### Supporting Information Table 2

**Table 2: Pharmacological Interventions Targeting AMPK**

<table>
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<tr>
<th>Model</th>
<th>AMPK Activity</th>
<th>Drug</th>
<th>Benefits</th>
<th>Notes</th>
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<th>Additional Targets</th>
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</thead>
</table>
| Ischemia/Reperfusion and Myocardial Infarction (Coronary occlusion)    | ↑              | AICAR      | Reduced infarct size and rescued dysfunction              | -AMPK already activated by I/R                                                                                           | 15,18,23,28,37-40 | -Adenosine receptor (M/A)  
                                                                                        |                | Metformin    |                                            | -No improvement of ventricular dysfunction or dilation                                                                 |       | -Na+/H+ Exchanger (A)  
                                                                                        |                |              |                                            | -Reduced failure-induced hyperinsulinemia, TNF exp.                                                                 |       | -AKT, ERK  
                                                                                        |                |              |                                            |                                                                                                              |       | -Hyperinsulinemia (M/A)  
                                                                                        |                |              |                                            |                                                                                                              |       | -Inflammation (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -Nitric oxide synthase (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -Elevated plasma fatty acids (M/A)  
                                                                                        |                |              |                                            |                                                                                                              |       | -ETC Complex I (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -Endothelial ROS production (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -TGFβ signaling in fibroblasts (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -Body weight (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -Glucocorticogenesis (M)  
                                                                                        |                |              |                                            |                                                                                                              |       | -mTOR activity (M) |
| Pressure-overload (Transverse aortic constriction)                     | ↑              | AICAR      | Normalized blood pressure, fractional shortening and dilation | -AMPK already activated by banding alone  
                                                                                        |                | Metformin    |                                            | -Reduced failure-induced increases in ANP and inflammation                                                                 |       |                                                                 |
| Tachycardia-induced Dilated cardiomyopathy (Pacing)                    | ↑              | AICAR      | Normalized cardiac output, vascular resistance, hyperinsulinemia, and body fat | -AMPK already activated by pacing alone  
                                                                                        |                | Metformin    |                                            | -Decrease of elevated catecholamines                                                                                   |       |                                                                 |
| Volume-overload (Aortocaval fistula)                                   | =              | Metformin  | None                                                      | -Decreased glucose oxidation  
                                                                                        |                |              |                                            | -No effect on AMPK activity                                                                                           | 34    |                                                                 |
| Familial Hypertrophic Cardiomyopathy (R403Q αMHC)                      | ↓              | AICAR      | -Restored LV function, architecture, lipid content        | -Restored deficient AMPK activity  
                                                                                        |                |              |                                            | -No effect on circulating lipids, glucose, ketones                                                                |       |                                                                 |

**Key:** Metformin (M), 5-Amino-4-imidazole-1-β-D-carboxamide ribofuranoside/AICAR (A), electron transport chain (ETC)