

Figure 4. Invasive hemodynamic measurements using pressure-volume loops. **(A)** At day 35, cardiac output was significantly increased in hearts receiving control BMMCs compared to hearts receiving db/db BMMCs or PBS (* P <0.05). **(B)** Moreover, arterial elastance was significantly decreased in hearts receiving control BMMCs compared with hearts receiving PBS (* P <0.05). **(C-F)** At day 35, there was a trend toward improved functional recovery in animals receiving control BMMCs compared with animals receiving db/db BMMCs or PBS. This trend did not achieve statistical significance compared with db/db BMMCs.

Figure 5. Real-time polymerase chain reaction quantification of surviving male transplanted BMMCs within female heart. *Ex vivo* Taqman analysis of hearts undergoing LAD ligation following injection of db/db BMMCs versus control BMMCs revealed no significant difference in survival of transplanted cells. In both hearts cell, survival at day 35 after surgery was <1% (n=3 in control and n=5 in db/db group).

Supplemental Table 1. Hemodynamic measurements at day 35 show an improvement in cardiac function in animals treated with control BMMCs compared with db/db BMMCs or PBS treated animals. Cardiac output was significantly increased in animals treated with control BMMCs compared with db/db BMMCs (* P =0.016) or PBS (** P =0.019). Arterial elastance was significantly increased in animals treated with control BMMCs compared with animals treated with PBS (** P =0.04). Although a difference was found with the db/db BMMCs treated group as well, it did not reach statistical significance. Values are expressed means \pm SEM and $n \geq 5$ in every group.

Hemodynamic measurements	Control	Db/Db	PBS
Heart rate (bpm)	371.8000 ± 31.50302	299.7143 ± 12.15713	310.8333 ± 1.10516
End-systolic Volume (μL)	55.3400 ± 3.19931	51.3017 ± 2.52986	51.8800 ± 4.74516
End-diastolic Volume (μL)	63.6360 ± 2.23135	57.5083 ± 3.01150	56.3117 ± 5.33148
End-systolic Pressure (mmHg)	69.5100 ± 2.10101	73.9583 ± 3.95258	81.6080 ± 3.40416
End-diastolic Pressure (mmHg)	5.0433 ± .58769	10.0057 ± 2.30112	15.5633 ± 3.37423
Ejection Fraction (%)	17.9760 ± 2.48784	13.6343 ± 2.36370	12.6750 ± 1.37203
Stroke Volume (μL)	11.4120 ± 1.29213	7.7314 ± 1.60908	6.2720 ± .35942
Cardiac Output (μL/min)	4166.6740 ± 393.36234	2246.6257 ± 62.26386*	2232.2583 ± 20.25357 **
Stroke Work (mmHg/μL)	499.2500 ± 53.12623	418.2857 ± 102.06504	396.8000 ± 29.39456
Arterial Elastance (mmHg/μL)	6.4960 ± .98299	9.1583 ± 1.29994	11.8580 ± 1.47995 ***
dPdt max (mmHg/sec)	3674.6000 ± 643.38904	3460.1667 ± 254.87833	4021.1667 ± 251.95177
dPdt min (mmHg/sec)	-2952.800 ± 431.74001	-2945.714 ± 340.12272	-2947.167 ± 129.45641
Tau_w (msec)	9.6950 ± 1.19048	11.5483 ± .70846	12.2880 ± 1.09732
Maximal Power (mWatts)	2.9800 ± .39496	1.8357 ± .41301	1.7817 ± .18080
Preload adjusted maximal power (mWatts/μL²)	7.7060 ± 1.41500	6.8560 ± .46881	5.0660 ± .54417

Supplemental Table 1