

## REVIEWS

SITPRIJA, V., SUVANPHA, R., POCHANUGOOL, C., CHUSIL, S. and TUNGSANGA, K. (Department of Medicine, Chulalongkorn Hospital Medical School, Bangkok, Thailand) Acute intestinal nephritis in snake bite. *Am. J. trop. Med. Hyg.* 31, 408 (1982).

ACUTE renal failure with prolonged oliguria was observed in a patient following the bite of a Russell's viper (*Vipera russelli siamensis*). Renal biopsy revealed interstitial nephritis in addition to tubular necrosis and mesangial proliferation usually noted. There was no deposition of immunoglobulins. The finding expands the spectrum of renal changes in snake bite.

(Authors abstract)

H. P. KOLM

MORRIS, J. G., JR, LEWIN, P., SMITH, C. W., BLAKE, P. A. and SCHNEIDER, R. (Bacterial Diseases Division, Centers for Disease Control, Atlanta, GA 30333, and Department of Health, Virgin Islands of the United States, U.S.A.) Ciguatera fish poisoning: epidemiology of the disease on St. Thomas, U.S. Virgin Islands. *Am. J. trop. Med. Hyg.* 31, 574 (1982).

IN A RANDOM household survey conducted on St. Thomas, U.S. Virgin Islands, the incidence of ciguatera fish poisoning was found to be 36.5 cases per 1000 population per 5 years (95% confidence limits  $\pm$  16.9 cases per 1000 population per 5 years). An average of 3.6 cases per 1000 population per year were diagnosed in the hospital emergency room on St. Thomas. Cases seen in the emergency room occurred most frequently among persons aged 30-39 years. No clear seasonality for cases could be demonstrated. In an investigation of cases occurring between 1 January and 10 April 1980, illness was caused by a variety of different fish, with carrang (*Caranx ruber*) the species most commonly implicated. Patients and age-matched controls ate fish with equal frequency; patients were significantly more likely to have had previous episodes of ciguatera fish poisoning than were controls.

(Authors abstract)

H. P. KOLM

STONE, B. L. and GRAY, W. R. (Department of Biology, University of Utah, Salt Lake City, UT 84112, U.S.A.) Occurrence of hydroxyproline in a toxin from the marine snail *Conus geographus*. *Archs Biochem. Biophys.* 216, 765 (1982).

A 22-RESIDUE peptide toxin from the venomous marine snail *Conus geographus* (L.) was found to have a most unusual amino acid composition: Lys<sub>4</sub>, Arg<sub>3</sub>, 1/2 Cys<sub>6</sub>, Asx<sub>2</sub>, Glx<sub>2</sub>, Thr, Ala, plus three residues of *trans*-4-hydroxyproline. Absence of Gly and Pro indicates that the hydroxyproline must be in sequences different from those in which hydroxyproline occurs in collagen and other proteins.

(Authors abstract)

H. P. KOLM

BROWN, W. V. and MOORE, B. P. (Division of Entomology, CSIRO, P.O. Box 1700, Canberra City, A.C.T. 2601, Australia) The defensive alkaloids of *Cryptolaemus montrouzieri* (Coleoptera: Coccinellidae). *Aust. J. Chem.* 35, 1255 (1982).

THE CHEMICAL defensive system of the ladybird *Cryptolaemus montrouzieri* consists mainly of three related alkaloids. Two of these have been identified as *cis*-1-(6-methyl-2-piperidyl)propan-2-one and 1-methyl-9-azabicyclo[3,3,1]nonan-3-one; the third is very unstable and readily isomerizes to the first compound.

H. P. KOLM

STONE, B. F., NEISH, A. L. and WRIGHT, I. G. (Divisions of Entomology and Animal Health, CSIRO, Long Pocket Laboratories, Private Mail Bag 3, Indooroopilly, Queensland 4068, Australia) Immunization of rabbits to produce high serum titres of neutralizing antibodies and immunity to the paralyzing toxin of *Ixodes holocyclus* Aust. *J. exp. Biol. med. Sci.* 60, 351 (1982).

RABBITS have been immunized against the effects of the paralyzing toxin of the Australian paralysis tick *Ixodes holocyclus* by injecting them with preparations extracted from tick salivary glands. Immunized rabbits were able to withstand doses of toxin known to kill unimmunized rabbits.

Neutralizing antibodies were detectable in serum after 2-4 doses of the crude extract or of the relatively pure antigenic fraction. When injections were continued at intervals of from 2-7 weeks, hyperimmunity was retained for at least 68 weeks. Hyperimmune serum, reaching a very high titre of neutralizing antibodies, was obtained after 3-6 injections. Titres tended to decline when boosting ceased, but after a 'rest period' high titres were restored by further boosting with normally lethal doses of toxin. No symptoms of tick paralysis developed