

In this issue

Quinine sensitization

Ever since Jesuit priests discovered the anti-malarial properties of the cinchona bark, quinine has been used as a therapeutic for treatment of malaria and as a prophylactic in endemic areas. Although displaced in recent times by synthetic antimalarials, quinine is still important in view of the increased incidence of drug-resistant *Plasmodium* infections, treatment of which will eventually require the availability of diverse therapeutics.

Commenting on a paper published earlier in *Current Science* (Talwar *et al.* 1995, 68, 437-440), Sharma (page 430, this issue) raises an important question on the advisability of using quinine in contraceptive cream formulations and more generally for non-therapeutic purposes. The case of the 'blackwater fever' syndrome is highlighted, where quinine 'sensitized erythrocytes' may become targets for immune attack following *Plasmodium falciparum* infection. Sharma's letter should focus attention on the need to enhance the range of available tools for checking the spread of malaria and more importantly, to consider courses of action for the future, when drug resistance will undoubtedly become a major public health issue. In his response Talwar (page 431) notes that the more recent polyherbal cream formulations contain no quinine at all.

P. Balaram

Calories and longevity

Should one eat less? The answer would appear to be an emphatic yes, if the decision were to be based only on the results reported by Subba Rao *et al.* (page 464). The authors draw an interesting correlation between calorie intake and DNA repair enzyme activities in groups of 'normal' and 'undernourished' human subjects. Diminished consumption appears to result in higher repair enzyme activities (in peripheral lymphocytes), as compared to the control group. Since DNA repair mechanisms are critical for survival of cells and organisms, there have been earlier claims that life span may be related to the capacity to repair DNA damage. This study extends to humans, earlier conclusions based on studies of experimental animals.

P. Balaram

Palaeolake implications

Sediments of the old and the now vanished lakes formed in the later Quaternary epochs unfold eloquent records of the climate changes and the tectonic upheavals that overtook the land 50,000 to 40,000 years ago. The information these palaeolakes provide is valuable for understanding the trend of change in climate and the nature and pat-

tern of earthquakes and resultant landslides. By determining the recurrence intervals of catastrophic natural phenomena, it is possible to attempt prediction of hazards.

T. N. Bagati and his associates (page 479) describe a palaeolake nestling 3600 m above sea level on the northern flank of the Himalaya (Zaskar Range), close to the geological junction of the Indian and Asian continents. They show that the lake originated 45,000 years ago, practically in the same period when many existing and palaeolakes were formed in the Spiti basin in north-eastern Himachal and in Kumaun in the central sector of the Himalaya mountain; as the studies of our group demonstrated. Significantly, the Ladakh lake, like the lakes of Kumaun, evolved as a result of ponding of rivers following tectonic movements of appreciable severity. Another important finding is that the presence of charcoal in the lake sediments, like those of the Kumaun lakes, indicates forest fires resulting presumably from lightning. It seems that forests in dry warm climate caught fire all over the Himalayan domain. The development of warm climatic condition is substantiated by magnetic susceptibility studies. It seems that the whole of the north-western Himalaya was rocked by major earthquakes and attendant hazards some 45,000 years ago.

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