

The 3 R's

Replacement, Reduction, Refinement

Background

Created in the 1960's, the 3 R's is a concept produced by two English biologists, Russel and Burch. In simple terms, the 3 R's, Replacement, reduction, and refinement, relate to the use and the possible substitute of animals in scientific research.

How Researchers Use The 3 R's

One way that the 3 R's are used during scientific research is when, for example, a mouse is being used to help develop a new medicine. First, the researchers will make sure that the mouse is in a familiar and safe environment to limit discomfort. Then, rather than testing multiple mice at a time, researchers may choose to use one mouse at a time to reduce the number of animals used. Alternatively, some may even have the DNA needed from previous experiments to use in the one that is being performed.

Conclusion

In the end, the 3 R's are an essential part of biomedical research. Hopefully, the 3 R's can help remove the negative stigma that is associated with animal research/testing.

Definitions

Replacement - Switching the use of living animals with inert material objects.

Reduction - The process of using less animals to attain the information that is needed.

Refinement - Methods used in research to lessen the amount of discomfort, agony, or harm that animals may have to go through during research.

