | 27760.33    | 55          | mmu-miR-127-3p  | 5150.00     |
| 16          | mmu-miR-23a-3p    | 26542.33    | 56          | mmu-miR-30c-5p  | 5097.00     |
| 17          | mmu-miR-93-5p     | 26371.00    | 57          | mmu-miR-100-5p  | 4429.00     |
| 18          | mmu-miR-382-5p    | 24404.67    | 58          | mmu-miR-103-3p  | 4388.67     |
| 19          | mmu-miR-31-5p     | 23632.33    | 59          | mmu-miR-186-5p  | 4236.67     |
| 20          | mmu-miR-99b-5p    | 22320.33    | 60          | mmu-miR-28a-3p  | 4210.67     |
| 21          | mmu-let-7a-5p     | 19912.67    | 61          | mmu-miR-146b-5p | 4210.33     |
| 22          | mmu-miR-182-5p    | 19381.33    | 62          | mmu-miR-214-3p  | 3738.67     |
| 23          | mmu-miR-152-3p    | 18523.00    | 63          | mmu-miR-34a-5p  | 3665.00     |
| 24          | mmu-miR-140-3p    | 17232.33    | 64          | mmu-miR-29c-3p  | 3629.00     |
| 25          | mmu-miR-30a-5p    | 16717.67    | 65          | mmu-miR-342-3p  | 3498.67     |
| 26          | mmu-miR-379-5p    | 16020.00    | 66          | mmu-miR-218-5p  | 3390.00     |
| 27          | mmu-miR-7a-5p     | 15534.67    | 67          | mmu-miR-532-5p  | 3344.33     |
| 28          | mmu-miR-30d-5p    | 14889.00    | 68          | mmu-miR-10a-5p  | 3297.33     |
| 29          | mmu-miR-26a-5p    | 13011.00    | 69          | mmu-let-7g-5p   | 3079.00     |
| 30          | mmu-miR-24-3p     | 12524.00    | 70          | mmu-let-7d-5p   | 3052.00     |
| 31          | mmu-miR-221-3p    | 12123.00    | 71          | mmu-miR-9-5p    | 2955.33     |
| 32          | mmu-miR-134-5p    | 11435.67    | 72          | mmu-miR-542-3p  | 2813.67     |
| 33          | mmu-miR-322-5p    | 10853.33    | 73          | mmu-miR-148a-3p | 2783.33     |
| 34          | mmu-miR-30e-5p    | 10087.33    | 74          | mmu-miR-423-5p  | 2753.00     |
| 35          | mmu-miR-10b-5p    | 9751.67     | 75          | mmu-miR-365-3p  | 2739.67     |
| 36          | mmu-miR-541-5p    | 9680.67     | 76          | mmu-miR-320-3p  | 2714.00     |
| 37          | mmu-miR-191-5p    | 9524.00     | 77          | mmu-miR-17-5p   | 2640.67     |
| 38          | mmu-miR-145a-5p   | 9219.67     | 78          | mmu-miR-126a-3p | 2635.67     |
| 39          | mmu-miR-27b-3p    | 8727.33     | 79          | mmu-miR-154-5p  | 2463.67     |
| 40          | mmu-miR-199a-5p   | 8622.33     | 80          | mmu-miR-101a-3p | 2324.67     |

| <b>Rank</b> | <b>miRNA</b>      | <b>UMIs</b> | <b>Rank</b> | <b>miRNA</b>         | <b>UMIs</b> |
|-------------|-------------------|-------------|-------------|----------------------|-------------|
| 81          | mmu-miR-494-3p    | 2201.33     | 121         | mmu-miR-30e-3p       | 965.00      |
| 82          | mmu-miR-15b-5p    | 2198.67     | 122         | mmu-miR-107-3p       | 955.67      |
| 83          | mmu-let-7d-3p     | 2197.00     | 123         | mmu-miR-142a-3p      | 951.00      |
| 84          | mmu-miR-30b-5p    | 2152.00     | 124         | mmu-miR-185-5p       | 945.00      |
| 85          | mmu-miR-503-5p    | 2139.67     | 125         | mmu-miR-19a-3p       | 940.67      |
| 86          | mmu-miR-148b-3p   | 2104.00     | 126         | mmu-miR-376b-3p      | 940.33      |
| 87          | mmu-miR-299a-3p   | 2080.00     | 127         | mmu-miR-486b-5p      | 897.00      |
| 88          | mmu-miR-155-5p    | 1941.00     | 128         | mmu-miR-31-3p        | 880.67      |
| 89          | mmu-miR-99b-3p    | 1891.00     | 129         | mmu-miR-98-5p        | 868.67      |
| 90          | mmu-miR-351-5p    | 1835.33     | 130         | mmu-miR-744-5p       | 853.00      |
| 91          | mmu-miR-381-3p    | 1824.33     | 131         | mmu-miR-151-3p       | 806.00      |
| 92          | mmu-miR-34c-5p    | 1818.00     | 132         | mmu-miR-126a-5p      | 794.00      |
| 93          | mmu-miR-140-5p    | 1792.00     | 133         | mmu-miR-425-5p       | 739.00      |
| 94          | mmu-miR-30a-3p    | 1719.00     | 134         | mmu-miR-872-3p       | 702.67      |
| 95          | mmu-miR-299b-3p   | 1681.33     | 135         | mmu-miR-15a-5p       | 695.33      |
| 96          | mmu-miR-128-3p    | 1678.67     | 136         | mmu-miR-432          | 689.00      |
| 97          | mmu-miR-222-3p    | 1592.67     | 137         | mmu-miR-485-3p       | 680.00      |
| 98          | mmu-miR-298-5p    | 1576.00     | 138         | mmu-miR-434-5p       | 671.33      |
| 99          | mmu-miR-1839-5p   | 1508.33     | 139         | mmu-miR-671-5p       | 639.00      |
| 100         | mmu-miR-674-5p    | 1473.67     | 140         | mmu-miR-143-5p       | 638.67      |
| 101         | mmu-miR-361-5p    | 1413.33     | 141         | mmu-miR-199b-5p      | 635.00      |
| 102         | mmu-miR-615-3p    | 1372.33     | 142         | mmu-miR-328-3p       | 617.33      |
| 103         | mmu-miR-20a-5p    | 1361.67     | 143         | mmu-miR-181a-5p      | 602.67      |
| 104         | mmu-miR-296-3p    | 1338.00     | 144         | mmu-miR-3074-5p      | 597.00      |
| 105         | mmu-miR-125b-1-3p | 1331.67     | 145         | mmu-miR-421-3p       | 590.33      |
| 106         | mmu-miR-133a-3p   | 1313.67     | 146         | mmu-miR-125a-3p      | 585.33      |
| 107         | mmu-miR-151-5p    | 1294.67     | 147         | mmu-miR-1198-5p      | 581.67      |
| 108         | mmu-miR-872-5p    | 1264.67     | 148         | mmu-let-7a-1/7c-2-3p | 565.33      |
| 109         | mmu-miR-192-5p    | 1247.67     | 149         | mmu-miR-34b-3p       | 564.00      |
| 110         | mmu-miR-301a-3p   | 1225.67     | 150         | mmu-miR-299a-5p      | 562.33      |
| 111         | mmu-miR-23b-3p    | 1216.67     | 151         | mmu-miR-106b-3p      | 552.67      |
| 112         | mmu-miR-350-3p    | 1183.67     | 152         | mmu-miR-434-3p       | 540.33      |
| 113         | mmu-miR-210-3p    | 1127.00     | 153         | mmu-miR-329-5p       | 538.33      |
| 114         | mmu-miR-369-3p    | 1091.33     | 154         | mmu-miR-376a-3p      | 534.00      |
| 115         | mmu-miR-130b-3p   | 1037.00     | 155         | mmu-miR-129-5p       | 530.33      |
| 116         | mmu-miR-451a      | 1026.00     | 156         | mmu-miR-335-5p       | 518.00      |
| 117         | mmu-miR-574-5p    | 1006.33     | 157         | mmu-miR-15b-3p       | 502.33      |
| 118         | mmu-miR-196a-5p   | 1006.00     | 158         | mmu-miR-1983         | 500.33      |
| 119         | mmu-miR-574-3p    | 976.67      | 159         | mmu-miR-652-3p       | 496.33      |
| 120         | mmu-miR-99a-5p    | 973.00      | 160         | mmu-let-7b-3p        | 483.33      |