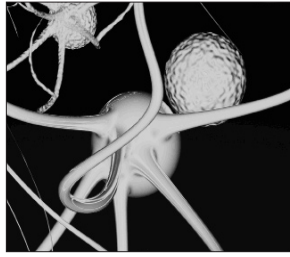


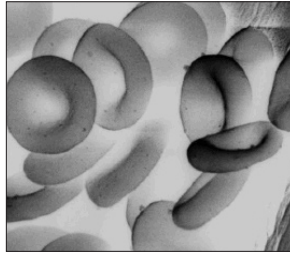
Optogenetics is a new branch of imaging that helps neuroscientists not only observe action potential firing between specific neurons, but also control electrical impulses traveling down an axon, thereby providing insight into neurological function.



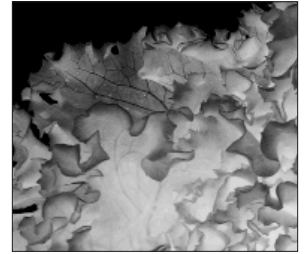
Psychologists have started treating patients with katsaridaphobia—the fear of cockroaches—using augmented reality therapy, wherein phobics can confront digital renditions of their fears within a real-world environment.



McMaster researcher Dr. Mick Bhatia and his colleagues became the first to successfully transform human skin cells into blood cells. The applications of this kind of cellular alchemy seem endless.



The British Medical Journal found that a diet rich in green leafy vegetables may reduce the risk of developing type II diabetes by up to 14%.



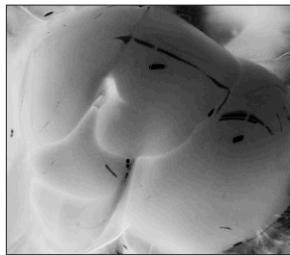
Feeling homesick yet? Although the feeling is not new, there are new developments on what causes the feeling. A recent study has found evidence that homesickness is nothing more than a simple adjustment issue.



Researchers at Sunnybrook have developed a cellphone software that can potentially help teens with mood disorders. Instead of using 'mood journals' or other currently common psychiatric methods, teens would record their feelings on their cell phone.



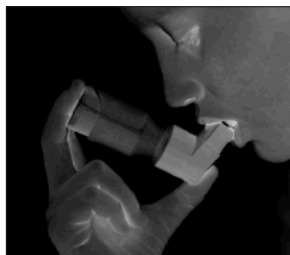
Researchers have successfully engineered mice with human liver cells, thereby allowing them to study the processes of the human immune system during diseases such as hepatitis B and C.



There is new insight into which genes may cause breast cancer. Women with the "high risk" breast cancer gene will be able to find out more about their chances of developing the disease by determining which region of the DNA the gene is in.



Oxytocin, a hormone involved in feelings of security, has demonstrated its potential to improve social abilities in autistic adults. Researchers found autistic participants to prefer interaction with more co-operative opponents during a computerized game, after inhaling oxytocin.



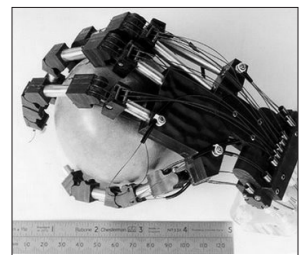
Bacteria inside fruit flies have been found to alter their pheromone production in such a way as to favour mating between fruit flies that are on the same diet. Therefore, symbiotic organisms may indirectly drive evolution of distinct fly species by influencing mate choice.

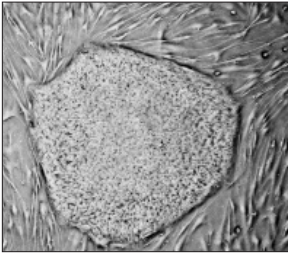


Researchers at UCLA have mapped out how an autism gene alters connections between neurons, changing the physiology of the brain. This discovery provides a critical missing link, bringing together genetics, physiology and neuroscience together in order to better understand autism.

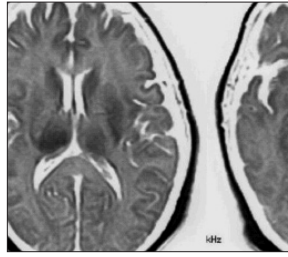


Scientists have successfully developed a robotic hand capable of performing intricate tasks such as drawing. Instead of mimicking the complexity of the joints in the human hand, this device is essentially a grain-filled sphere that moulds to grasp objects without losing grip.

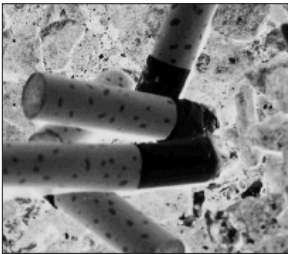




Geron Corp. treated a human spinal cord injury with embryonic stem cells. This is part of an early trial to determine the safety of this type of treatment in the future. While this is exciting news, years of testing are still required.



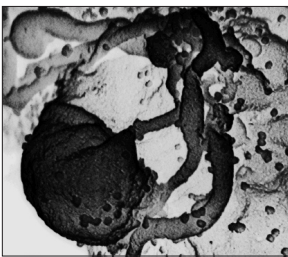
Introspection has been linked to the amount of grey matter a person has in their prefrontal cortex. The study also found that introspective people were more confident in the decisions they have made.



Canadian Tobacco Use Monitoring Survey reports that there has been a 7% drop in teen smoking in teenagers 15 and older. However, the rate of decline has slowed.



While it is known that antibiotics can cause temporary stomach discomfort, new studies are now showing that repeat exposure to these drugs might be altering the 'good' bacteria that reside in the gut. The long term effects of this study remain unknown.



Variations in the amino acid sequence of HLA-B proteins allow the immune system to break down HIV peptides. This may be why some individuals infected with HIV do not progress into full-fledged AIDS, thus giving direction for future vaccine efforts countering HIV.



According to a study by the American College Health Association, severe mental illness is becoming more common on university campuses across the United States and Canada.



People concerned with healthy food choices in restaurants tend to underestimate calorie counts. Consequently, they reward themselves by overeating.



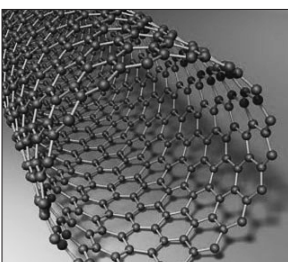
Neuroscientists have discovered that 20 minutes of electric stimulation, targeted at the right parietal lobe, significantly improves numerical processing. While ethically debated, it may prove to be an efficient strategy in enhancing cognition and elucidating the role of specific brain regions.



Scientists have sequenced the genome of musician Ozzy Osbourne. Osbourne wanted to know what made him the Prince of Darkness and his genes did not disappoint. Thousands of rare variants were found in Osbourne's genome, including mutations affecting brain function and alcohol metabolism.



The American Academy of Sleep Medicine published a study recently reporting that people, especially men, still need their 8 hours of sleep. Men with chronic insomnia and people who slept less than 6 hours a day were four times more likely to die than 'good sleepers' (8 hours a day).



Ultrathin actin cables called membrane nanotubes allow communication between cells that are far apart. Electrical signals sent through nanotubes may explain synchronized cell behavior. This finding has broad implications in terms of cell communication in the brain.



Osteoarthritis is a debilitating joint disease involving cartilage degradation. A recent animal study showed that when ADAMTS5, an enzyme implicated in this process, was inhibited, no cartilage damage was observed. These findings suggest a potential therapeutic target for osteoarthritis treatments.