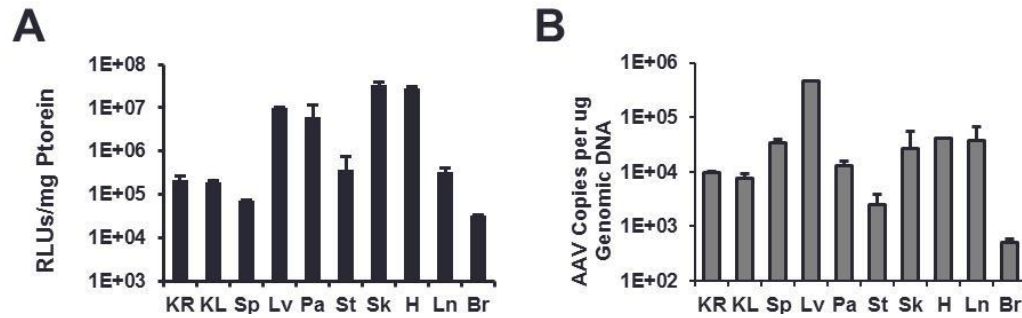
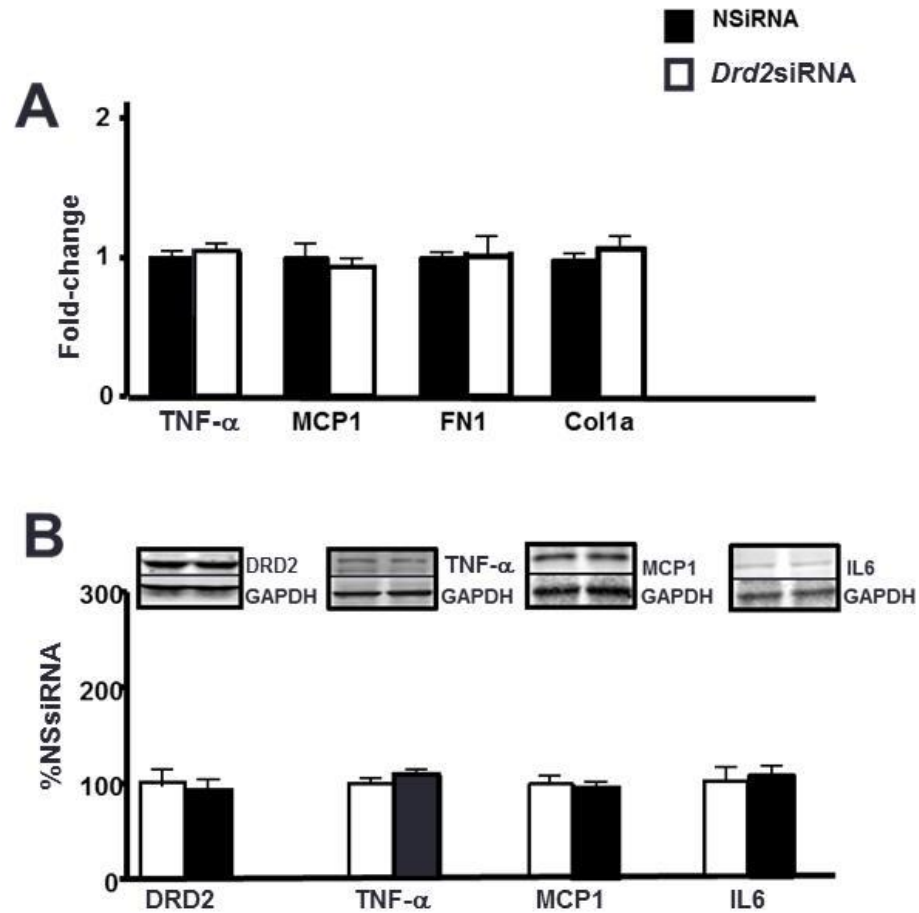


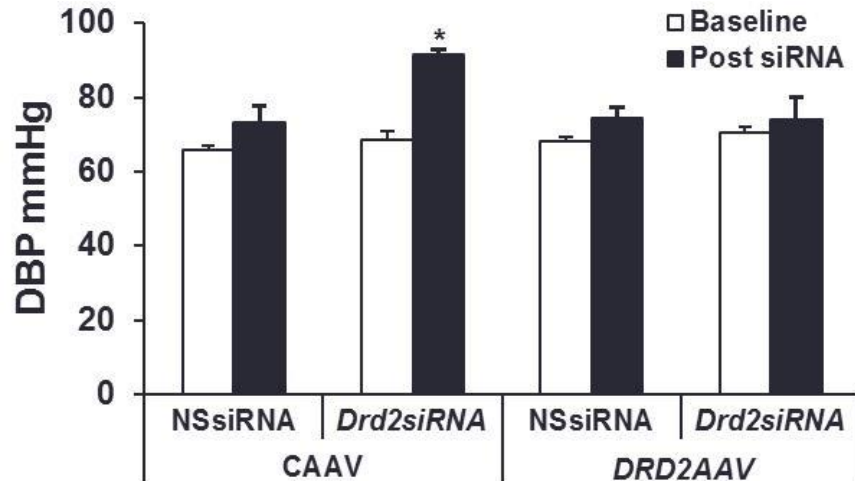
## Supplemental data



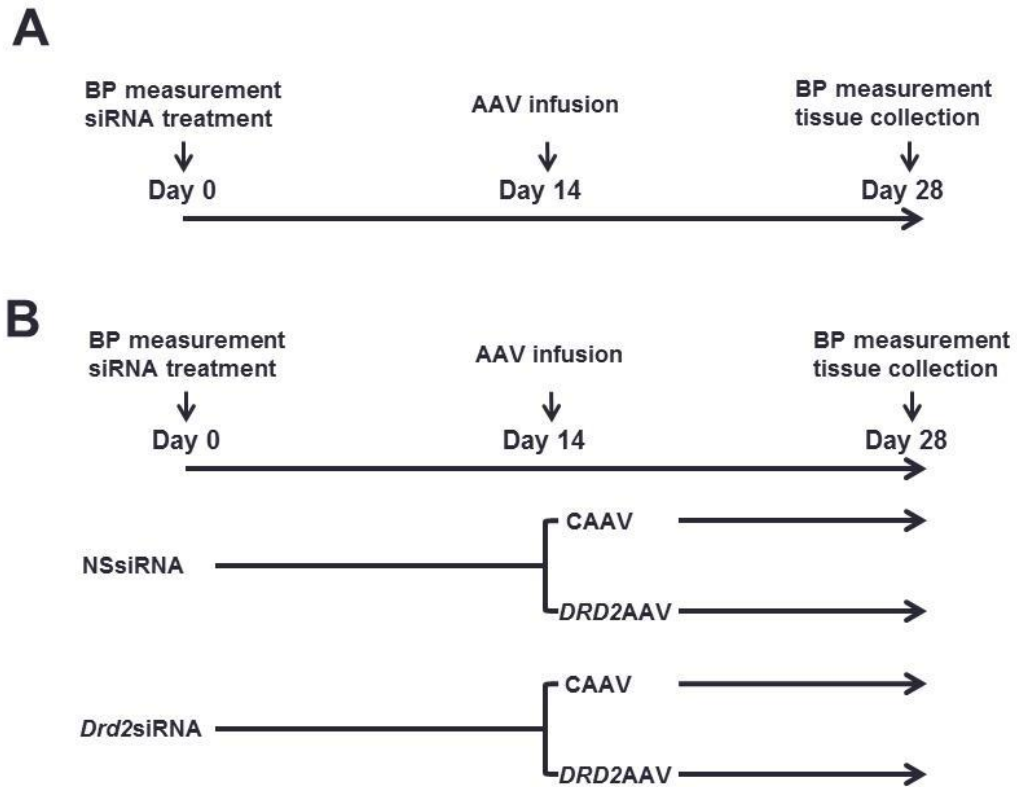
**Supplemental Figure 1S.** Mice were infused via the jugular vein with ACMVLuc vector ( $1 \times 10^{11}$  viral genome particles) carrying firefly luciferase under the control of cytomegalovirus (CMV). Fourteen days following vector administration, the mice were euthanized and a panel of tissues (Kidneys; KR and KL, right and left kidneys respectively, Spleen; Sp, Liver; Lv, Pancreas; Pa, Stomach; St, Skeletal muscle; Sk, Heart; H, Lung; Ln and Brain; Br) was collected. (A) Luciferase activity in the indicated organs was determined using the *in vitro* luciferase assay kit (Promega Corporation) on protein extracts prepared as per manufacturer's guidelines. Luciferase activities are reported as relative light units per mg protein (RLUs/mg protein). (B) AAV vector genome copy number in indicated organs was determined by real-time quantitative PCR.



**Supplemental Figure 2S.** Mice were treated with NSsiRNA or *Drd2* siRNA, by left renal sub-capsular infusion for 28 days via osmotic minipump. (A) Protein expression in the right, non-treated kidney of tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ), monocyte chemotactic protein 1 (MCP1), fibronectin 1 (FN1), and collagen type 1a1 (Col1a1) was quantified by quantitative RT-PCR. GAPDH mRNA was used for normalization of the data, n=4-5 per group. (B) Protein expression in the right, non-treated kidney of dopamine receptor D2 (DRD2), TNF- $\alpha$ , MCP1, and IL6 was determined by immunoblot. Relative abundance of the protein was normalized to GAPDH and expressed as percent of non-silencing siRNA-treated group. Inset shows one set of blots.



**Supplemental Figure 3S.** Rescue of left renal dopamine receptor D2 (DRD2) expression normalizes the high blood pressure induced by *Drd2* silencing in the left kidney. Systolic and diastolic blood pressures (SBP and DBP) were measured under pentobarbital anesthesia in the mice prior to siRNA treatment (baseline) and 28 days post siRNA and 14 days (from day 14 to day 28) post-AAV treatment. Shown in Figure 3S are the DBP of the mice. \* $P < 0.05$  vs all others; one-way ANOVA and Tukey test.



**Supplemental Figure 4S.** Experimental design

(A) Timeline of the experimental design (B) Mice treated with NSsiRNA or *Drd2*siRNA, by left renal sub-capsular infusion for 28 days via an osmotic mini-pump. Fourteen days after the initiation of left renal sub-capsular siRNA infusion, mice were treated with CAAV or *DRD2AAV* ( $1 \times 10^{11}$  vgp), via left ureteral retrograde infusion. Blood pressure (BP) was measured at day 0 and at day 28, as indicated.