Mechanism for epigenetic inheritance found in sperm

A solution may be nigh to one of the biggest mysteries of biology – how the effects of a person's lifestyle can be passed on to future generations without any changes to the genetic code.

This phenomenon, called epigenetic inheritance, has been implicated in a multitude of modern ills, enabling stresses experienced by one generation to be passed to the next, and resulting in conditions such as schizophrenia, bipolar disorder and obesity.

But failure to identify the detailed mechanism by which this happens has left many geneticists doubtful that it happens at all. Now Isabelle Mansuy of the University of Zurich in Switzerland and her colleagues have identified a mechanism in mice that sidesteps the usual objections.

Their work suggests that the process relies on tiny fragments of RNA in sperm that can pass "echoes" of environmental experience down to future generations.

Read the full, original story: Are RNA fragments making gene tweaks in descendants?