

## Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Results table from DEseq analysis of sperm miRNA

File Name: Supplementary Data 2

Description: Statistics for qRT-PCR validation of sperm and EV RNAsequencing

File Name: Supplementary Data 3

Description: Baseline demographics and assessments including ACE questionnaire and STAI inventory for all subjects in human cohort

File Name: Supplementary Data 4

Description: Data for raw caput epididymal histone mass spectrometry data

File Name: Supplementary Data 5

Description: Results table from DEseq analysis of DC2 EV miRNA

File Name: Supplementary Data 6

Description: Data for raw DC2 EV protein mass spectrometry data

File Name: Supplementary Data 7

Description: GO terms for Figure 3e, E12.5 offspring brains from ICSI of sperm incubated with EVs collected from DC2 cells following treatment

File Name: Supplementary Data 8

Description: Complete result Data for GO terms in E12.5 offspring brains from ICSI of sperm incubated with EVs collected from DC2 cells following treatment

File Name: Supplementary Data 9

Description: Complete result Data for GO terms in E12.5 offspring placenta from ICSI of sperm incubated with EVs collected from DC2 cells following treatment

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