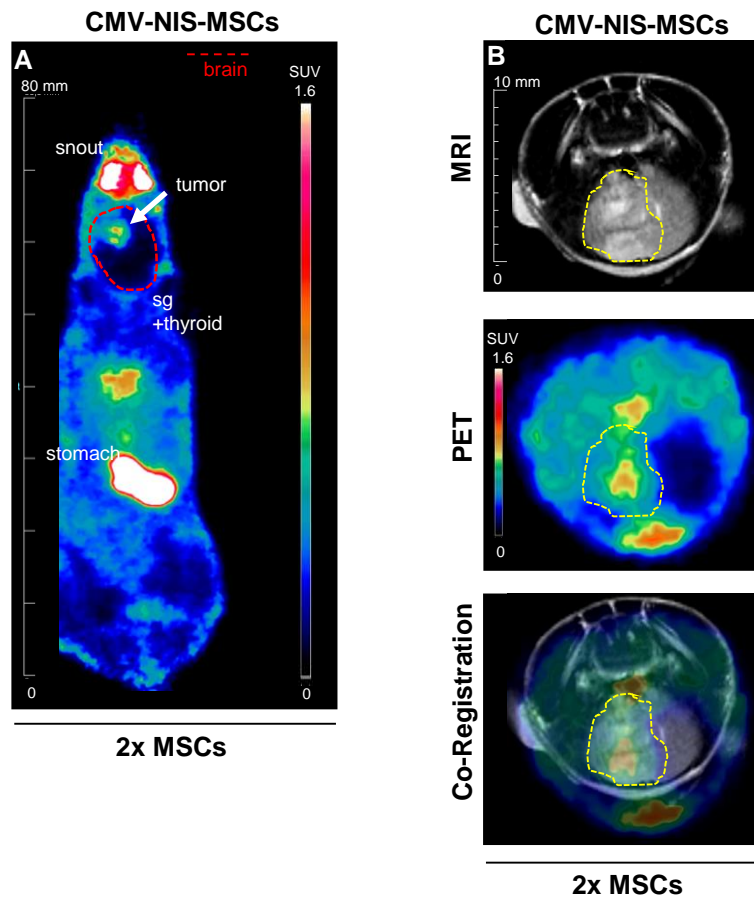


**Supplemental information**

**Interleukin-6-controlled, mesenchymal stem  
cell-based sodium/iodide symporter gene therapy  
improves survival of glioblastoma-bearing mice**

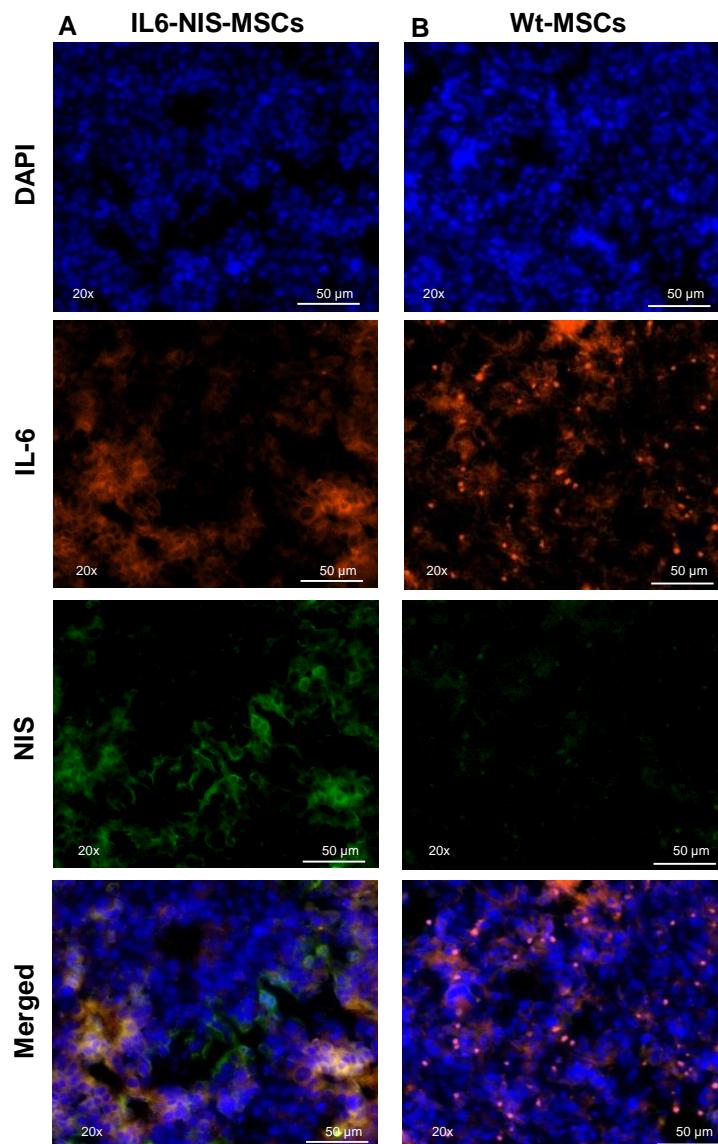
**Carolin Kitzberger, Khuram Shehzad, Volker Morath, Rebekka Spellerberg, Julius Ranke, Katja Steiger, Roland E. Kälin, Gabriele Multhoff, Matthias Eiber, Franz Schilling, Rainer Glass, Wolfgang A. Weber, Ernst Wagner, Peter J. Nelson, and Christine Spitzweg**

**Figure S1**



**Figure S1:  $^{18}\text{F}$ -TFB uptake of brain tumors is elevated after systemic CMV-NIS-MSCs delivery.** (A) Representative images of  $^{18}\text{F}$ -TFB PET imaging (horizontal planes;  $\text{SUV}_{\text{bw}} = 1.6$ ) are shown 1 h after tracer injection of GBM-bearing mice ( $n=3$ ). Brain area is encircled in red dotted lines and tumor is marked with a white arrow. (B) Exemplary images of co-registration of anatomical MRI and PET imaging of the brain showing tumor-selective tracer accumulation. Tumors are encircled in yellow dotted lines.

**Figure S2**



**Figure S2: *Ex vivo* immunofluorescence analysis of GL261 tumors. (A)** Representative images of co-localization of IL-6 (red) and NIS (green) protein expression in brain tumors after IL-6-NIS-MSC application. Tumors of Wt-MSC mice (B) showed no NIS protein expression despite IL-6 protein expression.