

# Venom may be useful as painkiller

A chemical compound found in the venom of toxic Australian marine snails could eventually replace morphine in the treatment of chronic pain, Melbourne researchers say.

Thought to be more powerful and long-lasting than morphine, the drug ACV1 has been patented by University of Melbourne scientists after being isolated from snails found on the Great Barrier Reef.

Researchers believe ACV1 could pave the way for a new era of treatment for chronic pain associated with cancer, AIDS and arthritis, without the addiction and side effects associated with morphine.

Department of Biochemistry

## **A deadly marine creature may provide a new form of pain relief derived from its poisonous toxin reports DARRIN BARNETT**

and Molecular Biology associate professor Bruce Livett says the research team is now seeking a commercial partner to begin human trials and develop it as a medical treatment.

"One company already has a drug from a coneshell toxin (conotoxin) that has reached the final stages of human trials," Prof Livett said.

"But when administered to some patients it has given unwanted side effects that include raised blood pressure.

"ACV1 acts on a different class of pain receptors to these drugs and is unlikely to exhibit the same side effects."

The drug works by blocking the peripheral nervous system, responsible for the transmission of pain from cuts, broken bones or internal injuries.

"The medical profession is crying out for alternative drug treatments," he said.

"There are potential wider applications for this compound, including pain relief

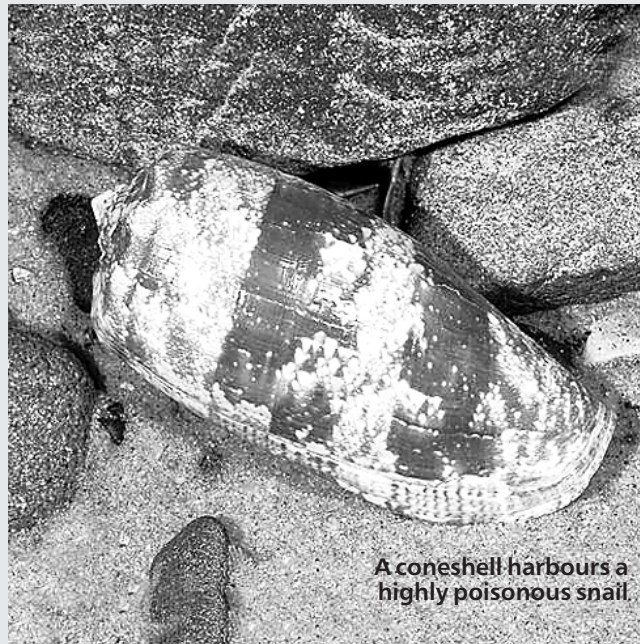
from sports injury and infection, for example shingles.

"In tests on rats it has also been found to accelerate wound healing where nerve damage has occurred."

While other competing drugs needed to be injected into the spinal column, ACV1 could be injected into the muscle or fat layer of patients, making it available to a wider group of patients, he said.

The snails, which live inside coneshells, use a special mouth-part to harpoon their prey and inject into them a paralysing toxin.

About 30 humans have died from their sting.



**A coneshell harbours a highly poisonous snail.**