Snail ‘memory transplant’ achieved through RNA transfer

Memory transfer has been at the heart of science fiction for decades, but it’s becoming more like science fact. A team successfully transplanted memories by transferring a form of genetic information called RNA from one snail into another.

…

The scientists gave mild electric shocks to the tails of a species of marine snail called Aplysia californica. After these shocks were administered, the snails’ defensive withdrawal reflex – where the snails contract in order to protect themselves from harm – became more pronounced.

…

Scientists extracted RNA from the nervous systems of the snails that received the shocks and injected it into a small number of marine snails that had not been sensitised in this way. The non-sensitised snails injected with the RNA from the shocked animals behaved as if they had themselves received the tail shocks.

…

Prof David Glanzman, one of the authors, from the University of California, Los Angeles (UCLA), said the result was “as though we transferred the memory”.

…

When asked if this process would be conducive to the transplant of memories laid down through life experiences, Prof Glanzman was uncertain, but he expressed optimism that the greater understanding of memory storage would lead to a greater opportunity to explore different aspects of memory.

Editor’s note: Read the full study

Read full, original post: ‘Memory transplant’ achieved in snails