

## Supplementary Table

Previously reported *CACNA1A* variants linked to congenital ataxia (CA) including functional consequences and molecular localization (protein domain). Adapted from Izquierdo-Serra et al [1].

	Variant (p.)	Domain	References (clinical descriptions of CA linked to variants in literature)
Gain of Function (GoF)	T666M	Pore-Selectivity filter	[2,3]
	D715E	Pore	[3,4]
	V1396M	Pore	[5,6]
	ΔF1502	Pore	[7,8]
	I1811L	Pore	[9]
	R1349Q/R1350Q/R1352Q	Voltage sensor	[5, 10-13]
	S218L	Linker S4-S5	[14,15]
Loss of function (LoF)	R1664Q	Voltage sensor	[16, Present work]
GoF and LoF	R1673P	Voltage sensor	[17]
	Y1384C/Y1385C	Pore	[18, 19]
Not known	I712V	Pore	[20]
	V1696F	Pore	[21]
	S1799L	Pore	[22]
	F1394L	Pore	[Present work]
	I1338T	Voltage sensor	[23]
	I1342T	Voltage sensor	[5]
	R1359W	Voltage sensor	[22]

## Supplementary Table References:

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