

Safeguards

It isn't easy to get a research proposal involving animals approved at McGill. Before animals are involved in research, two levels of review must occur: First, a **peer research panel** must determine that the proposed research project does indeed have scientific merit and that it can lead to advances in understanding and knowledge. Second, the University's **Animal Care Committee** must approve the project. Even after independent research experts and the Animal Care Committee approve, the researchers must then follow strict guidelines imposed by the **Canadian Council on Animal Care**. At McGill, we meet or exceed federal guidelines and our facilities are inspected regularly.

Compassion

Researchers and everyone involved in research with animals – including veterinarians and animal-care technicians – are sincerely concerned about the welfare of animals that are part of the research process. But researchers are also concerned about the sick and disabled among us who are desperate for ways to deal with pain or the prognosis of fatal illness or who seek better ways to ease their suffering from a chronic medical condition.



Thousands, perhaps millions, of lives can be improved by a successful research project that leads to better care and treatment – for the grandfather taken by Alzheimer's disease, the mother stricken with breast cancer, the child learning to live with diabetes, the whole segment of a community trying to cope with excessive levels of cholesterol or heart disease. Those are the people the researchers are trying to help.



Where to find out more

There is a wealth of information about humane animal research available on the Internet. Here is a sample of sites you might want to visit to learn more:

McGill University and Affiliated Hospitals' animal care program:
www.mcgill.ca/research/animal

McGill's online training course:
www.mcgill.ca/research/research/compliance/animals/training

Canadian Council on Animal Care (federal government):
www.ccac.ca

Canadians for Health Research:
www.chrcrm.org/

Foundation for Biomedical Research:
www.fbresearch.org

Student website on research:
www.speakingofresearch.com

Another student-supported site on the benefits of research:
www.pro-test.org.uk

The Society for Neuroscience:
www.sfn.org/

You can also send an email to animalcare@mcgill.ca if you have more or comments.



saving
lives

curing
disease



giving
hope

How research with animals helps make life better.
For all of us.

Why animals play a crucial role in research

From the development of insulin to the latest life-prolonging cancer drugs and virtually every major medical advance in between, animals have played vital roles in scientific research that have led to cures and treatments for a wide array of human diseases. They have helped scientists improve the nutritional value of our food supply and – thanks to agricultural and veterinary research – have helped bring about a better quality of life for many animals and a safer environment as well.

Millions of lives have been saved, improved and extended thanks to the results of humane scientific research that has relied upon animals at various stages. Without the use of animals, men, women and children around the world would simply not enjoy the quality and length of life they do today.

The “Three Rs”

Animals are used in research when there is simply no alternative that will produce the necessary results.

But before scientists at McGill are allowed to employ animals in research, they must follow what are called the “Three Rs” as established by the federal government's Canadian Council on Animal Care (CCAC). That means:

- they must replace animals with alternative research methods wherever possible
- they must reduce the use of animals to the least number possible
- they must refine their procedures to minimize adverse conditions for animals



McGill

McGill University and Affiliated Hospitals /
University Animal Care Committee

Myths and realities

A number of myths or misconceptions have arisen in the discussion about the involvement of animals in scientific research. It is important to know the facts.

Myth: Animals are not needed in research.

Fact: Whereas every effort is made to minimize the use of animals, at certain stages of research projects, a living organism must be tested before a drug or treatment is approved for human trials. Most people would consider allowing human trials of new drugs or procedures without prior testing on animals to be dangerous and unacceptable.

Myth: Studying animals does not provide insight into human health.

Fact: Genetic and physiological similarities between humans and animals provide researchers with irreplaceable and invaluable insights into how human systems might react to a drug or treatment.

Myth: Dogs, cats and monkeys are the most widely used animals in research.

Fact: Fish and rodents, usually mice or rats, account for more than 83% per cent of the animals used in research and are bred specifically for research purposes. Stolen pets or SPCA animals (other myths) are not used in research. Dogs and cats are purchased from reputable suppliers.

Myth: Research animals live in near-constant pain and suffering.

Fact: The vast majority of biomedical research does not result in significant discomfort or distress for research animals. The 2008 report of the Canadian Council on Animal Care shows that the overwhelming majority of procedures involving animals are described as experiments that cause little or no discomfort or stress or experiments that cause minor stress or pain of short duration such as an injection or minor surgery similar to pets undergoing spay or neutering.

Here's how the process works:

Multi-step process ensures that research with animals is very carefully monitored at McGill University.

The federal government's **Canadian Council on Animal Care** oversees every aspect of research involving animals. It inspects all animal facilities, reviews the work of university committees, reviews research projects and reviews institutional policies every three years.



- 1. Researcher submits a scientific project proposal to an agency.** The proposal gets evaluated and only the most meritorious will be supported and the use of animals will only be considered if it is established that there is no other way of achieving the research objectives.
- If the scientific project proposal was found to be meritorious, the **researcher submits a proposal** to the institution to do animal research before starting a new project or renewing an existing one.
- The University's Animal Care Committee** (at a minimum composed of a veterinarian, researchers, a community representative, animal care staff and a compliance officer) **reviews all aspects of the project** with emphasis on ensuring animals will receive the best care possible for achieving the research objectives. It rejects, approves or gives conditional approval to the procedures in the project or to changes in the procedures before allowing the research to proceed. This review is about the welfare of the animals.
- Mandatory **training** of personnel on animal handling and procedures as well as **health precautions** are assured for all research personnel and animals – and for all animals.
- The institution **approves the project for one year.**
- Assistance is available** to refine procedures, train people, care for the animals and, when needed, make changes to the research project.
- Quality Assistants** ensure that research personnel follow the approved proposal.
- One year later, the researcher must **submit another proposal** in order to continue the research.

How animals have helped

At McGill, recent research involving animals has led to the following advancements:

- the discovery of previously unknown interactions between genes that control whether cells become cancerous
- the development of new, experimental treatments for diseases that affect the nervous system
- a better understanding of the mechanisms of blood flow that has helped in the development of drugs to ease vascular head pain

Other familiar breakthroughs involving animal research have included:

- the discovery of insulin, penicillin, streptomycin and yellow fever vaccine
- the treatment for cancer, aids, hypertension, cardiac stents, high cholesterol, depression
- the development of such important medical devices as the electrocardiogram, computer assisted tomography (CAT scan) and magnetic resonance imaging (MRI)
- improved understanding of how cells work, how genetic differences play a role in the development of life and disease, immunity and the regulation of cholesterol

There are, in fact, too many medical research breakthroughs to list them all here. But it is accurate to say that cancer patients are living longer, HIV sufferers are living longer, diabetics are living longer thanks to research that has involved animals. Those diseases used to be automatic – and almost always rapid – death sentences. Now, they needn't be.

Animals in laboratories around the world have played an invaluable role in helping us understand disease and what we need to do to treat it or cure it.