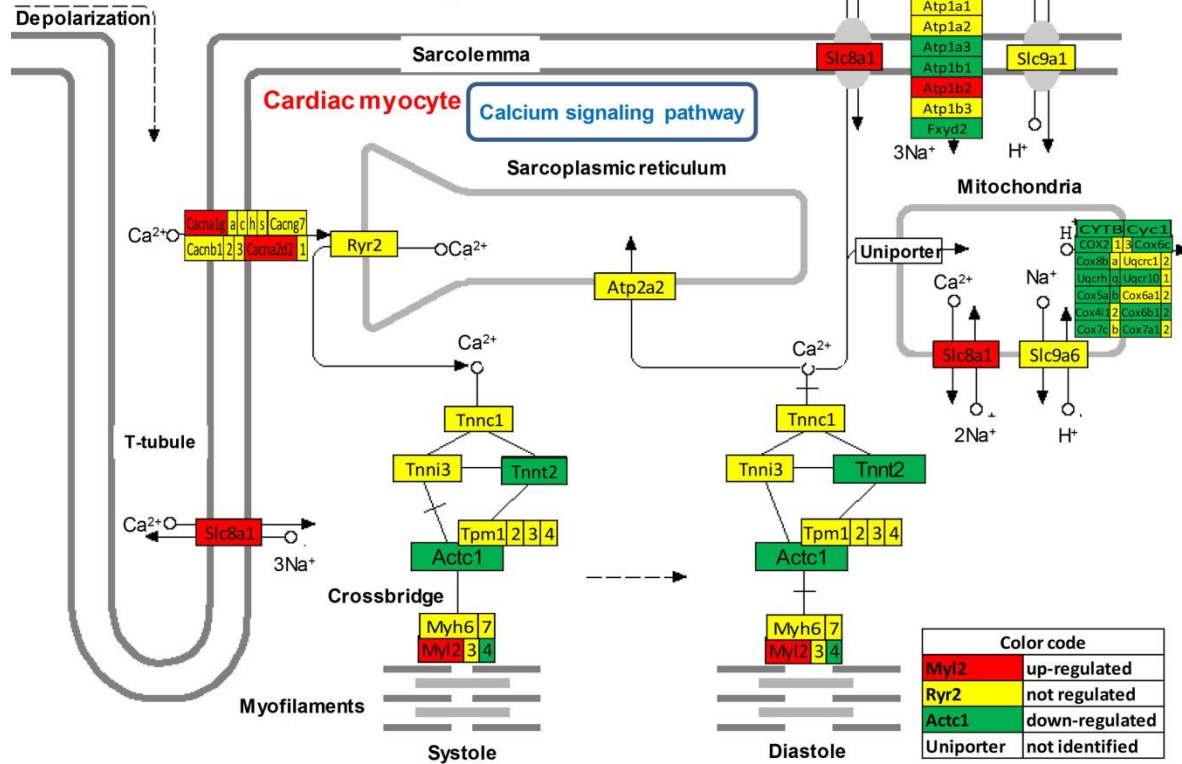
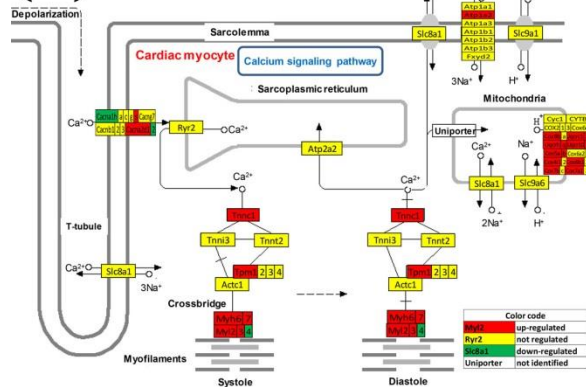


## Appendix

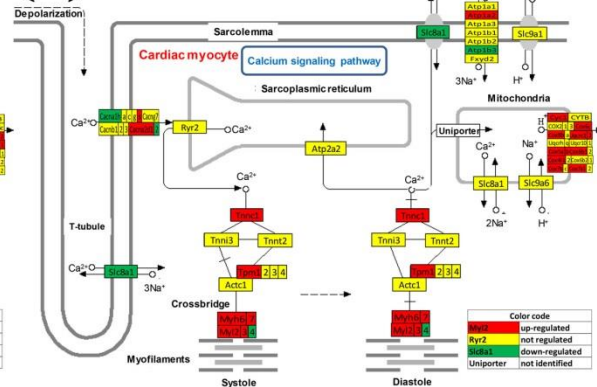
(a)



(b)



(c)



**Figure A1: KEGG map (mmu04260) of the differential expression of cardiac muscle contraction (CMC) genes in: (a) the right atrium with respect to the left atrium, (b) left ventricle vs left atrium and (c) right ventricle vs right atrium. No significant difference was found between the expressions of CMC genes in the two ventricles. Genes with significant differences: actin alpha cardiac muscle 1 (*Actc1*), Na<sup>+</sup>/K<sup>+</sup> transporting ATPases (*Atp1a2*, *Atp1a*), Ca<sup>++</sup> transporting ATPases (*Atp1b1*, *Atp1b2*), calcium channels (*Cacna1g*, *Cacna1h*, *Cacna1s*, *Cacna2d1*, *Cacna2d2*), cytochromes c1 and b (*Cyc1*, *Cyb*), cytochrome c oxidases (*Cox2*, *Cox3*, *Cox4i1*, *Cox4i2*, *Cox5a*, *Cox5b*, *Cox6a2*, *Cox6a2*, *Cox6b1*, *Cox6b2*, *Cox6c*, *Co7a1*, *Cox7b*, *Cox7c*, *Cox8b*), FXD domain-containing ion transport regulator 2 (*Fxyd2*), myosins (*Myh6*, *Myh7*, *Myl2*, *Myl3*,**



channel subfamily Q member 1 (*Kcnq1*), mitogen-activated protein kinases (*Mapk12*, *Mapk13*, *Mapk14*), myosins (*Myh6*, *Myh7*, *Myh2*, *Myh3*, *Myh4*), phospholamban (*Pln*), protein phosphatases (*Ppp1cc*, *Ppp1r1b*), protein kinase, cAMP dependent, catalytic, alpha (*Prkaca*), *Rps6ka5*, sodium channels (*Scn4b*, *Scn5g*), solute carrier family 8 (sodium/calcium exchanger) member 1 (*Slc8a1*), troponins (*Tnni1*, *Tnni2*) and tropomyosin 1 alpha (*Tpm1*).

**Table S1.** Ratios of RV/LV and RA/LA gene expression in our study for 12 genes encoding subunits of cardiac ion channels and transporters

Gene	Protein	RV/LV expression ratio	RA / LA expression ratio
<i>Scn5a</i>	Cardiac fast voltage-dependent Na <sup>+</sup> channel main subunit Nav1.5	0.712	0.636
<i>Kcnd2</i>	Cardiac fast transient outward K <sup>+</sup> channel main subunit Kv4.2	1.501	0.694
<i>Kcna4</i>	Cardiac slow transient outward K <sup>+</sup> channel main subunit Kv1.4	1.232	0.953
<i>Clcn2</i>	Voltage-gated chloride channel CIC-2	1.055	0.707
<i>Cacna1c</i>	Cardiac L-type Ca <sup>2+</sup> channel main subunit Cav1.2	1.087	0.832
<i>Kcnj2</i>	Cardiac inward rectifier K <sup>+</sup> channel main subunit Kir2.1	1.179	0.963
<i>Kcna5</i>	Cardiac ultrarapid delayed rectifier K <sup>+</sup> channel main subunit Kv1.5	0.891	1.018
<i>Kcnh2</i>	Cardiac rapid delayed rectifier K <sup>+</sup> channel main subunit Kv11.1	1.103	1.253
<i>Kcnq1</i>	Cardiac slow delayed rectifier K <sup>+</sup> channel main subunit Kv7.1	0.865	1.117
<i>Atp2a2</i>	Cardiac sarco/endoplasmic reticulum Ca <sup>2+</sup> pump main subunit SERCA2	1.199	1.036
<i>Atp1a1</i>	Cardiac Na <sup>+</sup> /K <sup>+</sup> pump catalytic subunit $\alpha$ 1	0.973	0.890
<i>Slc8a1</i>	Cardiac Na <sup>+</sup> /Ca <sup>2+</sup> antiport exchanger NCX1 main subunit	0.895	5.269