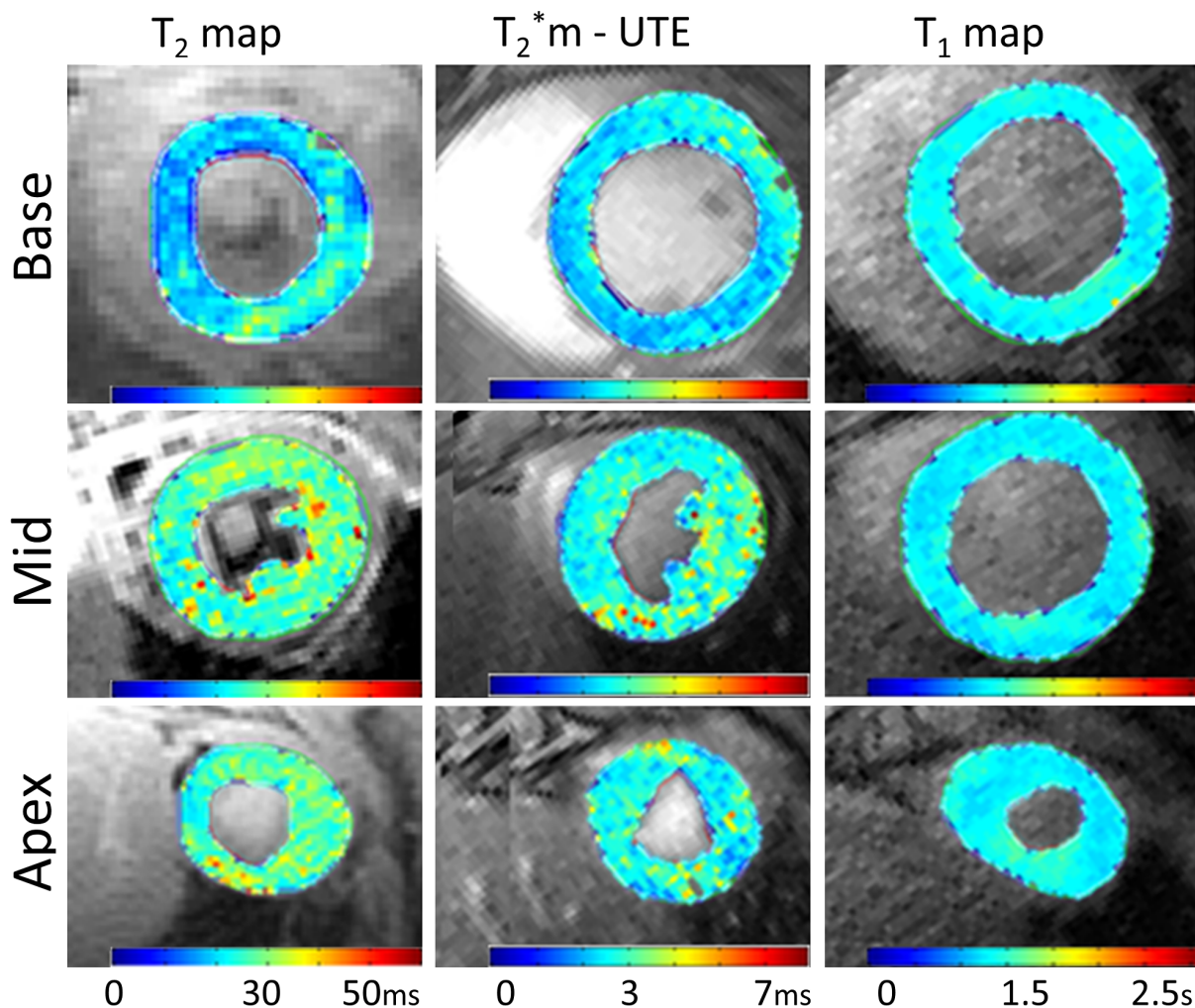


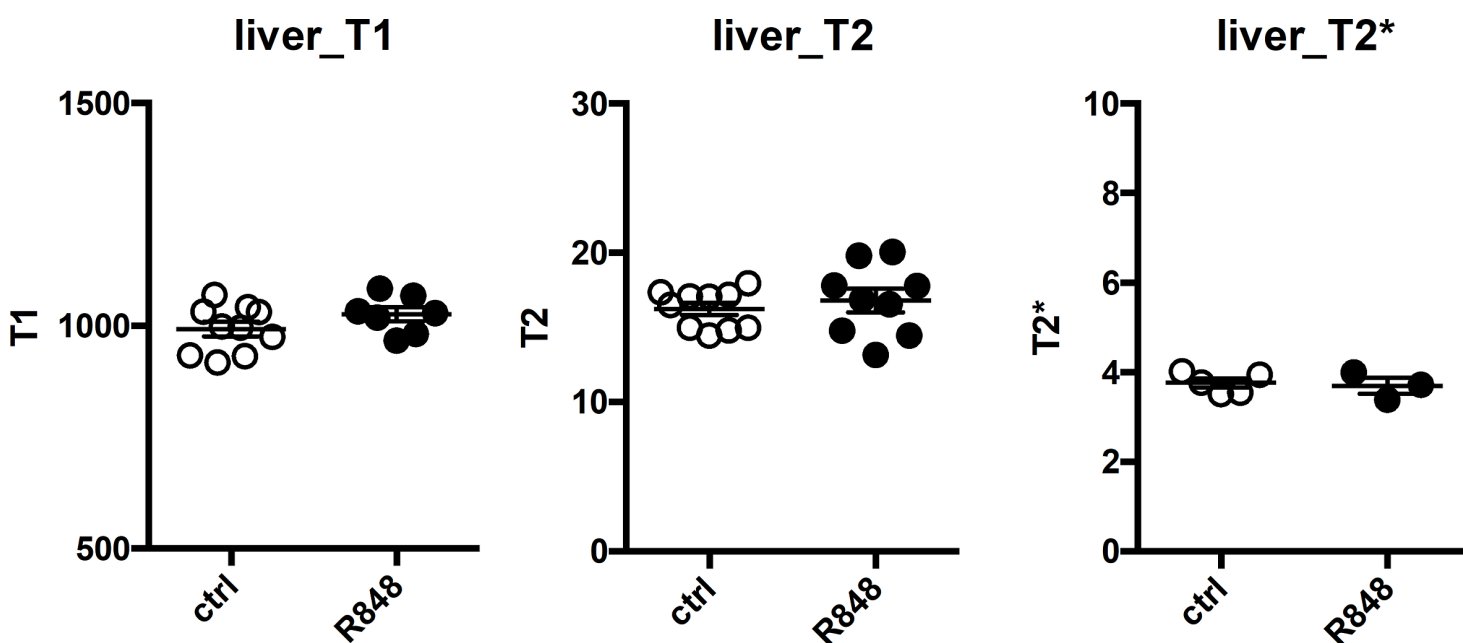
Supplementary Figure 1



<b>MRI Methods</b>	T <sub>2</sub> map (MSSE) Base, Mid, Apex	T <sub>2</sub> <sup>*</sup> map (UTE) Base, Mid, Apex	Native T <sub>1</sub> map (Look-Locker) Base, Mid, Apex
<b>Diffuse myocardial involvement</b>	Oedema/ Inflammation	Bleeding/Iron	Diffuse fibrosis
	~ 4 min/slice	~ 14 min/slice	~ 4 min 30s /slice No contrast agent

**Figure S1:** Improved multi-parametric approach to assess tissue damage by T<sub>1</sub>, T<sub>2</sub> and T<sub>2</sub><sup>\*</sup> mapping. Representative T<sub>1</sub>, T<sub>2</sub><sup>\*</sup> and T<sub>2</sub> maps acquired at base, midsection and apex of healthy mice showing the feasibility of this approach.

Supplementary Figure 2



**Figure S2:** MRI mapping parameters in the liver appear largely normal. Potential iron deposition and inflammatory damage to the liver in Resiquimod treated mice was assessed by T<sub>1</sub>, T<sub>2</sub> and T<sub>2</sub><sup>\*</sup> measurements in MRI.