



# South Pacific Snail May Be the New Pain Solution

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## Filipino scientists discovers snail poison is 1000 times more potent than morphine!

The cone snail of the South Pacific uses poison to kill prey and provide protection from predators. Humans stung by such snails die within minutes because the toxin is so powerful.

Lead scientist Bal-domero Olivera, a native of the Philippines, and his colleagues studied the deadly snail's venom. They isolated molecules in the venom and injected

mice to study the effects.

One molecule blocks pain signals through the spinal cord. If the signal cannot travel to the brain for processing, the body does not realize it is in pain! In humans, the drug was used on patients with terminal cancer and AIDS



(diseases that cause severe pain). The drug is now

in the last stages of testing before the FDA approves it for sale to the general public.

One interesting point; the discovery of this particular molecule was NOT made by a professional scientist, but by Michael McIntosh, just a few days after he graduated from high school. He eventually went to medical school and now works studying mental illness with the University of Utah.



The cone snail is native to Australia, Indonesia, and the Philippines. Photo credit: Kerry Matz, Image accessed 06/04/2008 <http://publications.nigms.nih.gov/findings/sept02/images/snail1.jpg>

### Taxonomy:

Domain	Eukarya
Kingdom	Animal
Phylum	<u>Mollusk...</u>
Species	<i>Conus geographus</i>



### Vocabulary to Know:

- \* **Potent**—powerful
- \* **Prey**—an animal taken by a predator as food
- \* **Toxin**—a poisonous substance produced by a living organism
- \* **Venom**—material that is poisonous
- \* **Terminal**—leading ultimately to death
- \* **Mollusk**—in Latin, Mollusca; any invertebrate with a shell and soft body, EX snail, octopus, clam

## Window to the World: The Philippines

7,000+ islands in the Pacific Ocean southeast of China (see black box on the map) make up what is known as the Republic of the Philippines.

The islands were a Spanish colony and then an

American colony for over four hundred years until the end of World War II.

About 87 languages and dialects are used in the islands.

Image accessed 06/04/2008 [http://en.wikipedia.org/wiki/Image:Map\\_of\\_Philippines.png](http://en.wikipedia.org/wiki/Image:Map_of_Philippines.png)

