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Supplemental Information

Regional Hyperthermia Enhances Mesenchymal Stem Cell Recruitment to Tumor Stroma: Implications for Mesenchymal Stem Cell-Based Tumor Therapy

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Supplemental Figures

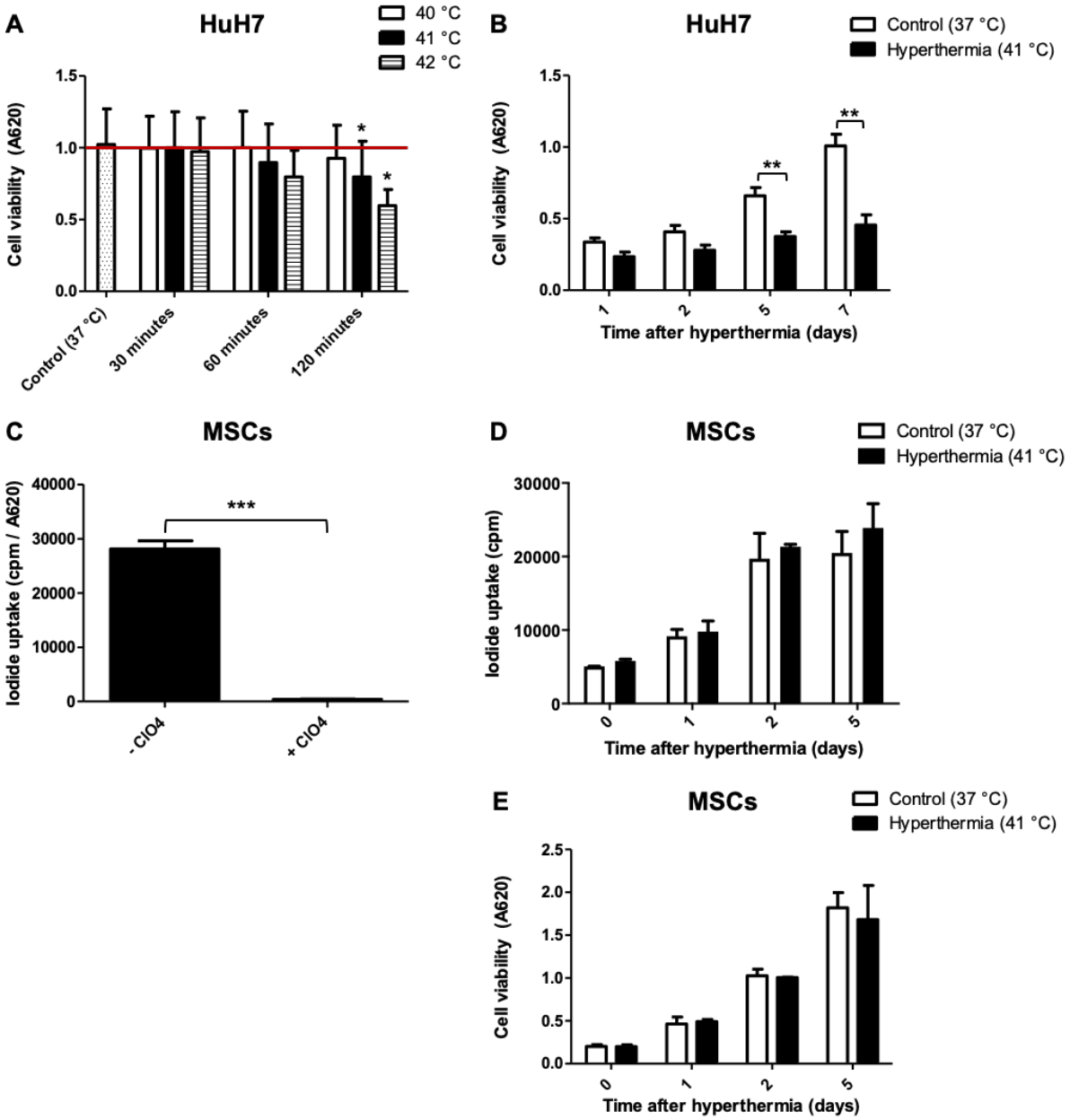

Figure S1: Hyperthermia effects *in vitro*

The effect of hyperthermia on HuH7 cells *in vitro* was analyzed by MTT assay 24 hours after heat treatment in a water bath for 30 to 120 minutes, at temperatures ranging from 40 to 42 °C. The red line represents the cell viability of the 37 °C controls (**A**). Following hyperthermia at 41 °C for 60 minutes, long-term cell viability was analyzed after 1 - 7 days (**B**). *In vitro* iodine uptake of CMV-NIS-MSCs was determined by a ^{125}I uptake assay. Perchlorate was added to demonstrate NIS dependency of the reaction (**C**; $n = 6$). In addition, the effects of hyperthermia on the iodine accumulation by CMV-NIS-MSCs (**D**) and their viability (**E**) was evaluated 0 - 5 days after one hour at 41 °C. All experiments were conducted at least in triplicate and are expressed as mean ± SEM (two-tailed Student's *t* test for comparison of heat-treated to unheated cells; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$).

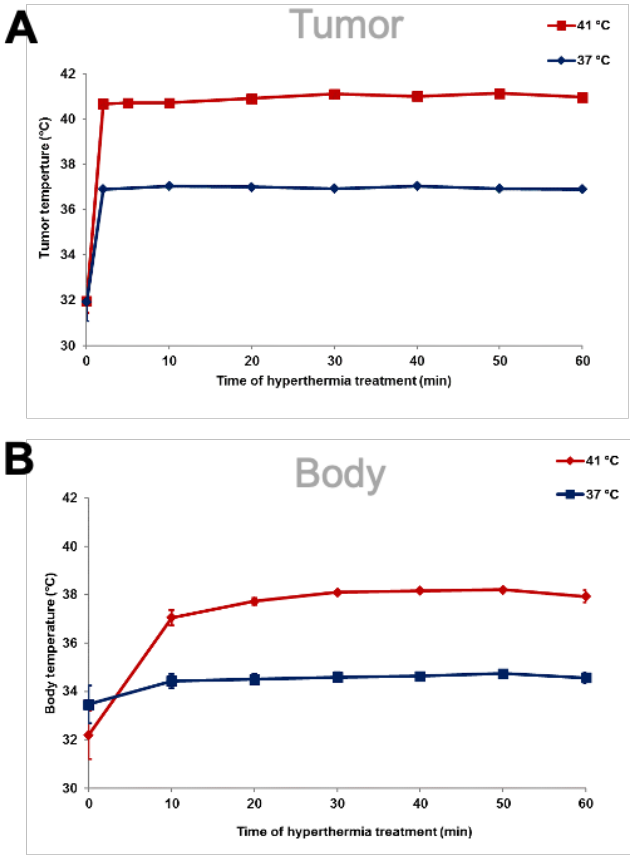

Figure S2: Establishment of *in vivo* heat treatment

In vivo heat treatment establishing experiments were conducted using intratumoral (**A**) and rectal temperature probes (**B**). Tumors were heat-treated either with 41 °C or 37 °C (control) for 1 hour using a water bath ($n = 3$).