Figure legends Supplementary Figures (Melzer et al.)

Supplementary Figure S1:

Transmission electron micrographs of MSC-derived exosome preparation by ultracentrifugation method and subsequent 1.5% formaldehyde / 1.5% glutaraldehyde fixation was performed as described elsewhere [46] and demonstrate a single rounded MSC-derived exosome of approx. 90nm in diameter (lower left panel). The content of MSC-secreted exosomes includes among others proteinous precipitate (indicated by arrows, upper left and right panel). Exosomes isolated from MSC cultures are varying in size between 50 to 200nm (right panel). Bar represents 200nm.

Supplementary Figure S2:

Characterization of HuVECs by FACS analysis using the PE-labeled CD90 and the FITC-labeled CD31 antibodies. A dual PE-/FITC-labeled IgG1 antibody served as control.

Supplementary Figure S3:

The average diameter of exosomes isolated from 2 different HuVEC control cultures (light blue bars) and corresponding 2 HuVEC cultures after treatment with 10µM taxol for 24 h (light red bars) was performed by NTA measurement using the ZetaView PMX120.

Supplementary Figure S4:

The exosome concentration of 2 different HuVEC control cultures (light blue bars) and corresponding 2 HuVEC cultures after treatment with 10µM taxol for 24 h (light red bars) was evaluated by NTA measurement.

<u>Supplementary Figure S5:</u>

In vitro cytotoxicity of different human cancer cell lines including A549 lung cancer (upper panel), SK-OV-3 ovarian cancer (middle panel), and MDA-hyb1 breast cancer (lower panel), was measured by GFP fluoroscan assay. The different cancer cell populations were treated with appropriate dilutions of control exosomes from MSC and HuVECs as indicated (light blue bars), taxol-loaded exosomes from MSC and HuVECs as indicated (light red bars), and taxol substance (0.1nM to 100nM, dark grey bars) for 72h, respectively. Fluorescence values of untreated steady state control cells (control, light gray bars) were set to 1 and cytotoxic effects were calculated as part of the control. Data represent the mean $\pm$ s.d. (n>=3).