A visual pigment with two physiologically active stable states

By hochstein
Created 9/1/2011
By hochstein September 1, 2011


Abstract:

Red illumination of a Balanus amphitrite photoreceptor that has been adapted to blue light leads to prolonged depolarization in the late receptor potential. This depolarization can be switched off by further exposure to a blue stimulus. The early receptor potential in this cell is purely depolarizing or largely hyperpolarizing; the former is true if the cell has been adapted to red light, and the latter, if blue light has been used. The color-adaptation "memories" for both early and late receptor potentials appear to be permanent. The existence of two stable states for the early receptor potential directly implies a pigment with two stable states, and these apparently contribute antagonistically to the late receptor potential.

Journal:
Science {{New} York, {N.Y.}}

Volume:
175

Pagination:
1486?1488

Notes:

{PMID:} 5013683
Our Int'l Ph.D. program provides outstanding students with top-notch courses in computational neuroscience.

The Jerusalem Brain Sciences Building will provide a state-of-the-art research and teaching facility for the Edmond and Lily Safra Center for Brain Sciences.

Get into our media channel and investigate ELSC's latest videos: seminars, public lectures, courses and video articles.

Source URL: https://elsc.huji.ac.il/hochstein/publications/visual-pigment-two-physiologically-active-stable-states