

Distinguished Lecture Series in Physiology

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“Structural energetics of cold sensitivity in TRPM8 and beyond”

Thermosensitive TRP ion channels enable somatosensory nerve fibers to detect changes in our thermal environment over a wide physiologic range. In mammals, the menthol receptor, TRPM8, is activated by temperatures below ~26°C and is essential for the perception of cold or chemical cooling agents. A fascinating, yet still unachieved goal is to elucidate structural mechanisms whereby TRPM8 or other thermosensitive channels are gated by changes in ambient temperature. In this study, we combined structural analysis with HDX-MS to unravel the structure energetics of cold sensitivity. Beyond TRPM8, I would like to illustrate the significance of studying conformational ensembles in structural biology.

Thursday, Oct. 29, 2026
GBSF and Zoom
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Oct. 29



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