

More validation about why to end animal experiments

From [CAARE Citizens for Alternatives to Animal Research and Experimentation](#)

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We do not need to torment animals to study human illnesses, and in fact, animal research will always be fundamentally flawed when applied to the human system.

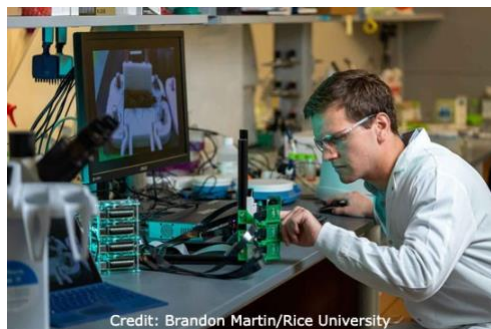
Brain structural differences observed in children with conduct disorder with and without childhood maltreatment



While animals are often used in experiments to study childhood maltreatment that subject them to ongoing mental torment, it isn't necessary to abuse animals to study human behavioral problems. Researchers at the University of Bath in the UK used [human-relevant technology to study conduct disorder](#) in children, rather than conduct cruel and inapplicable tests on animals.

Over 250 children were studied, including children with conduct disorder (CD) who had a history of childhood mistreatment and those who hadn't, along with healthy controls. All three groups underwent MRI brain scans that measured various aspects of their cortical structure. After analyzing the data, scientists found that youths with CD that had suffered from childhood maltreatment exhibited greater changes in brain structure than youths with CD that were not maltreated. Although future research is needed, these findings could have important implications for preventing, assessing and treating CD.

Bite this! Mosquito feeding chamber uses fake skin, real blood

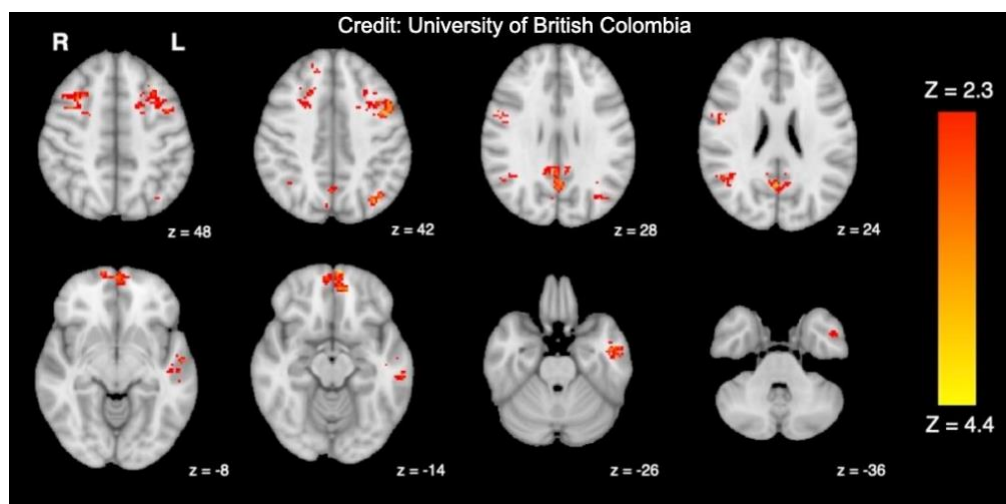


A [collaboration](#) between researchers at Rice University and Tulane University has resulted in a more humane, acceptable and less costly method for mosquito experiments that does not involve animals or human volunteers.

The method involves synthetic skin made from a 3D printer, inexpensive cameras and machine-learning software. When mosquitos are introduced to the chamber, scientists are able to analyze how often they land at a specific location and how long they stay.

Using this platform, scientists confirmed the effectiveness of repellents, including DEET and the oil of lemon eucalyptus plants. Future studies could test out new repellents and advance research into mosquito behavior and diseases, such as dengue.

Traffic pollution impairs brain function

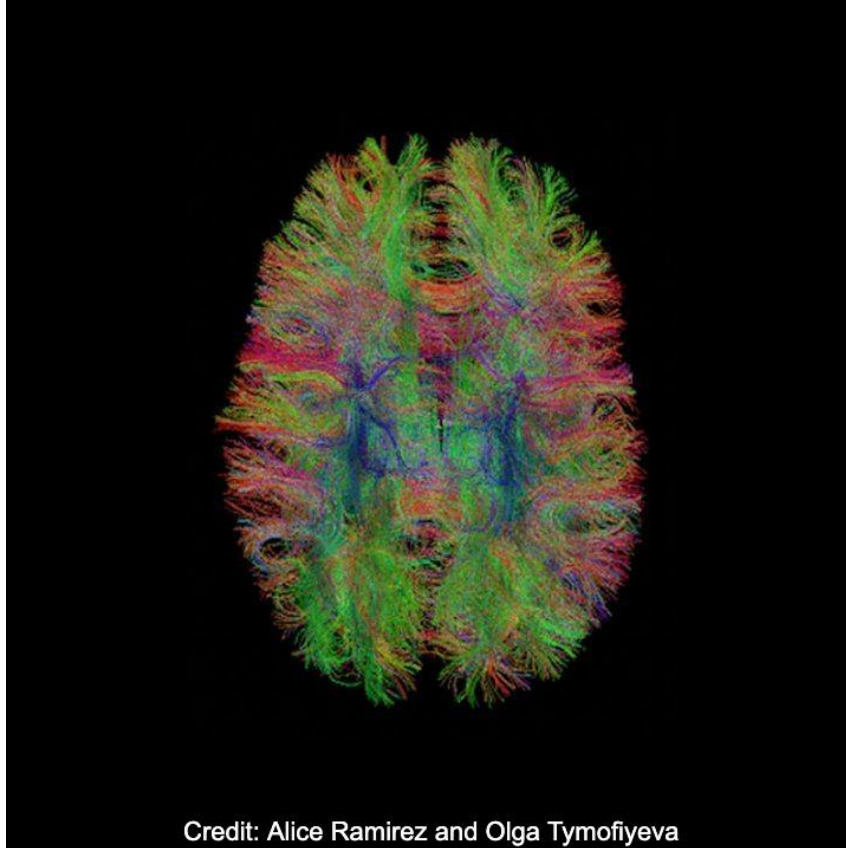


A [new human-based study](#) from researchers at the University of British Columbia and the University of Victoria demonstrates the immediate impact of air pollution on the brain. Unlike cruel animal experiments, that force animals to inhale abnormal quantities of toxic gas, human studies use real-world levels of pollution and informed volunteers who undergo minimal exposure.

Twenty-five participants were briefly exposed to both diesel exhaust and filtered air at different times. Scientists measured their brain activity through functional magnetic resonance imaging (fMRI) both before and after each exposure, specifically looking at changes in the brain's default mode network (DMN) which plays a vital role in memory and internal thought.

They found that exposure to diesel exhaust resulted in decreased functional connectivity throughout their DMN. Future studies are needed, but these results indicate that keeping air vents and windows closed while driving in traffic is advisable.

Brain injuries drop 20% for babies with heart defects



A partnership between UCSF Benioff Children's Hospitals and British Columbia Children's Hospital has resulted in [confirmation](#) that recent advances in care for newborns with congenital heart disease have resulted in fewer postoperative brain injuries.

Scientists analyzed 20 years' worth of advanced magnetic resonance (MRI) brain scans before and after heart surgery and as the patient aged. Infants that were kept at higher post-surgical blood pressures showed an almost 20% reduction in postoperative brain injuries.

This is yet another example of how monitoring treatments using advanced brain imaging is proving more effective than animal experiments for gaining insights into human health and diseases.