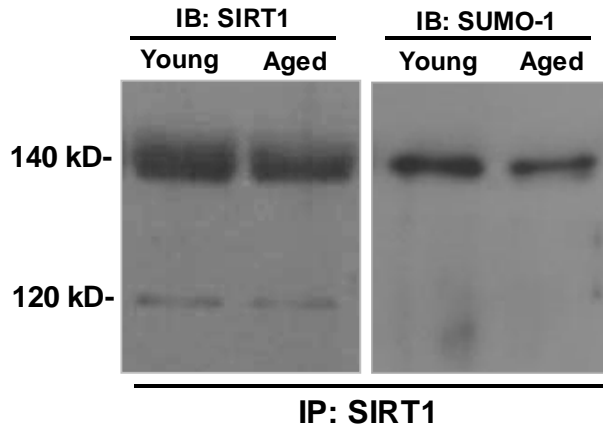


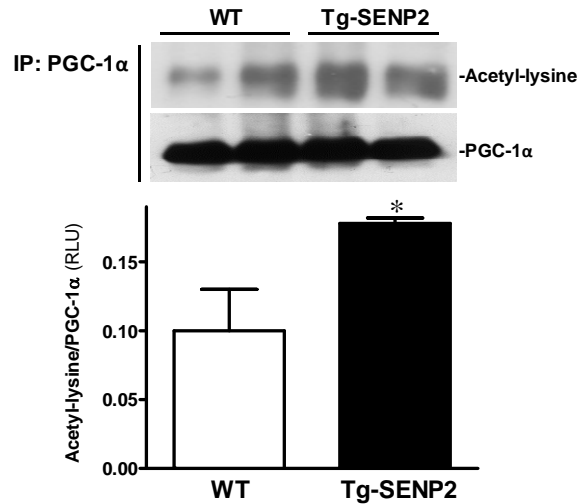
SUPPLEMENTAL MATERIAL

**Impaired SIRT1 Nucleocytoplasmic Shuttling in the Senescent Heart during Ischemic Stress**

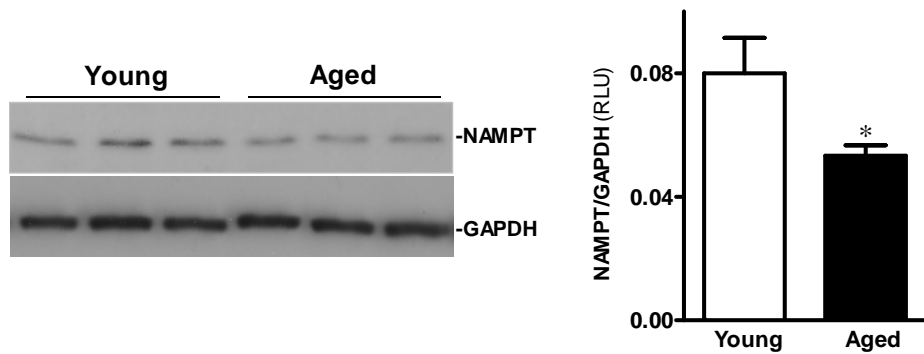
Chao Tong, Alex Morrison, Samantha Mattison, Su Qian, Mark Bryniarski, Bethany Rankin, Jun Wang, D Paul Thomas, Ji Li



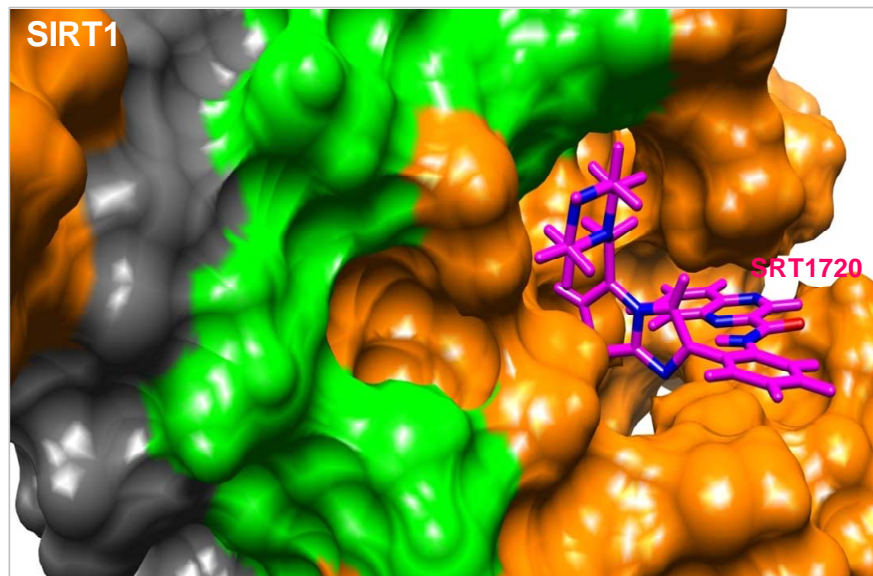
**Fig. 1S.** Heart homogenates (200  $\mu$ g) from young and aged C57BL/6 mice were immunoprecipitated with anti-SIRT1 antibody, then immunoblotting with anti-SIRT1 (left panel) or anti-SUMO-1 (right panel) to show only 140kD SIRT1 is sumoylated.



**Fig. 2S.** Heart homogenates from WT and Tg-SEN2 mice were subjected to immunoprecipitation (IP) with PGC-1 $\alpha$  antibody, the IP products were further analyzed by immunoblotting with anti-acetyl-lysine and anti-PGC-1 $\alpha$  antibodies (upper panel); bar graphs showed the relative levels of acetyl-lysine in WT versus Tg-SEN2 (lower panel). Values are means  $\pm$  SEM, n=6, \* $p$ <0.05 vs. WT.



**Fig. 3S.** Immunoblotting with anti-NAMPT (nicotinamide phosphoribosyltransferase) to determine the protein expression levels of NAMPT in young and aged hearts (left panel); bar graph shows the relative levels of NAMPT in young and aged hearts (right panel). Values are means  $\pm$  SEM, n=6-8, \* $p$ <0.05 vs. young.



**NLS** (nuclear localization signals): **lime green**  
**NES** (nuclear export sequence): **grey**

**Fig. 4S.** SRT1720 docked to SIRT1 designed from homology model MOE showing the pocket interaction with SRT1720 located close to NLS (nuclear localization signals) and NES (nuclear export sequence) domains of SIRT1.