**MicroRNA Profiling of Plasma Extracellular Vesicles in Bicuspid Aortopathy**

**Short title: Plasma EV-miRNAs in BAV aortopathy**

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**Table S1. The top 20 differentially expressed miRNAs**

|  |  |  |  |
| --- | --- | --- | --- |
| ID | logFC | FDR | Style |
| hsa-miR-548ar-3p | 5.754285 | 8.24E-10 | up |
| hsa-miR-628-3p | 5.546273 | 5.03E-36 | up |
| hsa-miR-454-5p | 5.307869 | 3.70E-19 | up |
| hsa-miR-3143 | 4.90002 | 1.75E-13 | up |
| hsa-miR-625-3p | 4.891198 | 1.32E-20 | up |
| hsa-miR-1278 | 4.849467 | 5.62E-16 | up |
| hsa-miR-128-3p | 4.82176 | 1.82E-54 | up |
| hsa-miR-335-3p | 4.818744 | 4.25E-26 | up |
| hsa-miR-625-5p | 4.764415 | 2.35E-20 | up |
| hsa-miR-223-5p | 4.494151 | 1.91E-28 | up |
| hsa-miR-6796-5p | -5.47925 | 1.78E-20 | down |
| hsa-miR-6883-5p | -5.54886 | 9.54E-23 | down |
| hsa-miR-1292-3p | -5.57041 | 2.95E-15 | down |
| hsa-miR-1273e | -5.67123 | 1.44E-20 | down |
| hsa-miR-6872-3p | -5.89236 | 3.08E-18 | down |
| hsa-miR-7156-5p | -5.8997 | 1.55E-12 | down |
| hsa-miR-1909-3p | -5.9451 | 7.23E-18 | down |
| hsa-miR-3192-3p | -6.09518 | 2.92E-11 | down |
| hsa-miR-6818-5p | -6.10786 | 2.83E-22 | down |
| hsa-miR-3611 | -6.38236 | 8.13E-20 | down |

**Table S2. Clinical Characteristics of the aortic tissues from patients.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Characteristic** | **TAV-non** **(n=3)** | **BAV-non (n=3)** | **BAV-dilated (n=3)** |
| **Male, %** | 67% | 33% | 67% |
| **Age, years** | 59.33±3.09 | 57.00±6.53 | 53.33±5.19 |
| **Ascending aortic diameter, mm** | 31.67±1.25 | 43.33±0.94 | 57.00±4.32 |
| **Hypertension, %** | 67% | 33% | 67% |
| **Diabetes, %** | 33% | 0% | 0% |
| **Hyperlipidemia, %** | 0% | 0% | 0% |
| **Sinus dilation, %** | 0% | 0% | 67% |
| **Aortic regurgitation (>moderate), %** | 0% | 0% | 33% |
| **Aortic stenosis** **(>moderate), %** | 0% | 100% | 100% |
| **Aortic stenosis + regurgitation, %** | 0% | 0% | 33% |
| **Aortic valve gradient,** **mean, mm Hg** | N/A | 55.67±10.27 | 26.00±8.60 |
| **Aortic flow jet, m/s** | N/A | 4.70±0.54 | 3.33±0.37 |



**Figure S1.** Results of RNA sequencing of Hierarchical clustering in BAV-dilated and BAV-non.



**Figure S2.** Go analysis of miR324 by miRWalk.



**Figure S3.** The expression of proteins associated with aorta aneurysm under different grouping criteria.



**Figure S4.** KEGG analysis of proteomics between group in T/E-high and T/E-low.