The evolution of animal self-medication

Abstract

Infection by parasites, viruses and other pathogens affect an animal's behavior, health and reproductive fitness. In response, across the animal kingdom, species have evolved a variety of means by which they counteract these affronts to their health homeostasis. Four basic modes for achieving this are: 1) behavioral avoidance or reduction of disease transmission: 2) ingestion of items with a prophylactic affect: 3) ingestion of substances of direct therapeutic value against pathogens: and 4) external application of these substances to the body or living area for the control of disease transmitting invertebrates. Primates have provided considerable evidence for the control of intestinal parasites across all four modes, and there is much evidence being gathered across the animal kingdom to demonstrate the universality of this adaptive strategy. Traditionally, humans have also looked to the behavior of sick animals for insights into the uses of medicinal plants for themselves and their livestock. In this light, the field is abound with options for research into the applications for phytotherapy in captive and domestic livestock health care maintenance.