News

New drug to tackle those senior moments

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A drug to be trialled in humans could herald an end to senior moments and everyday forgetfulness.

Laboratory tests suggest that the new treatment can rejuvenate shrinking brain cells and reset their ability to make and keep memories. Early results indicate that the drug could reverse natural, age-related cognitive declines.

Researchers also believe that the drug might help patients whose memories are impaired because of conditions such as depression, schizophrenia and Alzheimer's disease. Etienne Sibille, of the University of Toronto, said: "In the future, one may suggest anybody over the age of 55 to 60 years of age who may be at risk of cognitive problems later on could benefit from this treatment.

"Ideally it will be one pill a day."

The drug will only restore memory — it cannot boost it beyond natural levels. "It's not a drug a student would take to be smarter when they study for their exams," Dr Sibille said.

The compound was patented this week and the university's findings were presented yesterday at the annual meeting of the American Association for the Advancement of Science. Clinical trials are expected to begin within two years. "There are no medications to treat cognitive symptoms such as memory loss that occur in depression, other mental illnesses and ageing," Dr Sibille said.

The drug targets regions of the brain that help regulate the tempo at which neurons "fire" to store and retrieve memories. Scientists created a molecule that binds to Gaba receptors, which help inhibit activity in areas such as the hippocampus and neocortex, which play a part in cognition.

The drug molecules are derivatives of benzodiazepines, a class of anti-anxiety and sedative medications that includes Valium. In laboratory tests, the drug dramatically improved the memory of old mice, who were trained to navigate a simple maze.

The elderly mice completed the maze only about half the time but within 30 minutes of being treated with the drug they were solving it 80 per cent to 90 per cent of the time — almost as quickly as a young mouse.

Dr Sibille said: "We can actually grow the brain cells ... What we see after two months of treatment is that the cells grow to a level that's pretty close to that in young animals."