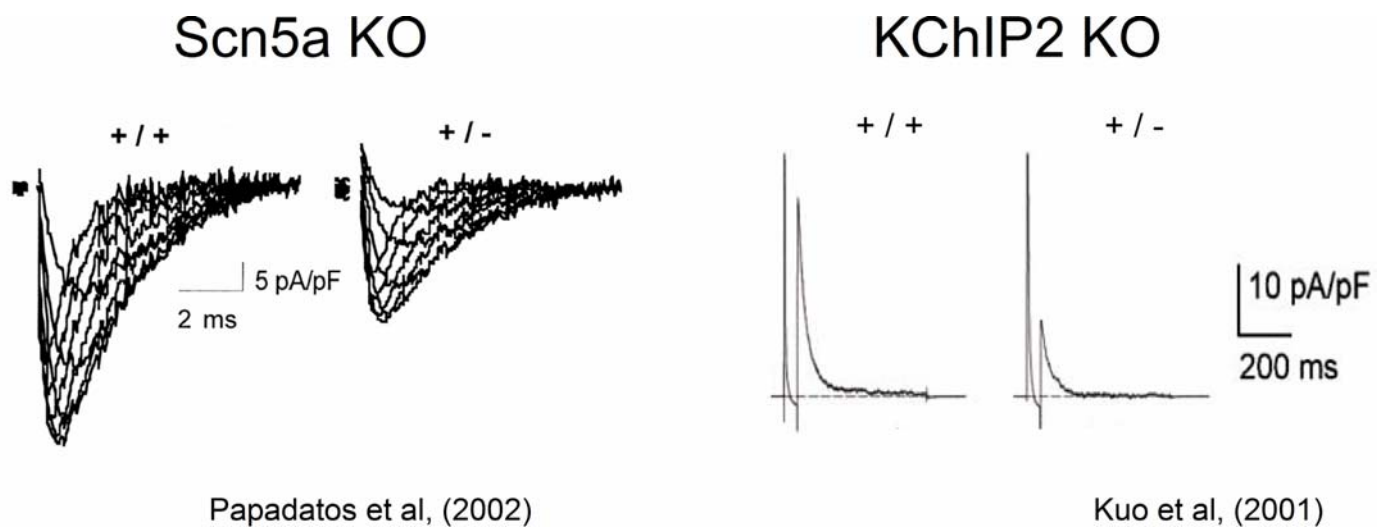


Haploinsufficiency Mutations in Human Cardiac Ion Channel Genes

I_{Ks}	KCNQ1	Wang et al 1999
I_{Kr}	KCNH2 (HERG)	Sanguinetti et al 1996
I_{K1}	KCNJ2 (Kir2.1)	Fodstad et al 2004
I_{Na}	SCN5A	Chen et al 1998

Heterozygous Knockouts in Mouse

I_{Na}	SCN5A	Papadatos et al 2002
I_{to}	KChIP2	Kuo et al 2001



Heterozygous Knockouts in Mouse Brain Channels

I_{Na}	Nav1.1	~50% reduction in protein and current	Yu et al 2006
I_{Na}	Nav1.2	~ 50% reduction in mRNA and current	Planells-Cases et al 2000
I_{mAHP}	KCNQ2	~ 50% reduction in current	Tzingounis and Nicoll 2008
I_K	Kv1.2	~ 50% reduction in mRNA and protein, altered electrophysiology	Brew et al 2007
I_{Ca}	Cav2.3	impaired motor learning and reduced LTD	Osanai et al 2006
I_{Ca}	gamma1	~ 50% reduction in protein and altered biophysical properties	Ahern et al 2001