

Supplementary Materials for

Anti-inflammatory resveratrol protects mice from early mortality after hematopoietic stem cell transplantation

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Figure S1

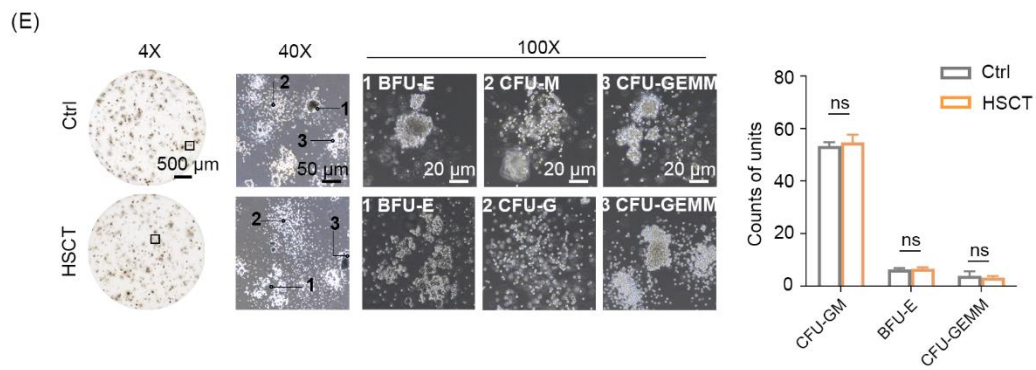
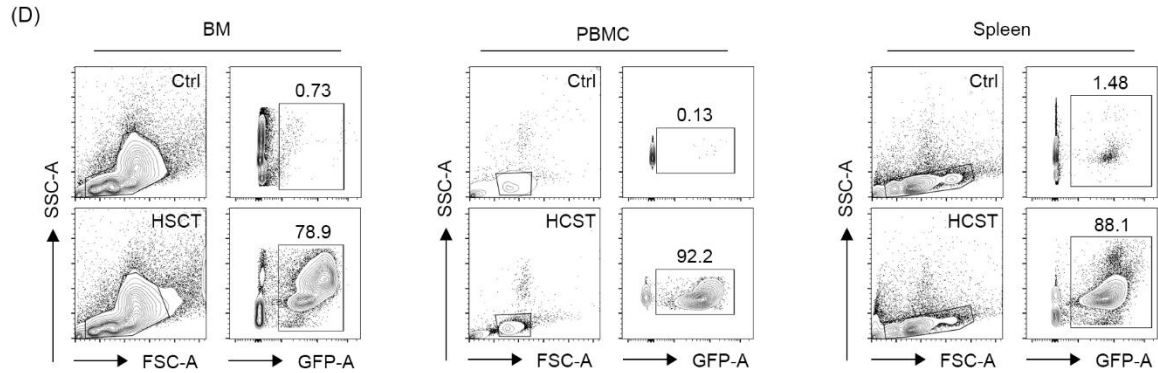
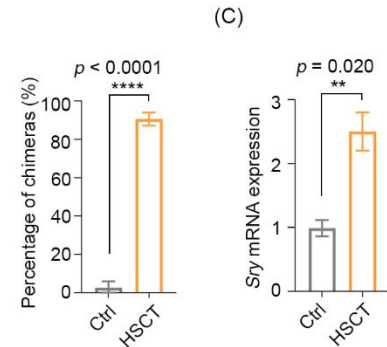
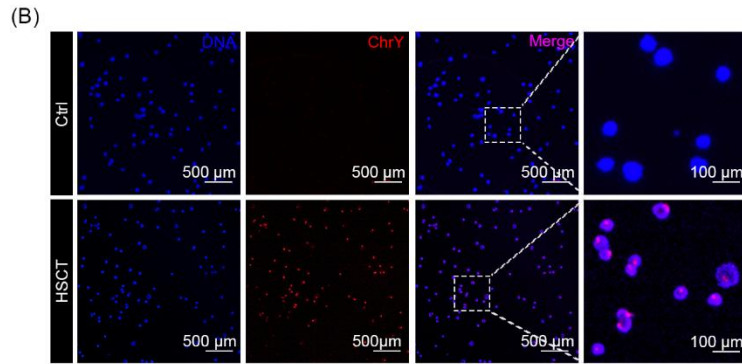
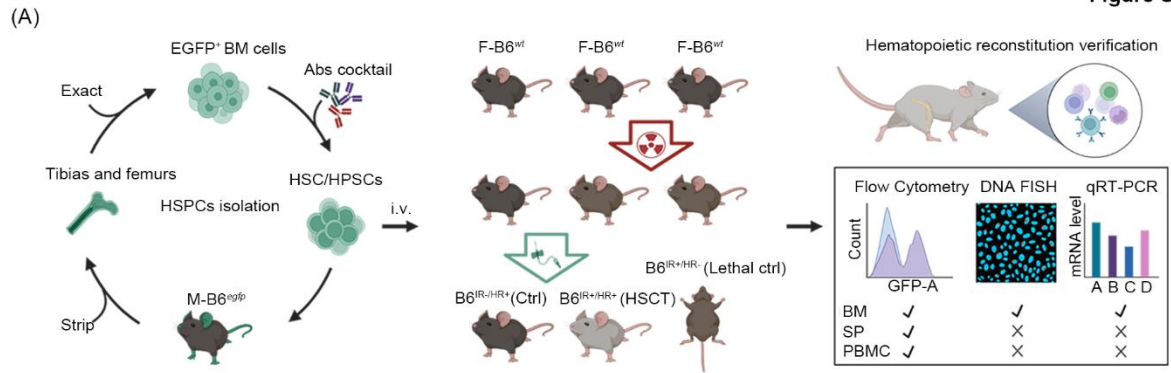


Figure S2

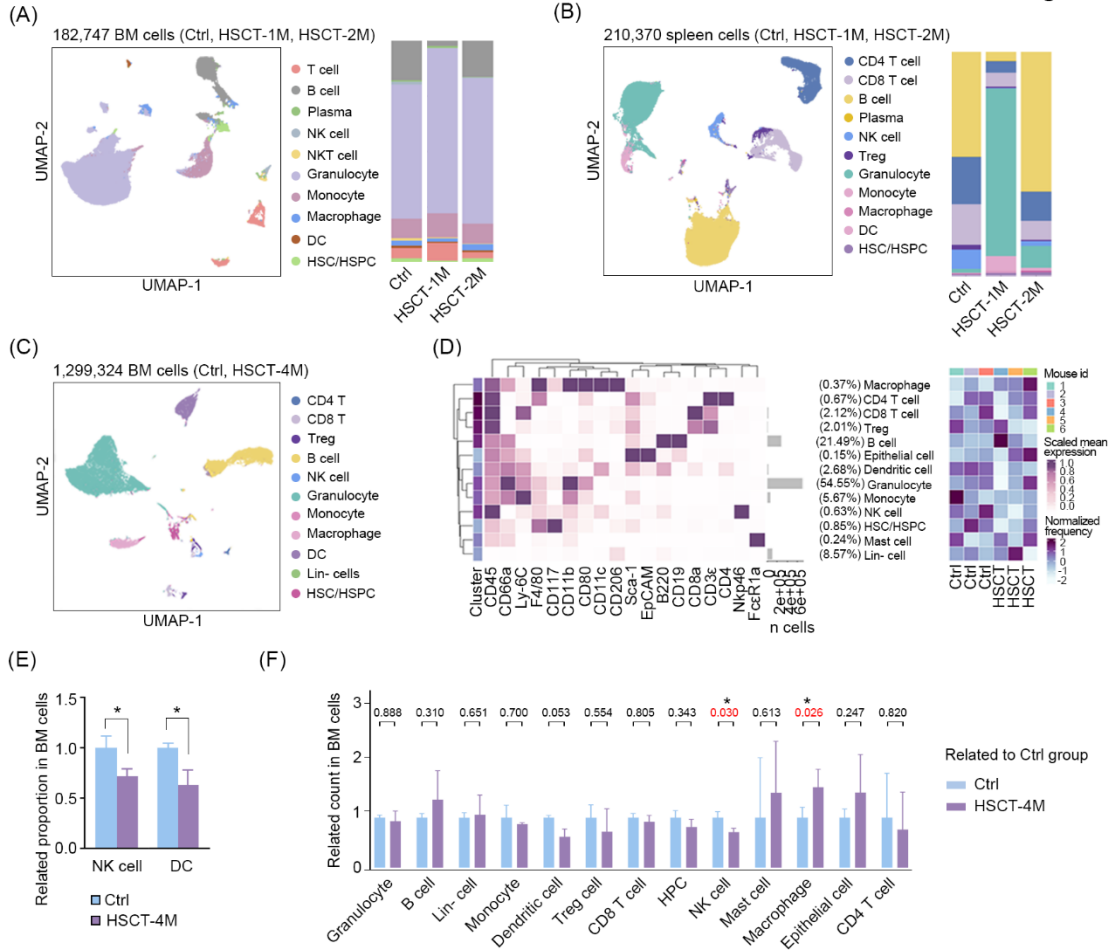


Figure S3

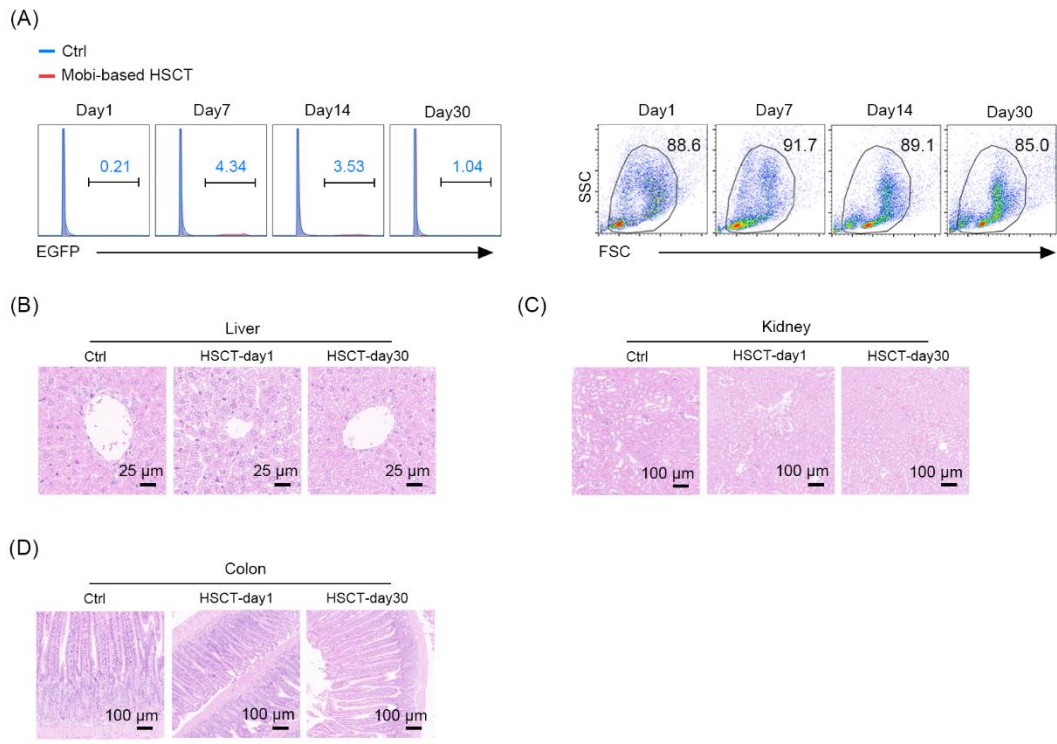
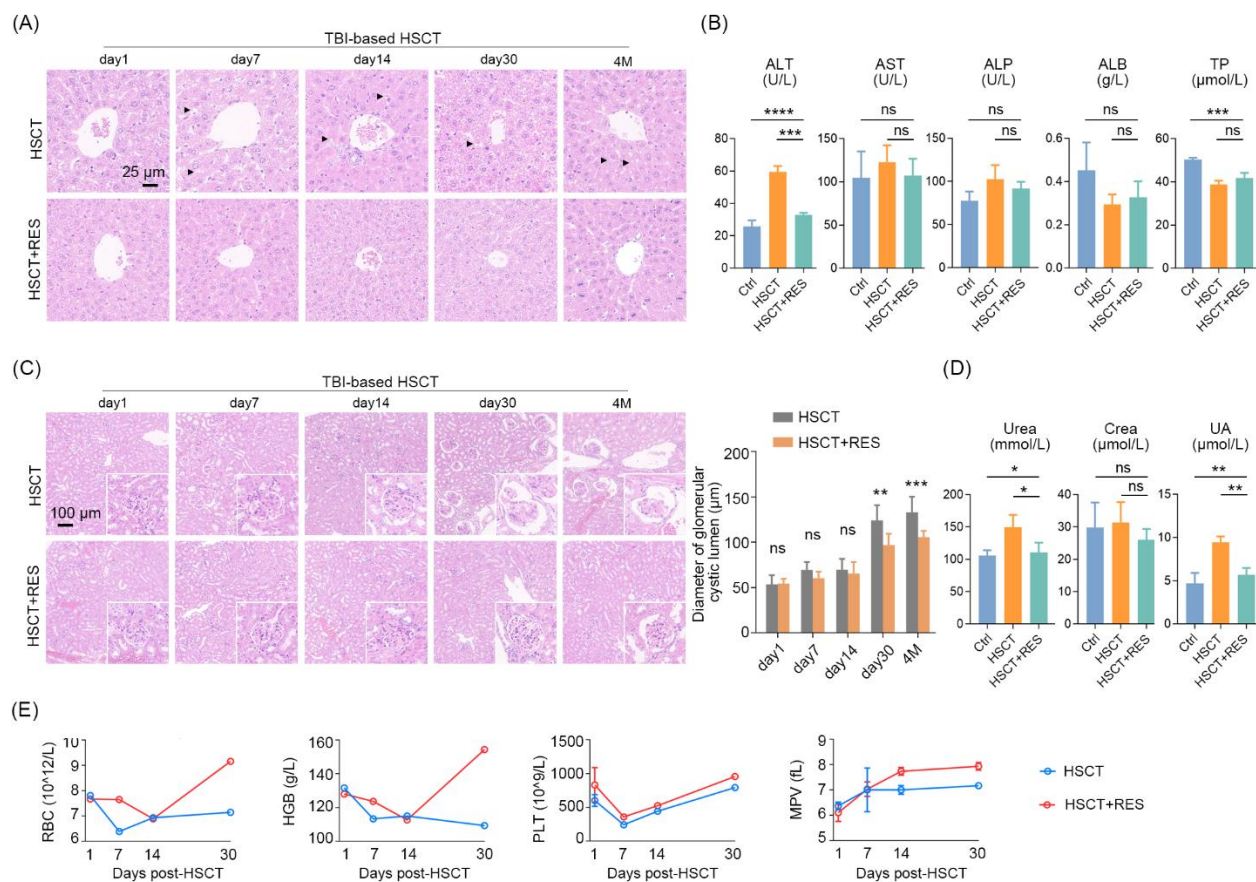


Figure S4



SUPPLEMENTARY FIGURE LEGENDS

Figure S1 Hematopoietic stem cell transplantation enables hematopoietic reconstitution in mice. **A** Schematics of operation and validation used in the study. **B** Results (left) and percentage (right) of Y-chromosome fragment probe (ChrY-Texas-red) on bone marrow smears using DNA fluorescence in situ hybridization in ctrl and HSCT mice. **C** qRT-PCR analysis illustrating the mRNA levels of *Sry* gene in bone marrow cells. **D** Flow cytometry determining the percentage of chimeras (EGFP⁺ cells) in bone marrow (left), peripheral blood mononuclear cells (PBMC; middle), and spleen (right). **E** CFU assay of HSPCs derived from the bone marrow of ctrl and HSCT mice on the day 30 following HSCT. ns (no significance) $p > 0.05$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$, $****p < 0.0001$

Figure S2 CyTOF analysis of immune cells from the ctrl and HCT mice at the first, second and the fourth month post-transplantation. **A–B** UMAP plots illustrating the dimension reduction results of 182,747 bone marrow cells (A) and 210,370 spleen cells (B). The cells were grouped by cell type (left) and condition (right). **C** UMAP plot of 1,299,324 bone marrow cells from ctrl and SHCT mice at the fourth month post transplantation. **D** Feature plot illustrating the marker expression (left), cell composition (middle), and cluster density (right) of the respective mice mentioned above. **E** Quantitative differences in counts of various cell types in the ctrl and fourth-month post-transplantation mice. **F** Related bar plot showing related cell counts of the ctrl and the fourth month post-transplantation mice.

Figure S3 Mobilization-based transplantation does not result in radiation-induced damage. **A** Flow cytometry depicting the proportion of EGFP⁺ cells (left) and effective cells (right) within bone marrow from ctrl and mobilization-based HSCT mice on day 1, day 7, day 14 and day 30 post-transplantation. **B–D** HE staining of liver, kidney and intestine of ctrl and mobilization-based HSCT mice.

Figure S4 Resveratrol mitigates the hepatotoxicity and nephrotoxicity induced by TBI. **A** HE staining of liver in HSCT and HSCT-RES mice on day 1, day 7, day 14, day 30, and 4-month post-transplantation. **B** Levels of liver function indices. **C** HE staining of kidney, and diameters of glomerular cystic lumen of the above-mentioned groups. **D** Levels of kidney function indices. **E** Whole blood count of HSCT and HSCT-RES mice on day 1, day 7, day 14 and day 30 post-transplantation.

Table S1 CyTOF antibodies and reagents

Target	Tag	Source	CAS No.
CD45	89Y	Standard BioTools	#3089005B
B220	106Cd	R&d	#MAB1217
BST-2	116Cd	Standard BioTools	#MAB8660
IL-3R	140Ce	R&d	#MAB983
CD205	142Nd	Abcam	#ab208649
CD66a	143Nd	R&d	#AF6480
FcεRIIA	144Nd	R&d	#MAB6900
CD4	145Nd	Standard BioTools	#3145002B
F4/80	146Nd	Standard BioTools	#3146008B
ST2	147Nd	R&d	#MAB10041
CD95	148Nd	Abcam	#ab227907
CD19	149Sm	Standard BioTools	#3149002B
CCR7	150Nd	R&d	#MAB3477
CD49d	151Eu	Standard BioTools	#3151016B
CD3ε	152Sm	Standard BioTools	#3152004B
Nkp46	153Eu	Standard BioTools	#3153006B
CTLA-4	154Sm	Standard BioTools	#3154008B
CD138	155Gd	R&d	#MAB2966
PD-1	159Tb	Standard BioTools	#3159006B
CD62L	160Gd	Standard BioTools	#3160008B
Ly-6C	162Dy	Standard BioTools	#3162014B

CD38	163Dy	R&d	#AF4947
Sca-1	164Dy	Standard BioTools	#3164005B
CD326	165Ho	Standard BioTools	#3165014B
CD117	166Er	Standard BioTools	#3166004B
CXCR3	167Er	R&d	#MAB1685
CD8a	168Er	Standard BioTools	#3168003B
CD206	169Tm	Standard BioTools	#3169021B
IL-7RA	170Er	R&d	#AF747
CD80	171Yb	Standard BioTools	#3171008B
CD11b	172Yb	Standard BioTools	#3172012B
CD21	173Yb	Abcam	#ab271855
IL-17RE	174Yb	R&d	#MAB7997
FcεR1A	176Yb	Standard BioTools	#3176006B
CD11c	209Bi	Standard BioTools	#3209005B
CD16/CD32 Fc block		BD	#553142
Cell Staining Buffer		Standard BioTools	#201068
Cell Acquisition Buffer		Standard BioTools	#201240
Fix and Perm Buffer		Standard BioTools	#201067
EQ Four Elements Calibration Beads		Standard BioTools	#P20C3116
Cell-ID Cisplatin	195Pt	Standard BioTools	#201064
Cell-ID Intercalator-Ir	191Ir/193Ir	Standard BioTools	#201192B