NEUROSCIENCE AND PHARMACOLOGY ANIMAL RESEARCH BREAKTHROUGHS

2002

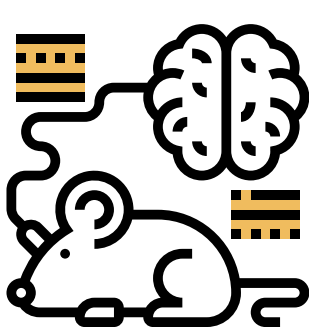
Pain Research

Suboxone was developed following research in mice, rats, rabbits, primates and dogs. The medication is used to treat adults dependent on opioid drugs, as part of a medical, social and psychological treatment program to regain control of their lives.

2003

Parkinsons Research

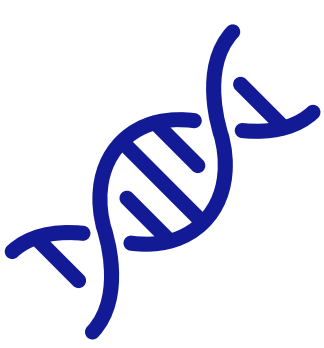
Research with mice reveals the DJ1 protein is linked to Parkinson's disease. Mutations in the gene associated with this protein cause a rare disease, due to problems with mitochondrial stress.



2005

Optogenetics

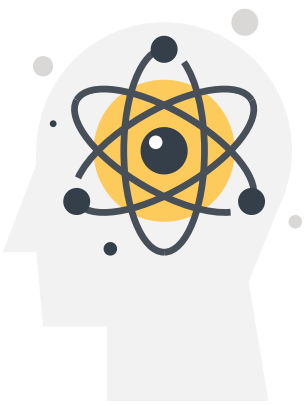
Optogenetics is a technique that involves the use of light to control neurons that have been genetically modified to express light-sensitive ion channels. We can use optogenetics to learn how various networks of neurons contribute to behavior, perception and cognition with remarkable precision in a variety of species including mice, guinea pigs, rats and primates.

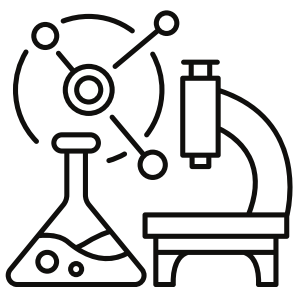


2008

CRISPR-Cas9

CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) genome engineering technology enables scientists to easily and precisely edit the DNA of any genome. CRISPR has been used with animal models such as pigs, primates, rodents and canines.





2014

Psychopharmacology Research

Following research in rats, dogs, rabbits and monkeys, Abilify was FDA approved to treat bipolar disorder, schizophrenia and Tourette syndrome, and is also used as a combination therapy for the treatment of depression.

2015

Cardiovascular Research

PCSK9 inhibitors are a new class of drugs, which were developed using research with rats, hamsters and monkeys, that lower LDL or "bad" cholesterol levels. The FDA recently approved two PCSK9 inhibitors (Praluent and Repatha), and these drugs have been found to prevent heart attacks or strokes in some cases.

2020

Cancer Research

After studies in rats and primates, the FDA approved Tucatinib for patients with HER2-positive metastatic breast cancer. By approving Tucatinib the FDA has provided a potentially life-saving option to patients with inoperable, locally advanced or metastatic HER2-positive breast cancer.

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Biomedical Research Awareness Day
BRADglobal.org