



האוניברסיטה העברית - הפקולטה לחקלאות המכון לביוכימיה, מדעי המזון והתזונה



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הנושא:

Voltage-gated calcium channels function as Ca(2+)- activated signaling receptors

המפגש יתקיים

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מועדון סגל

Abstract:

Voltage-gated calcium channels (VGCCs) are transmembrane cell surface proteins responsible for multifunctional signals. In response to voltage, VGCCs trigger synaptic transmission, drive muscle contraction, and regulate gene expression. Voltage perturbations open VGCCs enabling Ca(2+) binding to the low affinity Ca(2+) binding site of the channel pore. Subsequent to permeation, Ca(2+) targets selective proteins to activate diverse signaling pathways. It is becoming apparent that the Ca(2+)-bound channel triggers secretion in excitable cells and drives contraction in cardiomyocytes prior to Ca(2+) permeation. Recent data implicate receptor-like function of the Ca(2+)-bound channel in converting external Ca(2+) into an intracellular signal. The two sequential mechanistic perspectives of VGCC function acting as a signaling molecule and as channels that introduce CA2+ in to the cells highlight novel mechanistic aspects to the context of the prevailing and long-standing current models of depolarization-evoked secretion and cardiac contraction.

סגל וסטודנטים מוזמנים להשתתף

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