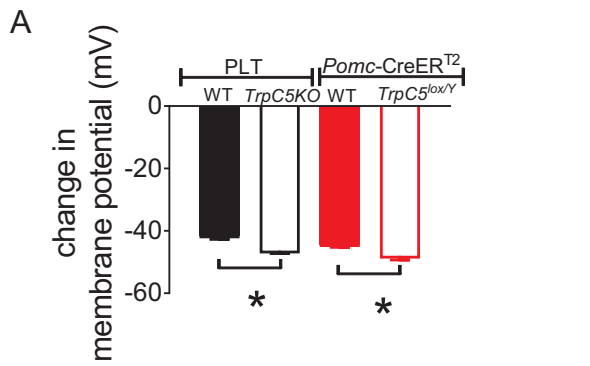
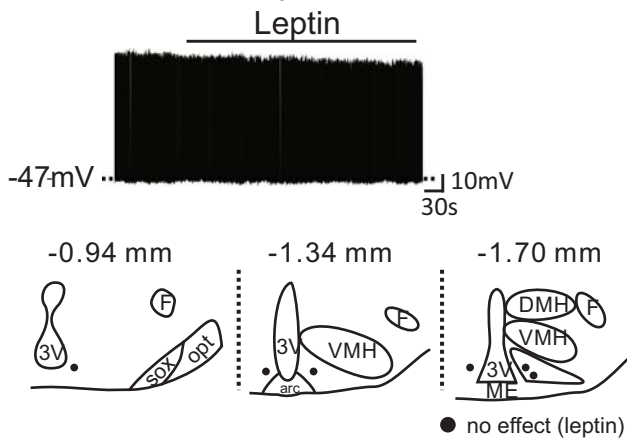


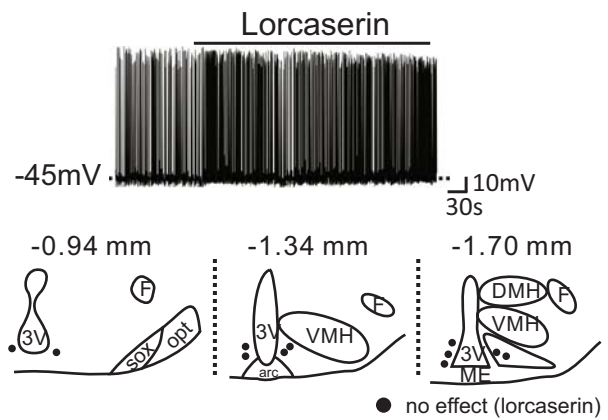
Supplemental Figure 1



B *Pomc-CreER::TrpC5^{lox/Y}::tdtomato*



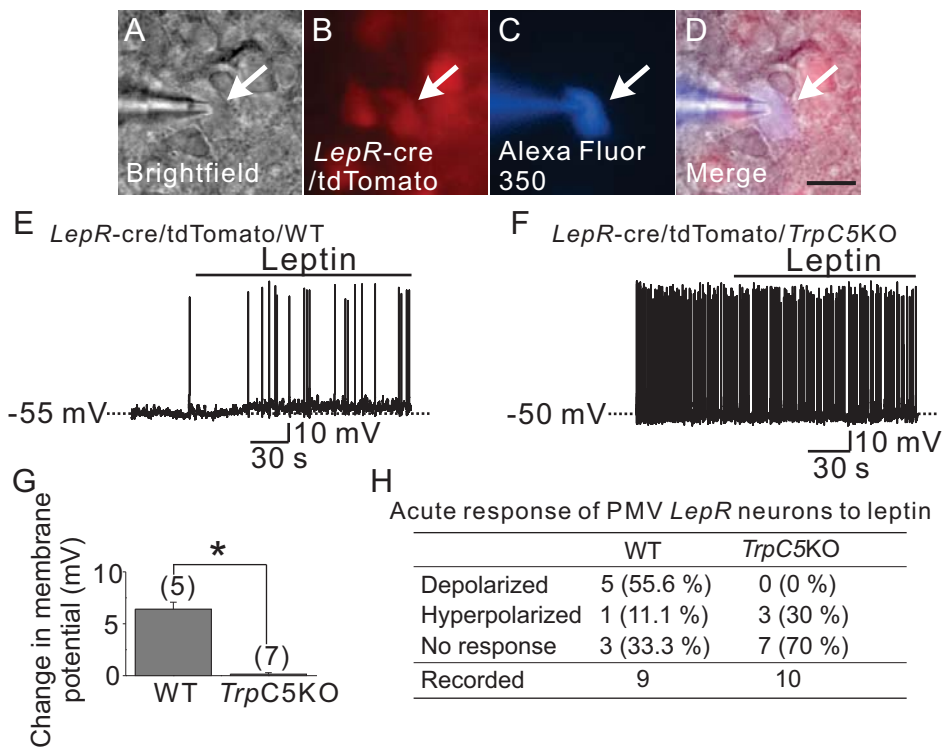
C *Pomc-CreER::TrpC5^{lox/Y}::tdtomato*



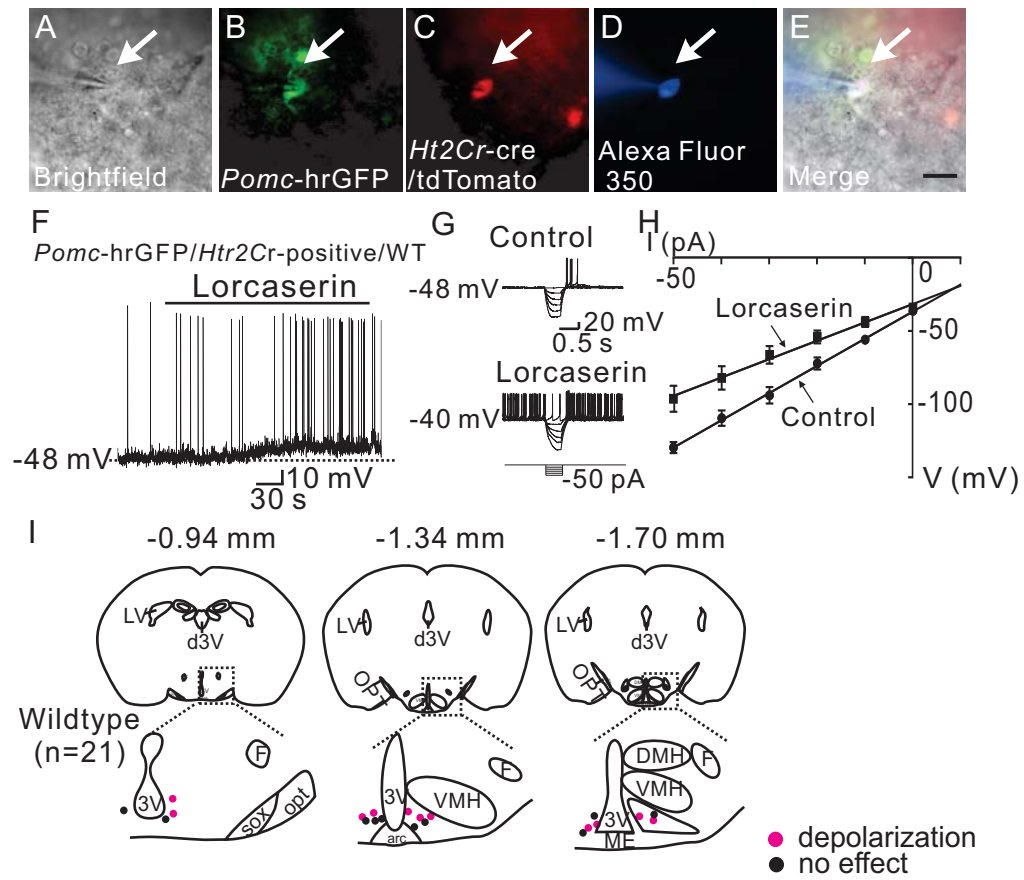
D Acute effects of lorcaserin on *TrpC5* negative *Pomc* neurons

	Hyperpolarized	Depolarized	No response
Lorcaserin (n=11)	0(0%)	0(0%)	11(100%)
Leptin (n=6)	0(0%)	0(0%)	6(100%)

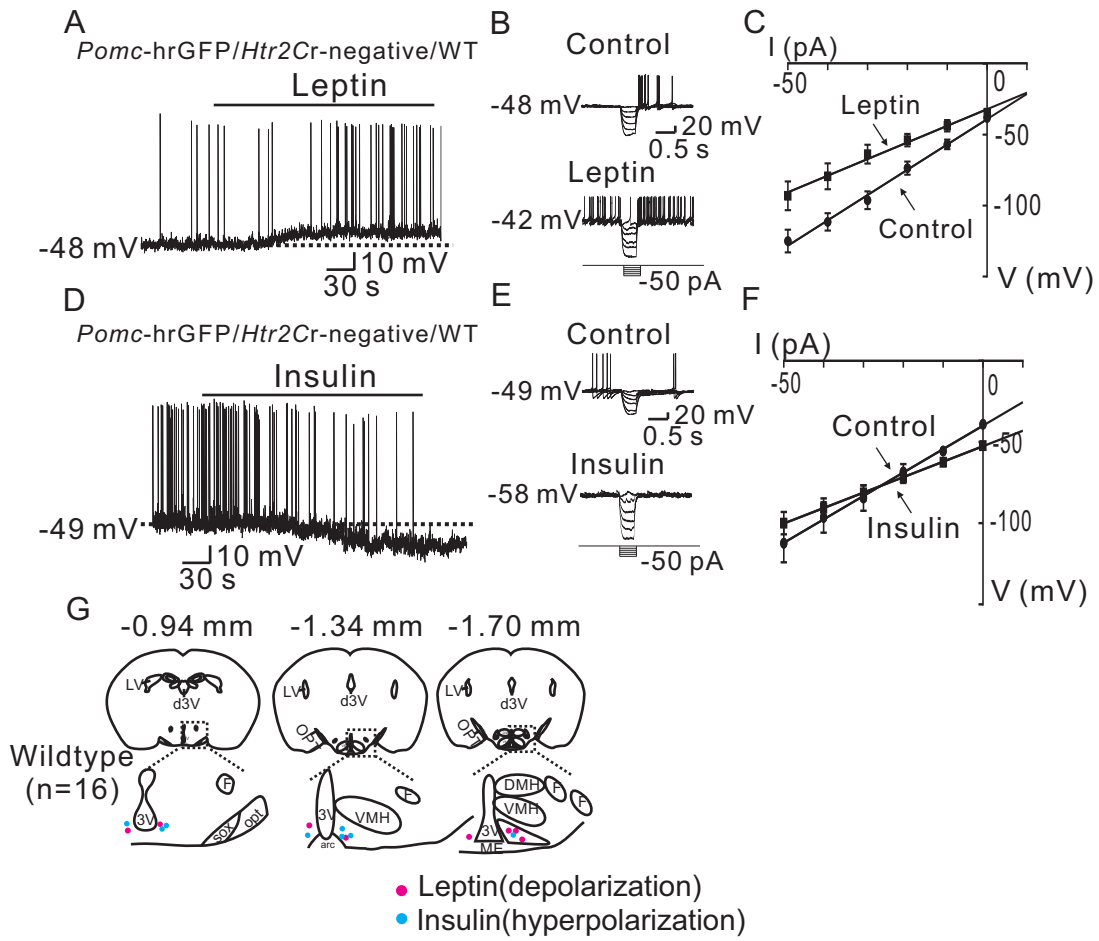
Supplemental Figure 2



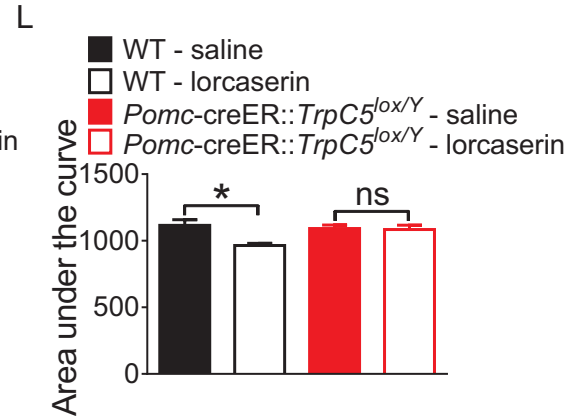
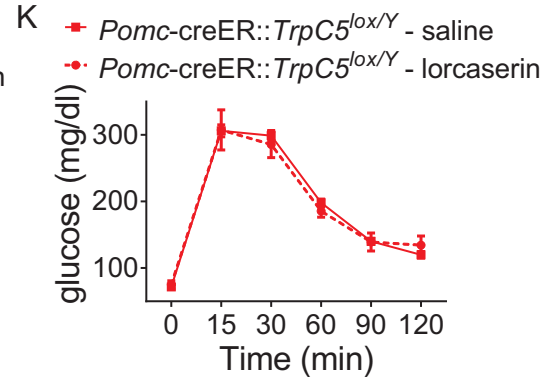
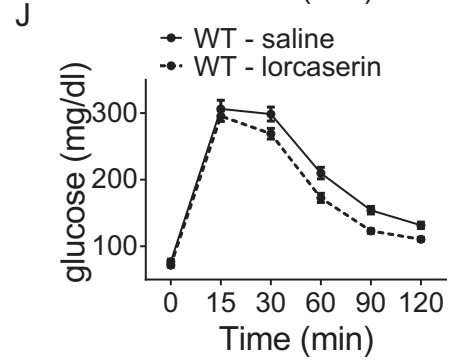
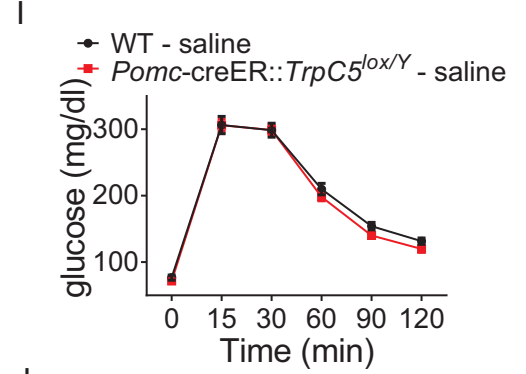
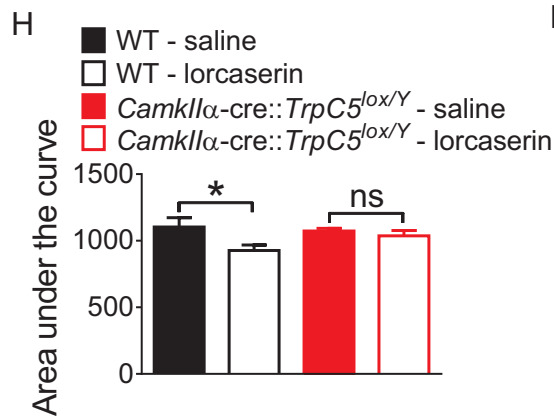
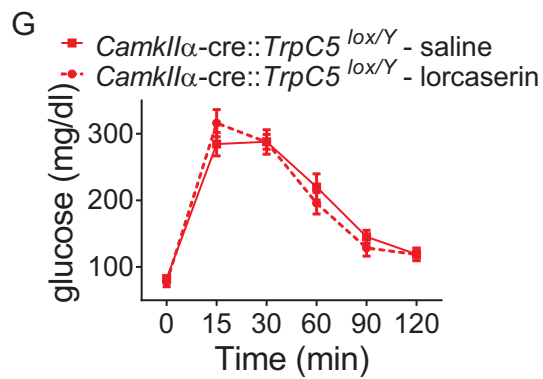
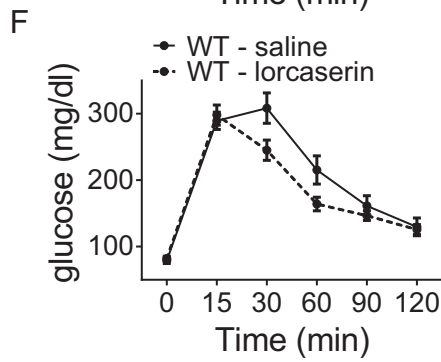
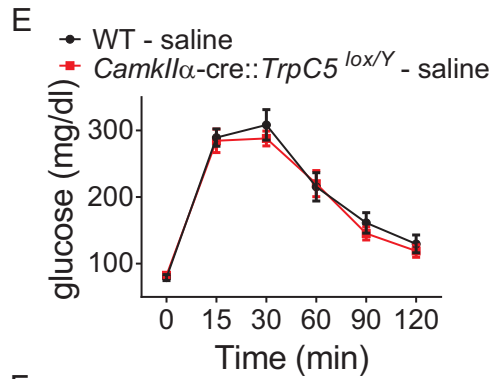
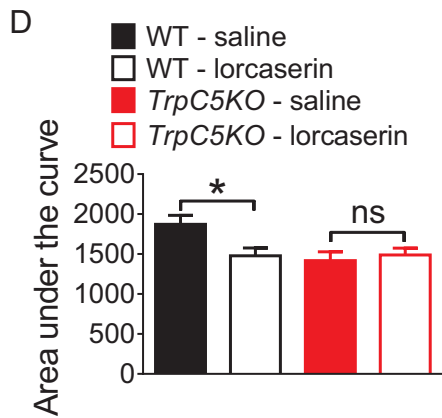
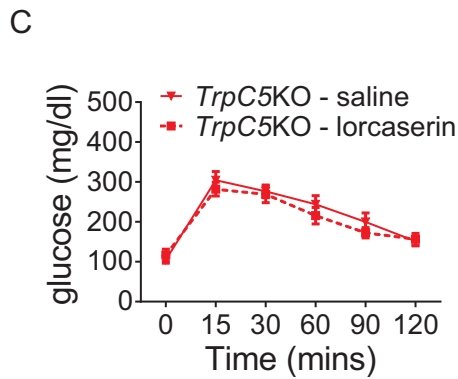
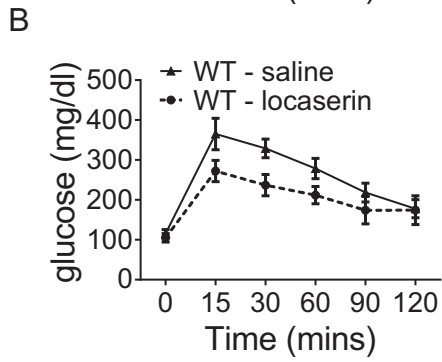
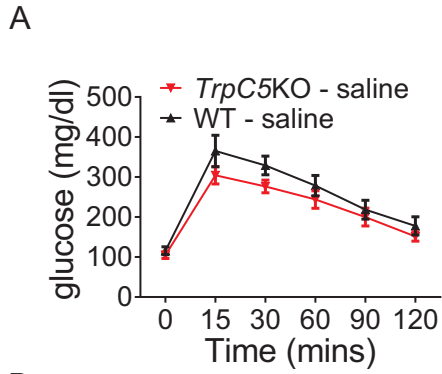
Supplemental Figure 3



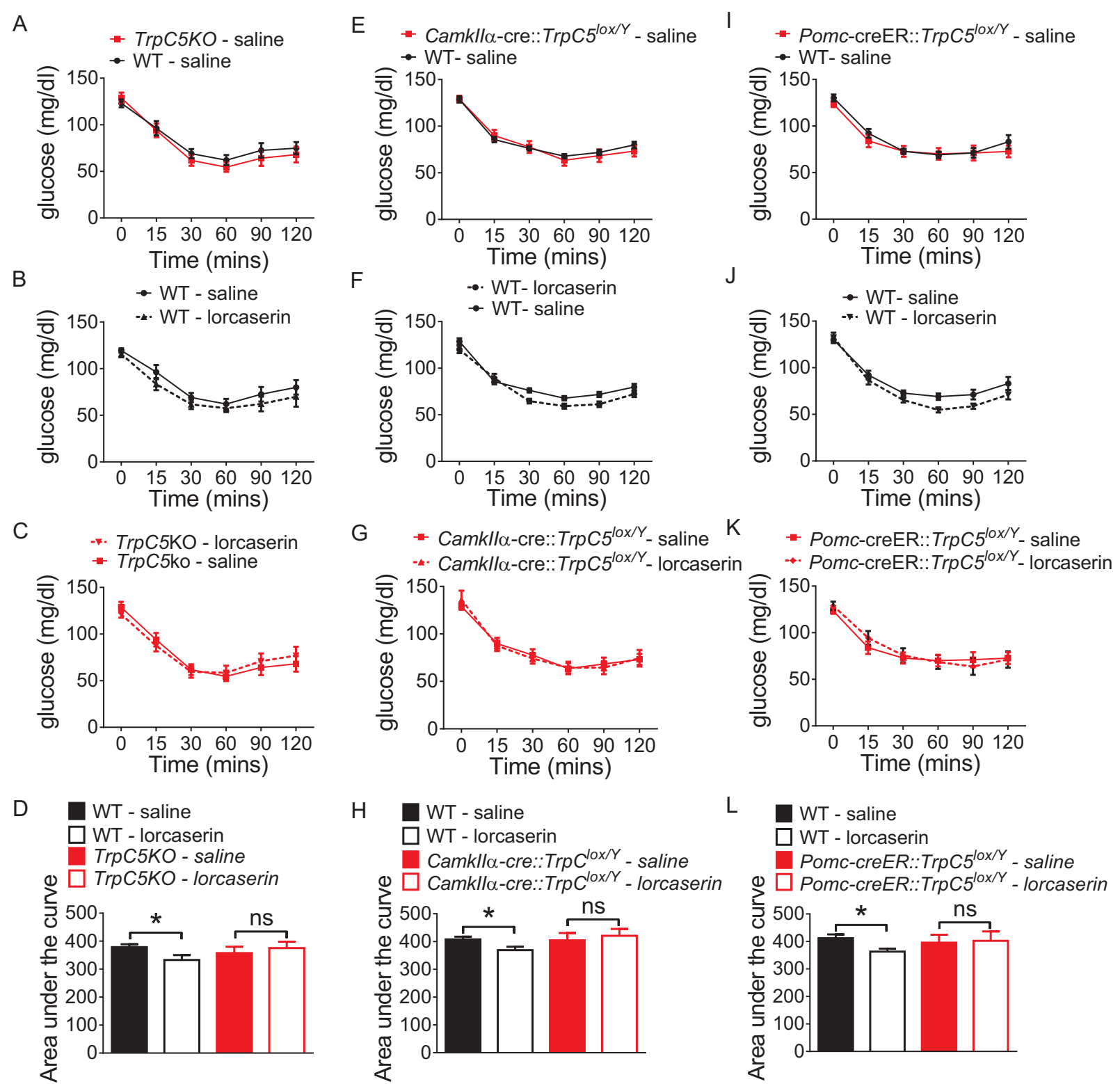
Supplemental Figure 4



Supplemental Figure 5



Supplemental Figure 6



Supplemental Table 1

Pomc-hrGFP::*LepR*-cre-tdtomato (PLT) mice

Action Potential Frequency		Resting Membrane Potential	
Leptin Treatment		Leptin Treatment	
Before Leptin	2.3 ± 0.9 Hz	Before Leptin	-46.1 ± 2.1 mV
After Leptin	5.6 ± 1.1 Hz	After Leptin	-40.2 ± 1.5 mV
Lorcaserin Treatment		Lorcaserin Treatment	
Before Lorcaserin	2.4 ± 0.4 Hz	Before Lorcaserin	-45.6 ± 1.1 mV
After Lorcaserin	7.3 ± 1.6 Hz	After Lorcaserin	-40.4 ± 0.8 mV
mCPP Treatment		mCPP Treatment	
Before mCPP	2.0 ± 0.6 Hz	Before mCPP	-44.8 ± 1.2 mV
After mCPP	4.1 ± 0.5 Hz	After mCPP	-38.5 ± 1.3 mV

Supplemental Table 2

Pomc-hrGFP::*LepR*-cre-tdtomato-*TrpC5*KO (PLT5KO) mice

Action Potential Frequency		Resting Membrane Potential	
Leptin Treatment		Leptin Treatment	
Before Leptin	1.8 ± 1.1 Hz	Before Leptin	-49.5 ± 1.1 mV
After Leptin	2.2 ± 0.8 Hz	After Leptin	-48.3 ± 1.0 mV
Lorcaserin Treatment		Lorcaserin Treatment	
Before Lorcaserin	1.9 ± 0.5 Hz	Before Lorcaserin	-48.7 ± 1.8 mV
After Lorcaserin	2.3 ± 0.9 Hz	After Lorcaserin	-49.1 ± 1.7 mV
mCPP Treatment		mCPP Treatment	
Before mCPP	1.6 ± 0.6 Hz	Before mCPP	-48.3 ± 1.4 mV
After mCPP	2.3 ± 0.9 Hz	After mCPP	-48.2 ± 1.5 mV

Supplemental Table 3

Pomc::Ht2Cr-cre::tdtomato (P2CT) mice

Action Potential Frequency		Resting Membrane Potential	
Leptin Treatment		Leptin Treatment	
Before Leptin	2.3 ± 0.6 Hz	Before Leptin	-46.2 ± 2.0 mV
After Leptin	2.6 ± 0.7 Hz	After Leptin	-46.0 ± 2.4 mV
Lorcaserin Treatment		Lorcaserin Treatment	
Before Lorcaserin	1.9 ± 1.0 Hz	Before Lorcaserin	-46.0 ± 1.3 mV
After Lorcaserin	5.6 ± 1.3 Hz	After Lorcaserin	-37.8 ± 1.1 mV

Supplemental Table 4

Pomc-creER^{T2}::tdtomato mice

Action Potential Frequency		Resting Membrane Potential	
Leptin Treatment		Leptin Treatment	
Before Leptin	2.1 ± 1.0 Hz	Before Leptin	-45.3 ± 1.9 mV
After Leptin	6.0 ± 0.8 Hz	After Leptin	-39.0 ± 1.3 mV
Lorcaserin Treatment		Lorcaserin Treatment	
Before Lorcaserin	2.0 ± 0.5 Hz	Before Lorcaserin	-46.0 ± 2.0 mV
After Lorcaserin	6.1 ± 1.1 Hz	After Lorcaserin	-40.7 ± 1.1 mV

Pomc-creER^{T2}::tdtomato::TrpC5^{lox/Y} mice

Action Potential Frequency		Resting Membrane Potential	
Leptin Treatment		Leptin Treatment	
Before Leptin	1.5 ± 0.8 Hz	Before Leptin	-49.2 ± 2.9 mV
After Leptin	2.0 ± 0.9 Hz	After Leptin	-48.9 ± 3.5 mV
Lorcaserin Treatment		Lorcaserin Treatment	
Before Lorcaserin	1.9 ± 0.8 Hz	Before Lorcaserin	-48.8 ± 1.1 mV
After Lorcaserin	1.8 ± 0.8 Hz	After Lorcaserin	-48.6 ± 1.5 mV