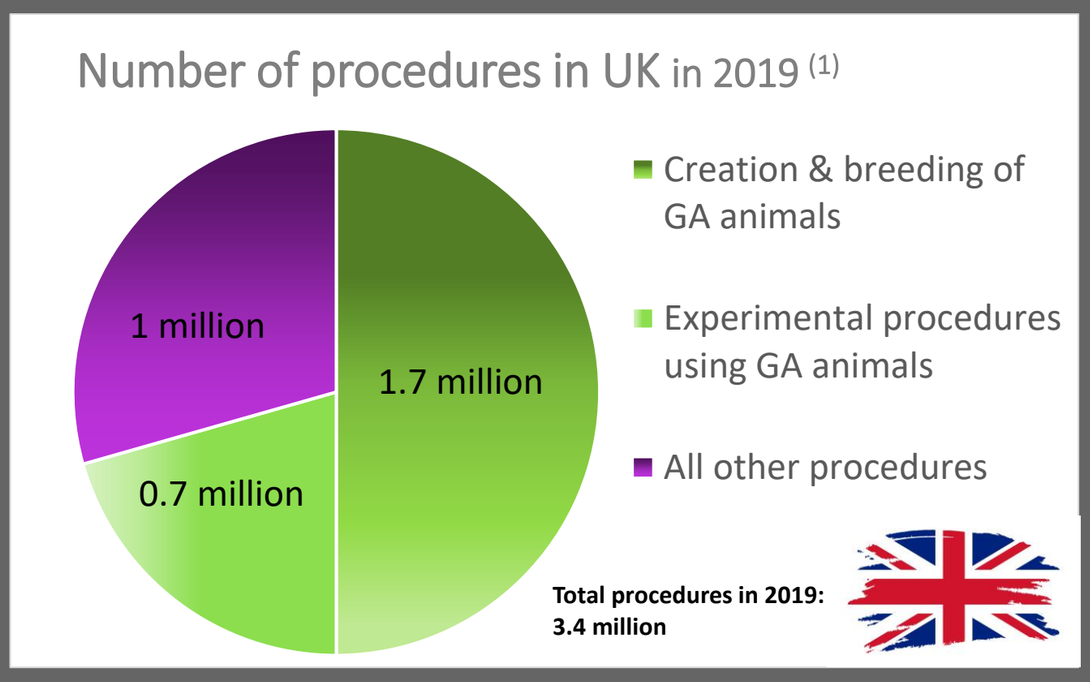
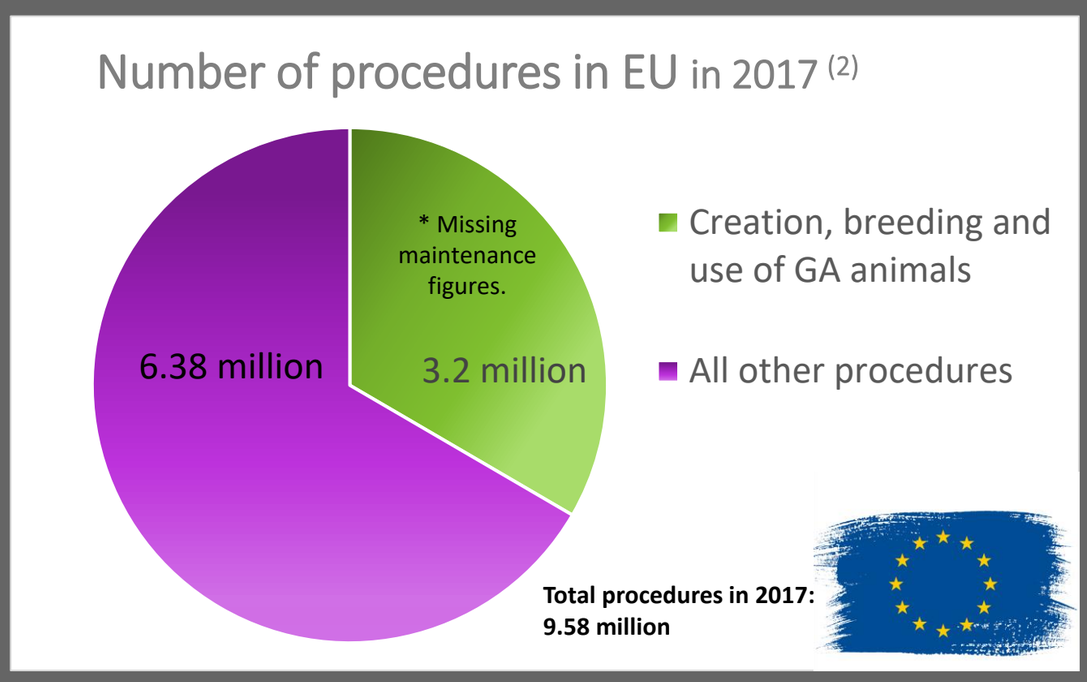
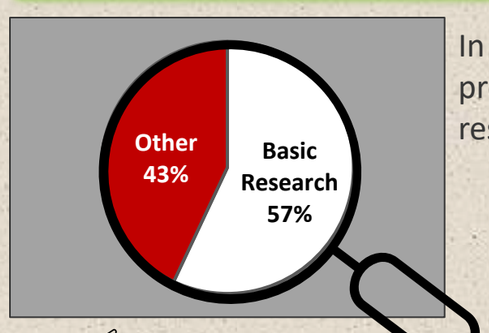
Reducing reliance on GA animal models in basic research will reduce overall animal use.





Basic research is the area of experimental/research procedures with:

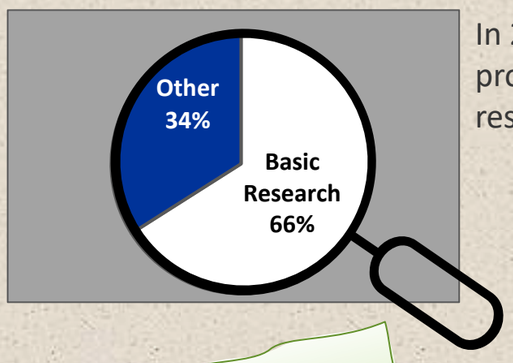
1.**The most recorded animal uses** 2. **The most genetically altered (GA) animal uses**



In 2019 in the UK 57% of all experimental procedures were for the purpose of basic research.(1)

43% of the total 1.73 million experimental procedures were carried out on GA animals.

Uses of GA animals in experimental procedures increased by 16% 2009 - 2019.



In 2017 in the EU 66% of all research procedures were for the purpose of basic research.(2)

45% of all uses for basic research were on GA animals.

Basic research accounted for 75% of all GA animal uses.

Whilst the number of experimental procedures overall is falling…

The number of procedures using genetically altered (GA) animals is not.

95% (UK) and 94% (EU) of all new GA animal lines were created for basic research purposes.

Next steps

- Although GA animal research has proven relevant and useful in some areas, for example in identifying the role of specific genes, much research has not, for example in the research of complex human diseases such as Alzheimer's. The popularity and increasing use of GA animals continues to raise welfare, scientific and ethical concerns.(3)
- The number of animals required to create and use GA lines can be seen in the statistics but the full picture of **research value vs number of animals** cannot be gauged.

At FRAME we believe working with researchers currently using GA animals will help us understand:

- Motivations for using specific GA models, particularly in basic research.
- Perceived strengths & weaknesses of GA models.
- Where GA animal models are working/failing.
- What barriers and gaps need addressing to help facilitate a move away from GA animals to human relevant, non-animal methods.

New project
Please contact FRAME if you are interested in helping, supporting or collaborating on this project.

At FRAME we believe that steps should be taken to:

- Ensure that only relevant genetically altered animal models are used in biomedical research
- Reduce the use and development of poor or redundant GA models.

Fund for the Replacement of Animals in Medical Experiments
FRAME
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Increased transparency of animal research through animal study registration/publishing of null & negative results.

Researchers, funders, regulators, animal welfare bodies, journal editors & reviewers ensuring GA animal research is of value.

Education, training & knowledge enhancement to support the above roles.

Funding & promoting non-animal methods. Particularly where they plug perceived gaps requiring GA animal models, or make use of relevant gene editing technology in vitro.

References:
1.https://www.gov.uk/government/statistics/statistics-of-scientific-procedures-on-living-animals-great-britain-2019
2. https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1581689520921&uri=CELEX:52020DC0016
3.https://frame.org.uk/latest/use-of-gene-altering-technology/

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