Heat Shock Protein 70 is Necessary to Improve Mitochondrial Bioenergetics and Reverse Diabetic Sensory Neuropathy Following KU-32 Therapy

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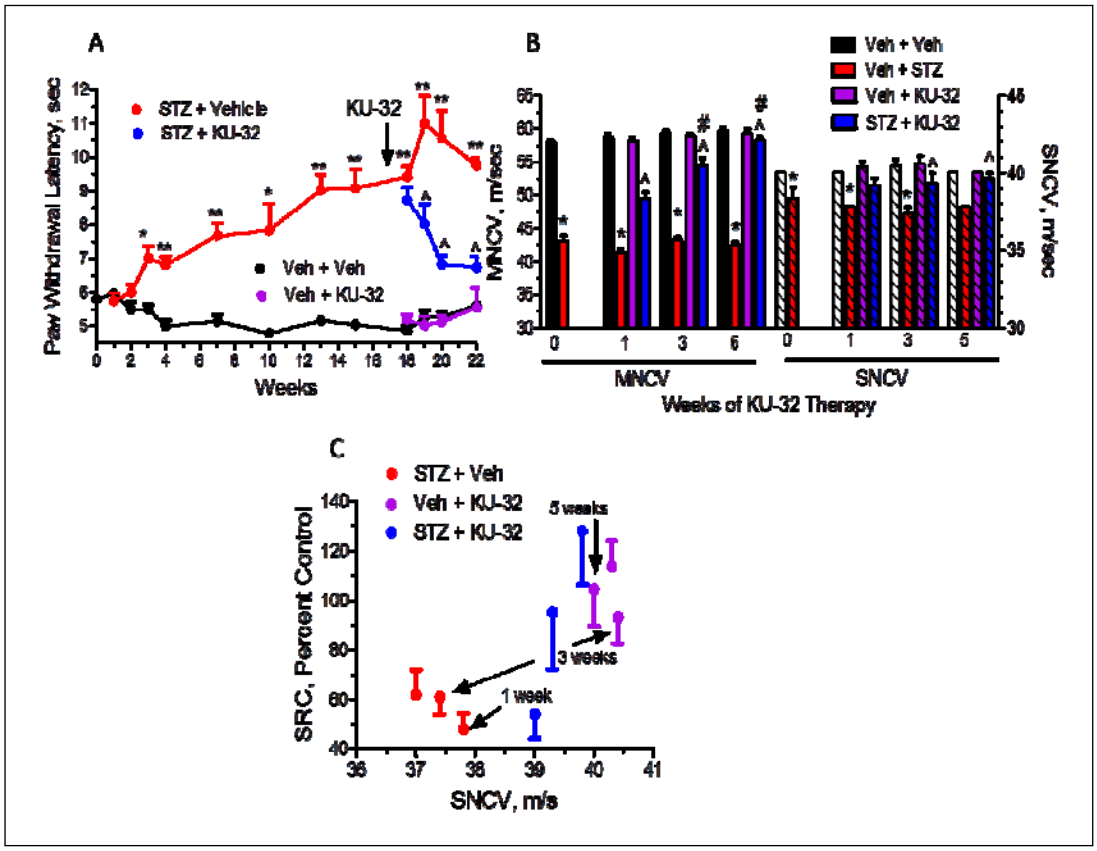
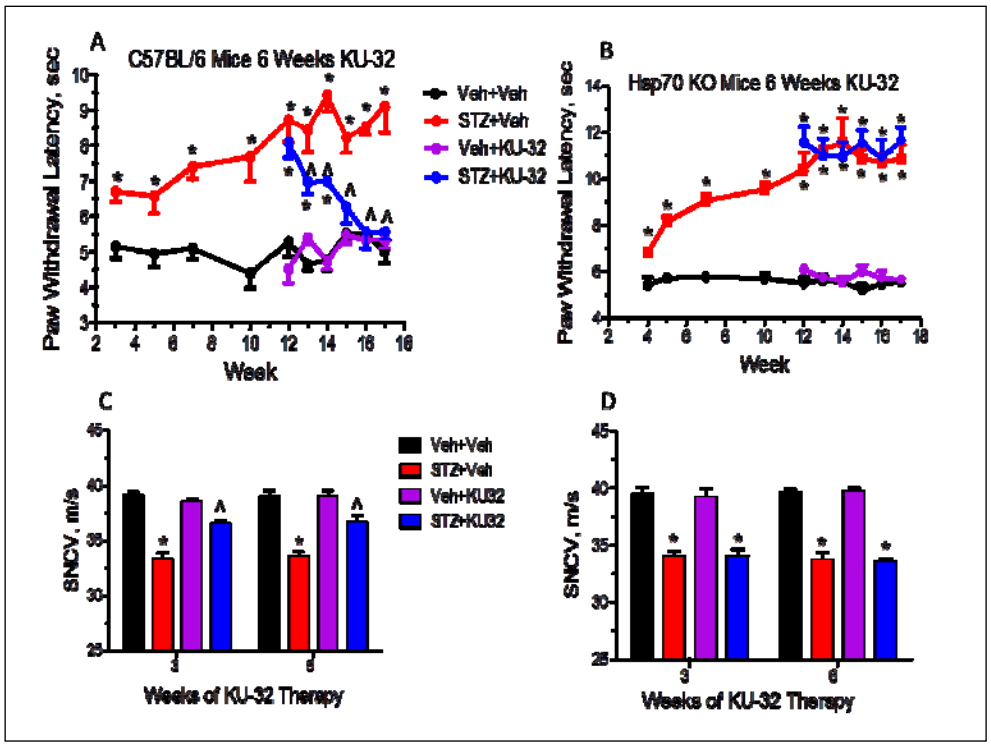


Supplemental Figure 1- Effect of Diabetes and KU-32 Therapy on Thermal Hypoalgesia, NCV and Mitochondrial Bioenergetics. Swiss Webster mice were rendered diabetic with STZ and thermal sensitivity assessed at the indicated weeks. After 17 weeks of diabetes, KU-32 was given weekly and at 1, 3 and 5 weeks after drug administration, NCV was measured and sensory neurons were isolated to assess mitochondrial bioenergetics. **A)** Diabetes induced a thermal hypoalgesia that was reversed by KU-32 treatment. *, $p< 0.05$, **, $p< 0.01$ vs time-matched Veh + Veh; ^, $p< 0.05$ vs time-matched STZ + Veh. **B)** Both MNCV and SNCV were decreased after 16 weeks of diabetes (0 weeks KU-32) and drug therapy improved these deficits. *, $p< 0.05$ vs Veh + Veh; ^, $p< 0.05$ vs STZ + Veh; #, $p< 0.05$ vs STZ + 1 week KU-32. **(C)** Correlation between recovery of SRC and improvement in SNCV.



Supplemental Figure 2- Hsp70 is Necessary for KU-32 to Reverse DPN. C57Bl/6 **(A, C)** and Hsp70 KO **(B, D)** mice were rendered diabetic with STZ and at 12 weeks of diabetes, KU-32 was given weekly for 6 weeks. Thermal sensitivity **(A, B)** was assessed at the indicated weeks and SNCV **(C, D)** was assessed after 15 (3 weeks KU-32) and 18 weeks (6 weeks KU-32) of diabetes. *, $p< 0.05$ vs Veh + Veh; ^, $p< 0.05$ vs STZ + Veh. Symbol and bar colors in legend are shared between (A and B) and (C and D), respectively.