Formas genéticas conhecidas da Síndrome de Brugada – 2010

Dr. Andrés R. Pérez Riera

Type and OMIM	Locus (Chr)	Ion channel	Gene	**REFERENCE/AUTHORS/MONTH/YEAR**
BrS1 / 601144	3p21	INa	*SCN5A, Nav1.5*	Chen Q, Kirsch GE, Zhang D, Brugada R,P, et al.Genetic basis and molecular mechanism for idiopathic ventricular fibrillation. Nature.1998 Mar 19;392:293-296.
BrS2 / 611778	3p24	INa	*GPD1L: Glycerol-3-phosphate dehydrogenase like peptide*	Weiss R, Barmada MM, Nguyen T, Seibel JS, Cavlovich D, Kornblit CA, et al.Clinical and molecular heterogeneity in the Brugada syndrome: a novel gene locus on chromosome 3.Circulation. 2002 Feb 12;105:707-713.
BrS3 / 114205	12p13.3	ICa	*CACNA1C, CaV1.2: Alpha subunit of cardiac L-type calcium channel.*	Antzelevitch C, Pollevick GD, Cordeiro JM, Casis O, Sanguinetti MC, Aizawa Y, et al. Loss-of-function mutations in the cardiac calcium channel underlie a new clinical entity characterized by ST-segment elevation, short QT intervals, and sudden cardiac

				death.Circulation. Arrhythmia and Electrophysiology 2007; Jan 30; 115: 442-449.
BrS4 / 600003	10p12.33	ICa	*CACNB2b, Cav2b Beta-2 subunit of the voltage dependent L-type calcium channel.*	Antzelevitch C, Pollevick GD, Cordeiro JM, Casis O, Sanguinetti MC, Aizawa Y, et al. Loss-of-function mutations in the cardiac calcium channel underlie a new clinical entity characterized by ST-segment elevation, short QT intervals, and sudden cardiac death.Circulation. Arrhythmia and Electrophysiology 2007; Jan 30; 115: 442-449.
BrS5 / 604433	11 Universityof,: 73.84	Ito	KCNE3 which coassembles with KCND3 Beta subunit to KCND3. Modulates the Ito potassium outward current Potassium voltage-gated channel, Isk-related family, member 3	Delpón E, Cordeiro JM, Núñez L, Thomsen PE, Guerchicoff A, Pollevick GD, et al. Functional effects of KCNE3 mutation and its role in the development of Brugada syndrome.Circ Arrhythm Electrophysiol. 2008; August 1: 209-218.
BrS6 / 600235	19	Na+	SCN1B Beta-1 subunit of the sodium channel SCN5A	Watanabe HJ, Koopmann TT, Le Scouarnec S, Yang T, Ingram CR, Schott JJ, et al. Sodium channel beta1 subunit mutations associated with Brugada syndrome and cardiac conduction disease in humans.Clin.

				Invest. 2008; Jun; 118: 2260–2268.
BrS7	7	Kv11.1	KCNH2 hERG (the human Ether-à-go-go Related Gene)	Wilders R, Verkerk AO. Role of the R1135H KCNH2 mutation in Brugada syndrome.Int J Cardiol. 2010 Sep 24;144:149-151.

Prezados Amigos El Dr CharlesAntzelevitch acaba de corregirme mi pesquiza bibliográfica en referencia a los tipos genéticos del síndrome de Brugada. Existe segun él un error mio en esta clasificación al considerar el tipo 7 como siendo una variante KCNH2

Dearest Andrés: are you fine?
The KCNH2 variant described by Wilders is a modulating factor and is not disease-causing according to the authors.
I have attached the papers for BrS7 and BrS8
We will also be redefining SCN1B mutations as causing a gain of function of Ito in a future paper, but that is not published as yet
Charlie

Prezado Andrés, la variante KCNH2 descripta por Wilders es un factor modulador y no es causante de la enfermedad de acuerdo a los autores.
Te envio en anexo ahora los manuscritos de las variantes 7 y 8.
Nosotros también redefiniremos 1B como causa de una ganancia en la función del canal Ito en un articulo futuro, pero no ha sido publicado todavia.

BrS BrS1 PVT AD 3p21 INa*SCN5A, $Na_v1.5$*
BrS2 PVT AD 3p24 INa*GPD1L*
BrS3 PVT AD 12p13.3 ICa*CACNA1C,$Ca_V1.2$*
BrS4 PVT AD 10p12.33 ICa*CACNB2b, $Ca_v\beta_{2b}$*
BrS5 PVT AD 19q13.1 INa*SCN1B*,*$Na_v\beta1$*
BrS6 PVT AD 11q13-14 Ito*KCNE3. MiRP2*
BrS7 PVT AD 11q23.3 INa*SCN3B, Navb3*
BrS8 PVT AD7q21.11ICa*CACNA2D1*,*$Ca_V\alpha2\delta$*

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