A visual pigment with two physiologically active stable states

By hochstein
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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.

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