

Reptile

Snake venom can prevent heart attacks

The scientists at the Indian Institute of Chemical Biology, Kolkata have isolated organspecific haemorrhagic chemicals from Snake Venom that target lung, eye, brain and intestine. In their latest study, they purified a haemorrhagin that specifically causes bleeding of skin and muscle. The toxin, which the researchers called VRR-73 has a relative molecular mass of 73,000. In laboratory tests VRR-73 has been found to be even better at breaking down fibrin than urokinase, a standard drug currently used to dissolve the blood clots that lead to heart attacks.

When the blood of experimental mice was injected with 2 mg of VRR-73, it did not clot even after 180 seconds, whereas clotting occurred in less than 90 seconds in control animals that did not receive the drug. The mechanism of the action of drug suggested that VRR-73 like urokinase, induces the breakdown of fibrin by activating a chemical called plasminogen. Production of this clot buster is being planned through genetic engineering (*News India*, August, 2001, 10).



Snake

Sericulture

Conversion of dead silkworm pupae into feed supplement

The dead silkworm pupae after drying in sun are used for feed purposes in small quantity. The Central Food Technological Research Institute (CFTRI), Mysore has now developed and patented a novel and environment-friendly process for conversion of dead silkworm pupae into quality feed supplement. By utilizing this process nearly 40,000 metric tonnes of silkworm pupae produced in the country every year would be converted into value added, eco-friendly and quality feed supplement.

The CFTRI process involves fermentation of a homogenized mass of silkworm pupae under microaerobic conditions. Care is taken to avoid growth of moulds and provide sufficient carbohydrate source during fermentation. The resultant mass is a paste like product which can be stored in airtight containers and used as feed supplement. The paste can be dried or powdered for incorporating it into aquaculture or poultry feeds. This feed is nutritionally comparable to commercially available fish meal. The process is cost effective and can be easily adapted for rural areas (*CSIR News*, 2002, 52, 20).

Spices

Use of 5-10g garlic is beneficial for cholesterol

The effect of garlic (*Allium sativum* Linn.) on cholesterol has been studied by several researchers. It is claimed to have both hypocholesterolemic and hypolipidemic effects and antioxidant properties.

Coconut and groundnut oils are very commonly used for cooking but the former is considered as an atherogenic oil as compared to the latter. However, studies have shown that a diet containing 20% coconut oil is hyperlipidemic in rats but incorporation of garlic oil or garlic cake counteracted such effects. Recently Augusti and his team at School of Medical Education, Mahatma Gandhi University, Kottayam has studied the effects of groundnuts and coconuts with and without cholesterol in the diet and also studied whether incorporation of garlic in the combined diet could ameliorate the bad effects of these oil seeds to any extent. Based on the results authors have recommended a regular use of 5-10g garlic in human diet especially for those who are above the age of thirty (Augusti *et al*, *Indian J Exp Biol*, 2001, 39, 660).



Allium sativum Linn.