A mathematical modeling toolbox for ion channels and transporters across cell membranes

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The following supplementary material is from " A mathematical modeling toolbox for ion channels and transporters across cell membranes" manuscript. It contains an overview of all equations related to Ion channels, Pumps, Cotransporters, and Symporters, organized in a table form. The detailed transporters along with the descriptions of their equatuons can be found from here.

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1.1.5. *Two pore domain potassium channels*

Two-Pore-domain potassium channels	**Ref**
$$I''^{M,N}_{K,leak\ channels} = P^{M-N}_{K,K2P}\ \frac{z_K^2 F^2 V_m^{M-N}}{RT}\ \frac{[K]_M - [K]_N exp\frac{-z_K F V_m^{M-N}}{RT}}{1 - exp\frac{-z_K F V_m^{M-N}}{RT}} \quad (29)$$	[11]
$$V^{M-N}_{K,rev} = \frac{RT}{z_K F} ln\Big(\frac{[K]_{M(out)}}{[K]_{N(in)}}\Big) \quad (30)$$	

Table 2: The corresponding equations describing the current transported via Two pore domain potassium channels across the cell membrane