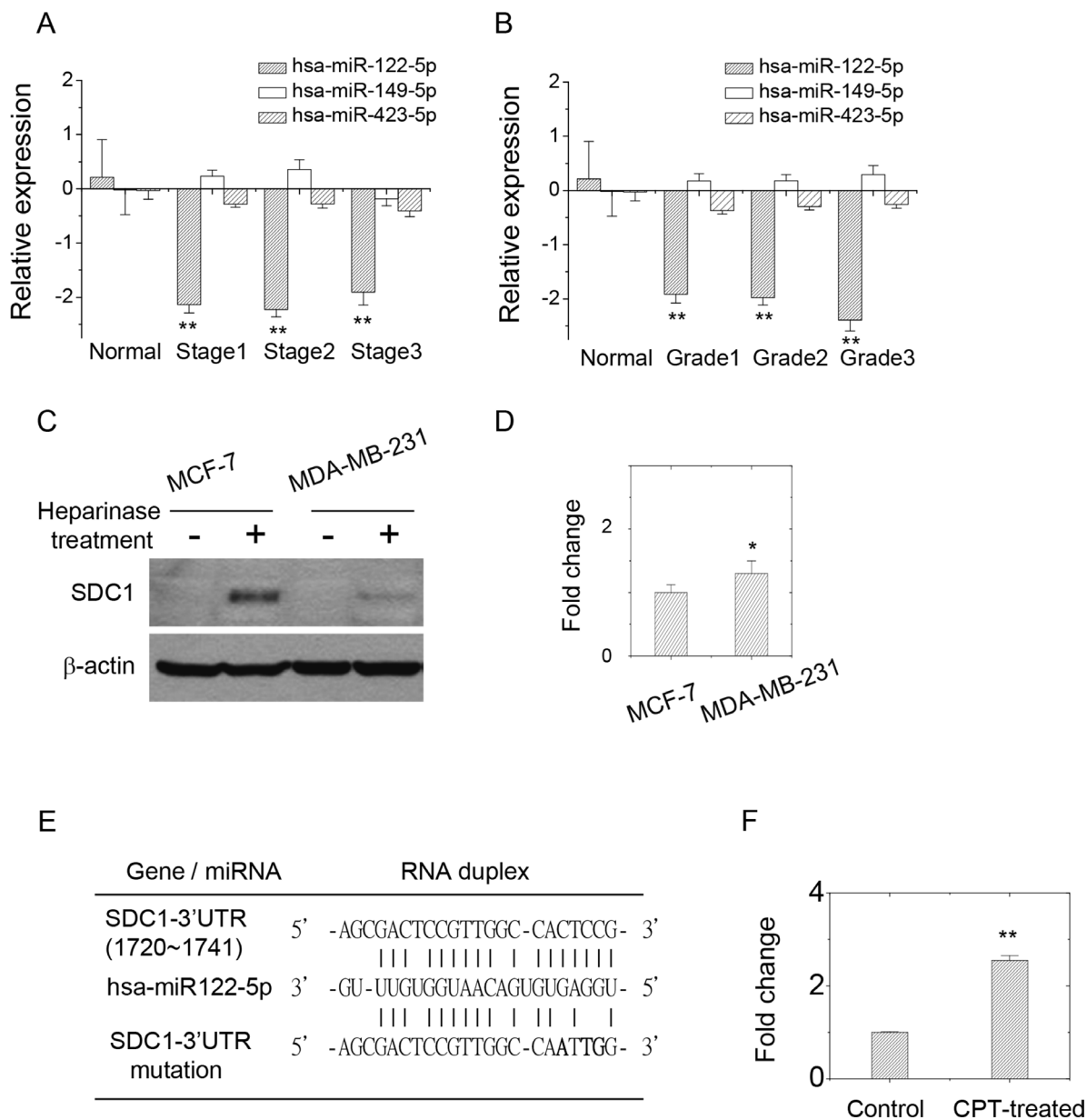
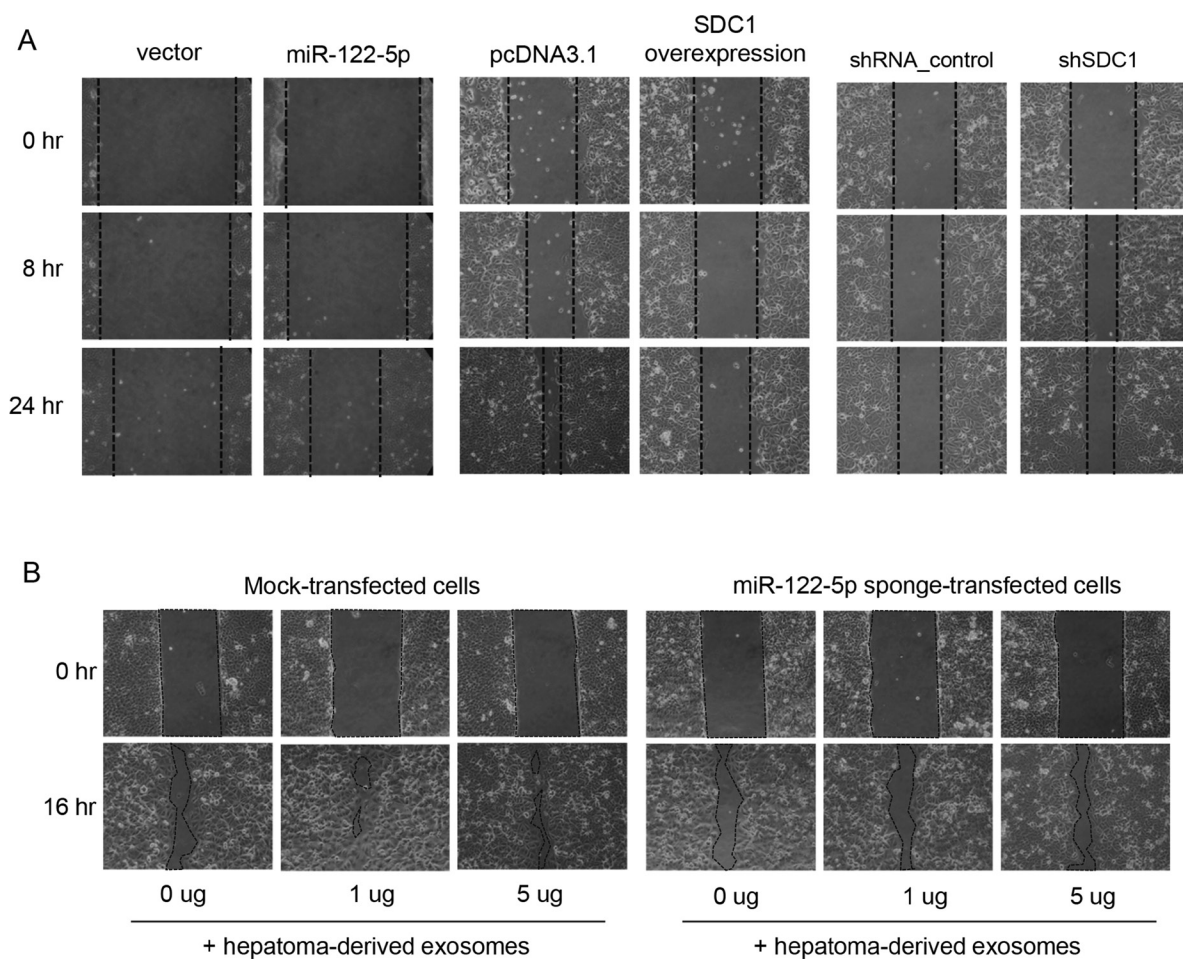


Mining of potential microRNAs with clinical correlation - regulation of syndecan-1 expression by miR-122-5p altered mobility of breast cancer cells and possible correlation with liver injury

SUPPLEMENTARY MATERIALS



Supplementary Figure 1: Extracted data in GSE7842 for expression of miR-122-5p under (A) different patient stages and (B) tumor grades. Data were mean \pm S.E. $**p < 0.01$. (C) SDC1 protein expression in MCF-7 cells (ER⁺PR⁺; luminal type) was higher than MDA-MB-231 cells (triple negative; basal type). (D) The miR-122-5p expression level was relatively higher in MDA-MB-231 cell than in MCF-7 cells. Data were mean \pm S.E. $**p < 0.05$. (E) RNA duplex for hsa-miR-122-5p pairing with SDC1-3'UTR or SDC1-3'UTR mutated at seed region. (F) The miR-122-5p expression level in hepatoma cells was increased upon treatment of chemoagent camptothecin (CPT; in 10 μ M) as quantified by qPCR. Data were mean \pm S.E. $**p < 0.05$.



Supplementary Figure 2: (A) Effect of transfection of miRNA-122-5p, SDC1 construct, or shRNA against SDC1 on MCF7 cell mobility as observed by wound healing assay. (B) Effect of treatment of hepatoma-derived exosome at MCF7 cell mobility with or without miR-122-5p-specific inhibitor (miRNA sponge) as observed by wound healing assay.

Supplementary Table 1: Primers used for construction of miR-122-5p overexpression plasmid, SDC1 overexpression plasmid, SDC1-3'UTR, SDC1-3'UTR mutation, miR-122-5p sponge, and PCR analysis of miR-122 expression

Primer	Sequence
Forward primer for miR-122-5p cloning	5'-cctgtgatagatctccttagcagagctgtggagtgtgacaatggtgttgtctaaactcaaacgcc-3'
Reverse primer for miR-122-5p cloning	5'-cctgtgataagcttcctagcagtagctatttagtgtgataatggcgttgatagtttagacacaaac-3'
Forward primer for SDC1 CDS cloning	5'-cctgataagcttatgaggcgcgggcgtctgg-3'
Reverse primer for SDC1 CDS cloning	5'-cctgatctcgagtcaggcatagaattcctctctgttgggg-3'
Forward primer for SDC1 3'UTR cloning	5'-cctgatactagtcgaggagccatgcgcc-3'
Reverse primer for SDC1 3'UTR cloning	5'-cctgataagcttttgcggaaatgacaagtaccg-3'
Forward primer for SDC1 3'UTRmut cloning	5'-cctgatgaattcgaagaccctggcagctcccagac-3'
Reverse primer for SDC1 3'UTRmut cloning	5'-cctgatctcgagaatggaggggaaggacaaagaagatagaga-3'
Forward primer 1 (fp1) in multiplex PCR	5'- aattctatgcctgacgaggagccatg -3'
Forward primer 2 (fp2) in multiplex PCR	5'- aggggttctcgcataggac -3'
RT primer for miRNA assay	5'- gcgagcacagaattaatcagactcactataggtttttttttvn -3'
Forward primer for miR-122-5p PCR	5'- tggagtgtgacaatggtgtttg -3'
Forward primer for miR-423-3p PCR	5'- tgaggggcagagagcgagacttt -3'
Forward primer for U6 RNA PCR	5'- gtgctcgttcggcagcaca -3'
Universal reverse primer for PCR	5'-aattctaaattatctaataataggagatgaattcttatgatattac-3'
Forward primer to clone miR sponge	5'-cctgataagcttcaaacaccaacagacactccaccggcaaacaccaacagacactccaccggcaaacaccaacagacactccacc-3'
Reverse primer to clone miR sponge	5'-cctgatctcgagccgggtgagtgtctgttgggtttgccgggtggagtgtctgttgggtttgccgggtggagtgtctgttgggtt-3'
Forward primer to clone mock sponge	5'-cctgataagcttaagtttccagaaagctaacaccggaagtttccagaaagctaacaccggaagtttccagaaagctaacacc-3'
Reverse primer to clone mock sponge	5'-cctgatctcgagccgggttagctttctgaaaactccgggttagctttctgaaaactccgggttagctttctgaaaactccgggttagctttctgaaaac-3'