Figure S1

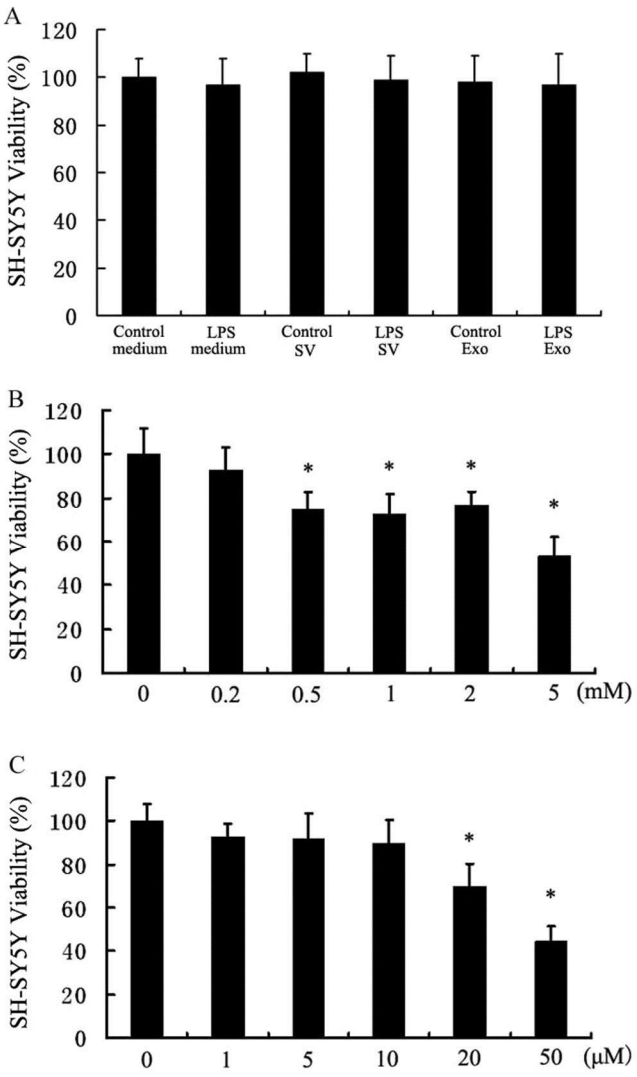

Figure S1 Assessment of cell viability in SH-SY5Y cells with different treatments. SH-SY5Y cell viability assessed by cck-8 assay after treatment **(A)** with conditioned medium or different types of microvesicles; **(B)** with different concentrations of MPP+, * $p<0.05$; **(C)** with different concentrations of 6-OHDA, * $p<0.05$.

Figure S2

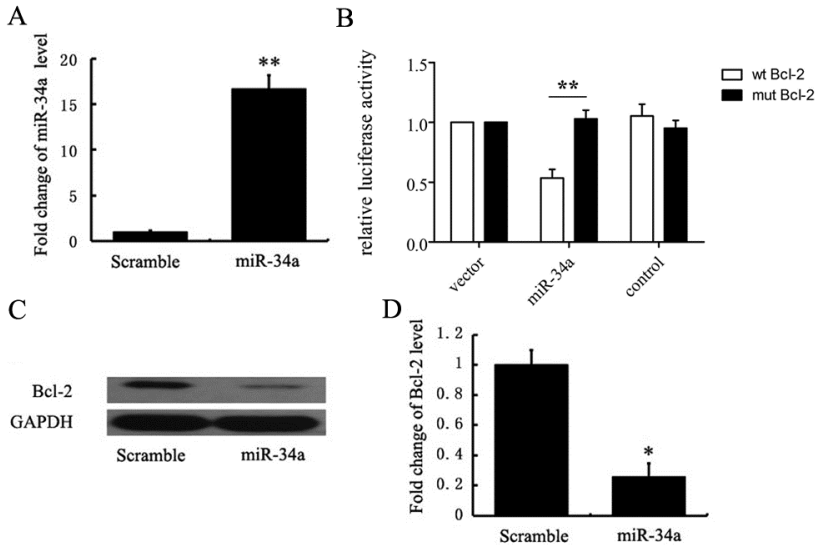

Figure S2 Overexpression of miR-34a in SH-SY5Y cells down-regulates Bcl-2 expression level.

(A) QPCR analysis showed that the level of miR-34a was significantly increased in SH-SY5Y cells after transfection, ** $p<0.01$; **(B)** Luciferase activity was measured 24 hours after transfecting SH-SY5Y cells. Reporter plasmids with the wild type (wt) or mutated (mut) 3' UTR of Bcl-2 were transfected either alone (vector) or with miR-34a mimics (miR-34a) or scrambled control (control), ** $p<0.01$; **(C)**Western-blot showed that the level of miR-34a-targeted protein Bcl-2 was decreased in SH-SY5Y cells overexpressing miR-34a; **(D)** Quantification of Bcl-2 levels in SH-SY5Y cells overexpressing miR-34a as compared with control cells, * $p<0.05$.

Figure S3

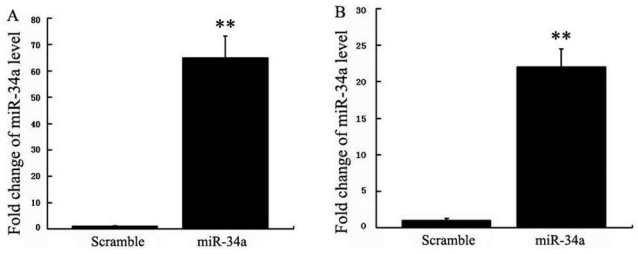

Figure S3 Overexpression of miR-34a in U-87 MG cells leads to the increase of miR-34a level in SVs released by cells.

(A) QPCR analysis showed that the level of miR-34a was increased in U-87 MG cells after transfection of miR-34a,** $p<0.01$; **(B)** QPCR analysis showed that the level of miR-34a was also significantly increased in U-87 MG cell derived SVs after transfection of miR-34a into U-87 MG cells, ** $p<0.01$.

Figure S4

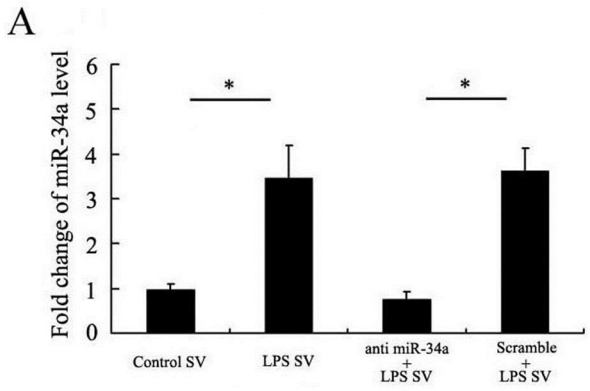

Figure S4 QPCR analysis of miR-34a levels in different groups of SVs derived from primary astrocytes, * $p<0.05$.

Table S1 Microarray analysis of miRNA expression in control SV and LPS SV

No.	miRNA	Control SV	LPS SV	**No.**	miRNA	Control SV	LPS SV
1	miR-34a	1	2.86	**11**	miR-708-3p	1	0.45
2	miR-92a	1	2.20	**12**	miR-377	1	0.41
3	miR-296-3p	1	2.56	**13**	miR-196b-3p	1	0.51
4	miR-18a	1	2.47	**14**	miR-143-5p	1	0.50
5	let-7d-3p	1	2.24	**15**	miR-455-5p	1	0.41
6	miR-214	1	2.44	**16**	miR-188-3p	1	0.45
7	miR-216a	1	2.79	**17**	miR-761	1	0.45
8	miR-200c-5p	1	2.00	**18**	miR-3074-3p	1	0.29
9	miR-19a	1	2.23	**19**	miR-33a	1	0.29
10	miR-194-3p	1	3.02	**20**	miR-653	1	0.30