

**Spaceflight increases sarcoplasmic reticulum  $\text{Ca}^{2+}$  leak and this cannot be counteracted with BuOE**

**treatment**

Jessica L. Braun<sup>1,2</sup> & Val A. Fajardo<sup>1,2\*</sup>

<sup>1</sup>Department of Kinesiology, Brock University, St. Catharines, ON, Canada

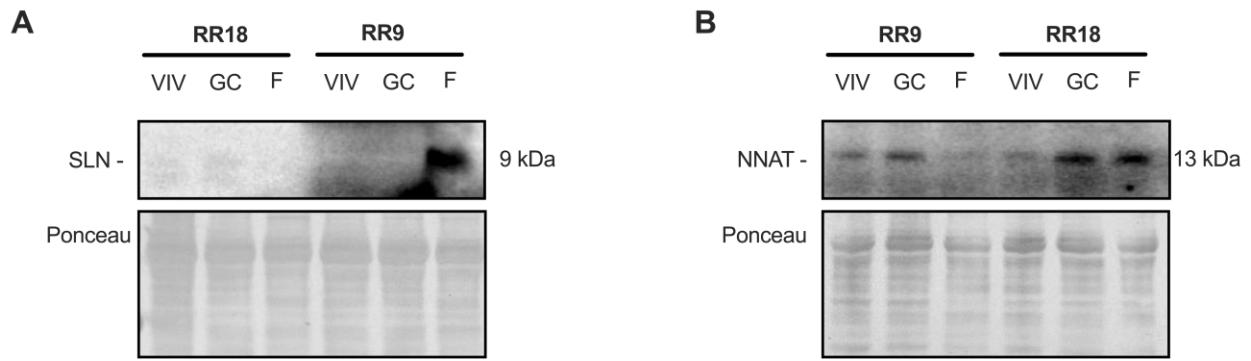
<sup>2</sup>Centre for Bone and Muscle Health, Brock University, St. Catharines, ON, Canada

**SUPPLEMENTARY MATERIAL**

**Supplemental Table 1.** Protein specific Western blotting protocols and materials.

Target	Protein Loaded (μg)	Type of Gel	Membrane	Primary Antibody Dilution	Primary Antibody Details
SERCA1a	10	BioRad PreCast TGX 4-15% gradient gel	PVDF	1:5000	MA3-912, ThermoFisher Scientific
SERCA2a	2.5	BioRad PreCast TGX 4-15% gradient gel	PVDF	1:5000	MA3-919, ThermoFisher Scientific
RYR	10	BioRad PreCast TGX 4-15% gradient gel	PVDF	1:2000	MA3-925, ThermoFisher Scientific
p-RYR	10	BioRad PreCast TGX 4-15% gradient gel	PVDF	1:2000	AF3703, Affinity Biotech
4-HNE	10	BioRad PreCast TGX 4-15% gradient gel	PVDF	1:5000	AB5605, Millipore Sigma
SOD	10	BioRad PreCast TGX 4-15% gradient gel	PVDF	1:5000	NB100-1992SS, Novus
SLN	25	Homemade tricine	Nitrocellulose	1:250	ABT13, Sigma Aldrich
NNAT	15	Homemade tricine	PVDF	1:1000	78122S, Cell Signaling Technology
PLN	10	Homemade tricine	PVDF	1:2000	MA3-922, ThermoFisher Scientific

Abbreviations: sarco(endo)plasmic reticulum  $\text{Ca}^{2+}$  ATPase (SERCA); ryanodine receptor (RYR); 4-hydroxynonenal (4-HNE); superoxide dismutase (SOD); sarcolipin (SLN); neuronatin (NNAT); phospholamban (PLN); polyvinylidene fluoride (PVDF)



**Supplemental Figure 1.** Representative Western blots of SLN and NNAT in RR-9 vs RR-18 soleus.

Representative images show differential responses to spaceflight between the RR-9 and RR-18 missions in SLN (**A**) and NNAT (**B**).