

**Supplemental Table 1. Mitochondrial enzyme activities, yield and respiratory function at 22 weeks following surgery in Protocol 2.**

<b>Mitochondrial Function</b>	<b>18% Protein Diet</b>		<b>30% Protein Diet</b>
	<b>Sham</b> (n=16)	<b>Heart Failure</b> (n=21)	<b>Heart Failure</b> (n=13)
<b>Mitochondrial Enzyme Activities in Whole Tissue</b>			
Citrate synthase activity ( $\mu\text{mols}\cdot\text{g wet}^{-1}\cdot\text{min}^{-1}$ )	132.2 $\pm$ 8.3	95.9 $\pm$ 7.3*	91.5 $\pm$ 6.7*
MCAD activity ( $\mu\text{mols}\cdot\text{g wet}^{-1}\cdot\text{min}^{-1}$ )	13.1 $\pm$ 0.8	8.9 $\pm$ 0.7*	8.4 $\pm$ 0.5*
Aconitase activity ( $\text{mmols}\cdot\text{g wet}^{-1}\cdot\text{min}^{-1}$ )	13.3 $\pm$ 1.3	10.6 $\pm$ 0.8	8.7 $\pm$ 0.6*
<b>Subsarcolemmal Mitochondria</b>			
Yield (mg mitochondrial protein/g wet mass)	16.3 $\pm$ 0.9	13.3 $\pm$ 1	14.5 $\pm$ 0.6
Citrate synthase activity ( $\mu\text{mols}\cdot\text{mg prot.}^{-1}\cdot\text{min}^{-1}$ )	2.4 $\pm$ 0.2	2.2 $\pm$ 0.1	2.4 $\pm$ 0.2
MCAD activity ( $\mu\text{mols}\cdot\text{mg prot.}^{-1}\cdot\text{min}^{-1}$ )	0.18 $\pm$ 0.02	0.17 $\pm$ 0.01	0.19 $\pm$ 0.02
Aconitase activity ( $\mu\text{mols}\cdot\text{mg prot.}^{-1}\cdot\text{min}^{-1}$ )	50.1 $\pm$ 3.7	52.2 $\pm$ 4	59.6 $\pm$ 4.19
<b>Respiration:</b>			
Glutamate + malate: State 3	207.1 $\pm$ 9.7	214.3 $\pm$ 11.4	180 $\pm$ 12.1
Glutamate + malate: State 4	34.2 $\pm$ 2.3	36 $\pm$ 2.4	29.3 $\pm$ 2.3
Glutamate + malate: RCR	6.3 $\pm$ 0.4	6.2 $\pm$ 0.3	6.3 $\pm$ 0.4
Glutamate + malate: ADP:O	2.03 $\pm$ 0.08	1.89 $\pm$ 0.07	2.15 $\pm$ 0.06
Palmitoylcarnitine: State 3	247.2 $\pm$ 13.8	207.9 $\pm$ 10.2*	199.6 $\pm$ 11.4*
Palmitoylcarnitine: State 4	56.4 $\pm$ 2.7	57.4 $\pm$ 2.1	57 $\pm$ 4.8
Palmitoylcarnitine: RCR	4.4 $\pm$ 0.2	3.6 $\pm$ 0.1	3.6 $\pm$ 0.2
Palmitoylcarnitine: ADP:O	2.23 $\pm$ 0.07	2.29 $\pm$ 0.08	2.34 $\pm$ 0.09
Rotenone + Succinate: State 3	368 $\pm$ 18.3	355 $\pm$ 17	332 $\pm$ 19.5
Rotenone + Succinate: State 4	133 $\pm$ 5.6	124 $\pm$ 7	123 $\pm$ 9.6
Rotenone + Succinate: RCR	2.7 $\pm$ 0.1	2.9 $\pm$ 0.1	2.8 $\pm$ 0.2
Rotenone + Succinate: P:O	1.37 $\pm$ 0.08	1.45 $\pm$ 0.06	1.40 $\pm$ 0.07
<b>Interfibrillar Mitochondria</b>			
Yield (mg mitochondrial protein/g wet mass)	13.5 $\pm$ 0.5	8.5 $\pm$ 0.3*	8.4 $\pm$ 0.9*
Citrate synthase activity ( $\mu\text{mols}\cdot\text{mg prot.}^{-1}\cdot\text{min}^{-1}$ )	2.7 $\pm$ 0.2	2.5 $\pm$ 0.1	2.5 $\pm$ 0.1
MCAD activity ( $\mu\text{mols}\cdot\text{mg prot.}^{-1}\cdot\text{min}^{-1}$ )	0.25 $\pm$ 0.02	0.19 $\pm$ 0.01	0.21 $\pm$ 0.02
Aconitase activity ( $\mu\text{mols}\cdot\text{mg prot.}^{-1}\cdot\text{min}^{-1}$ )	47.2 $\pm$ 3.6	50.8 $\pm$ 4.5	53 $\pm$ 3.4
<b>Respiration:</b>			
Glutamate + malate: State 3	242.5 $\pm$ 11	234 $\pm$ 9.1	214.5 $\pm$ 16.6
Glutamate + malate: State 4	38.1 $\pm$ 3.2	42.1 $\pm$ 2.6	38.7 $\pm$ 3.9
Glutamate + malate: RCR	6.8 $\pm$ 0.5	5.8 $\pm$ 0.2	5.9 $\pm$ 0.5
Glutamate + malate: ADP:O	2.35 $\pm$ 0.12	2.19 $\pm$ 0.09	2.36 $\pm$ 0.12
Palmitoyl Carnitine: State 3	339.3 $\pm$ 23.8	243.7 $\pm$ 15.2*	213.1 $\pm$ 7.5*
Palmitoyl Carnitine: State 4	70.4 $\pm$ 4.8	68.1 $\pm$ 3.6	63.4 $\pm$ 4.7
Palmitoyl Carnitine: RCR	5.0 $\pm$ 0.4	3.6 $\pm$ 0.2*	3.5 $\pm$ 0.2*

Palmitoyl Carnitine: ADP:O	2.39 ± 0.1	2.36 ± 0.08	2.38 ± 0.11
Rotenone + Succinate: State 3	498 ± 21.5	493 ± 21	444.5 ± 30.8
Rotenone + Succinate: State 4	176 ± 6.7	182 ± 9	166 ± 15
Rotenone + Succinate: RCR	2.9 ± 0.1	2.8 ± 0.1	2.8 ± 0.2
Rotenone + Succinate: ADP:O	1.42 ± 0.07	1.28 ± 0.05	1.41 ± 0.07

\* p<0.05 compared to the sham group. There were no significant differences between the two heart failure groups.