慈濟大學分子生物暨人類遺傳學系碩士班

104 學年考試入學招生 英文科普文章測驗(筆試)

准考證號:	姓名:

(請閱讀下列文章後作答於考卷上) Insulin-infused venom helps cone snails net prey

The most venomous animal on the planet isn't a snake, a spider, or a scorpion; it's a snail—a cone snail, to be precise. According to the research paper, this marks the first time insulin has been discovered as a component of venom. Cone snails are notorious for stinging scuba divers tempted to pick up their beautiful shells.

The most venomous sea snail *Conus geographus* kills by overdosing fish with a toxic cloud containing insulin, plummeting blood sugar levels throw the victims into a stupor. Once the fish are in a sugar coma, the cone snail reaches out with what's called a false mouth—it looks like it's throwing a cape over its prey—and drags a stupefied animal into its mouth. The snail then stings the fish with another set of toxins, just to make sure its victim is completely paralyzed.

Conus geographus actually produce multiple variants of the hormone, some of which, like one called Con-Ins G1, are more similar to fish insulin than snail varieties. Con-Ins G1 isn't an exact match of fish insulin though; it's a stripped-down version that the team suspects may be missing bits that would let fish detect the overdose and respond. If they're correct, the snail's venom may yield insight into the nuances of how insulin is regulated that may extend to humans.

Answering Questions (佔筆試 50 分):

1) 根據以上科學報告,地球上最毒的動物是什麼? (5分)

2) 這種動物如何使用它的劇毒來狩獵它們的獵物?	(15 分)
3) 根據您的理解,這種毒素能影響/毒殺人類嗎?	請試著解釋爲什麼您如此認爲。(30 分)

請考生 Read First Paragraph 並請口試委員評分予下表 (佔筆試 50 分)

考生姓名	英文文章口語測驗評分 (佔筆試 50%) 【請以 0~50 分進行評分】

Insulin-infused venom helps cone snails net prey

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