



## About FRAME

# 2022 Recruitment support document

# About FRAME

## HISTORY

---

FRAME was founded in London in 1969 by Dorothy Hegarty, who was introduced to the 3Rs by the biologist Charles Foister. The 3Rs principles of Replacement, Reduction and Refinement set out a framework for humane animal research, prioritising the replacement of animal experiments with an alternative wherever possible. The main aim of FRAME has always been to promote the 3Rs, in particular the Replacement of animal research, by championing the development and use of validated, reliable, and reproducible alternative methods for predicting human adverse effects in medical research. FRAME focused on the development and validation of non-animal tests for the safety testing of cosmetics and chemicals, and in 1979 the first FRAME Toxicity Committee was elected. In 1981 FRAME moved from London to Nottingham, where Professor Michael Balls took up the role as Chair of the Board of Trustees. Throughout the 1980s and 90s FRAME provided advice to various governmental groups and committees which culminated in the passing of the Animals (Scientific Procedures) Act 1986 (ASPA), the first piece of legislation for the protection of animals used in research in over 100 years. FRAME has continued to push the boundaries in the field including receiving the first ever government grant to research replacement methodologies in 1984, having its first lecture delivered by 3Rs pioneer Bill Russell, and validating one of the first alternative toxicity tests accepted by the EU. FRAME celebrated 50 years of working to end animal testing in 2019, and we're excited about what the next 50 years will bring.

## VISION

---

A world where non-animal methods are accepted as scientific best practice.

## MISSION

---

To support the timely development and implementation of scientifically valid methods which will provide reliable data and replace the need for animal experiments in medical and scientific research, education, and testing.

## VALUES

---

### BRAVE

We *inspire* change, by **questioning** and **constructively challenging** the use of animals in scientific and medical research.

### THOUGHTFUL

Our approach is **research-led** and **considered**, using expert scientific sources to demonstrate that **humane** and **human-focused** science is better science.

## COLLABORATIVE

We work **with** academics, industry scientists, policy-makers and regulators. **We don't dictate, berate, or preach**; we stand alongside those working within the sector to create **practical** solutions for better human health.

## RESOURCEFUL

We act prudently and **creatively**, using our resources strategically to create maximum impact.

## SUPPORTIVE

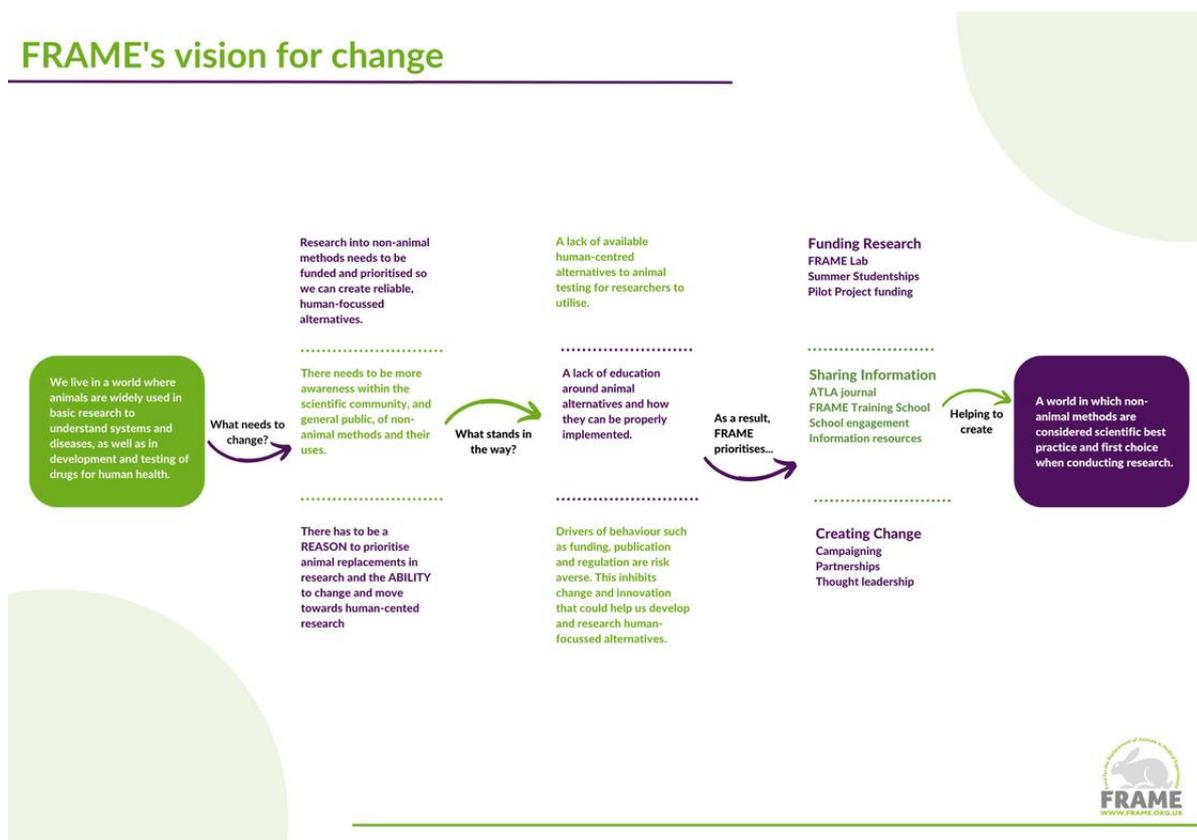
We are **supportive** of our staff and community, **open** to new ideas and viewpoints and **loyal** to our supporters and partners. We seek to **inform, inspire, and nurture** the next generation of researchers.

FRAME works to improve scientific efficiency and outcomes by replacing the use of animals in research and testing in **medical and bioscience research**, and **drug discovery and testing for human health**. We consider that the prevailing paradigm of animal use in research is out of line both with scientific evidence, and social progress in terms of attitudes towards animals. The current system is configured around this working model and there are many forces that act to make change difficult both at an individual and system level. We believe that lasting change involves engaging all stakeholders – current and future scientists, regulators, funders, journal editors, and the public – in debate about how to move towards a more accurate, efficient, and humane model of biomedical research.

## STRATEGY

FRAME's strategy is based around 3 key pillars set on a foundation of robust organisational governance and sustainability. Below is our vision for change diagram describing why we do what we do and how our work has impact:

### FRAME's vision for change



## 1. FUNDING RESEARCH

---

**To ensure that alternative, non-animal approaches are being developed and disseminated as scientific methods for biomedical research and drug testing.**

- 1.1. We know that in many cases there are not yet suitable non-animal methods to replace required regulatory tests or provide an adequate basis for investigation of complex disease processes in living systems. However, based on the success of non-animals methods in key areas of research and testing, the increasing sophistication of methods such as in silico and organ-on-a-chip, and a growing acceptance that where they exist alternatives provide improved prediction of human adverse outcomes compared to animal models, we know that continuing to push the boundaries of science to develop better methods is critical. This requires targeted funding.
- 1.2. FRAME has the longest-standing lab devoted specifically to the development of non-animal alternatives research in the UK, the FRAME Laboratory at the University of Nottingham. We have always believed that this dedicated centre of excellence is critical to making inroads of sufficient breadth and depth to make a real difference. Progress in research is slow and incremental. The lab has contributed to the creation and validation of acute toxicity tests for chemicals and cosmetics, and today focuses on the development and promotion of human cell-based models for disease research. In addition, the Lab trains many PhD students and nurtures promising projects from postdoctoral students. It plays a key role as an incubator and launchpad for the next generation of alternatives researchers.
- 1.3. Due to the ongoing work of both FRAME and other charities, research into non-animal methods has become more mainstream in recent years and excellent work takes place across many institutions. However, it is still difficult for researchers, especially those earlier in their careers, to secure funding for innovative ideas. To ensure that as wide a range of methods as possible continues to be investigated and developed we seek to fill this gap in the system by supporting new and promising research via our Summer Studentship and Innovation Grant Schemes.

## 2. SHARING INFORMATION

---

**To ensure that information about non-animal methods, how to find them, and how to use them is disseminated and shared as widely as possible within the scientific community at all levels.**

- 2.1. FRAME takes a holistic view of providing and facilitating access to information on alternatives to animal methods. This incorporates our approach to training and education, as well as our publication of original research, and our work encouraging peer to peer sharing of ideas and best practice. We target our services and interventions at all levels of the current scientific system.
- 2.2. Starting with **schools** FRAME aims to open students' minds to the ethics of animal use and the growing field of alternatives research. By this we aim to educate students on the opportunities of non-animal approaches and barriers to their implementation and encourage future university students to consider what subjects they wish to pursue, and where they wish to study in part based upon the use of animals and the availability of further courses on ethics and good experimental design. At **undergraduate** level we aim to engage with students via societies to encourage consideration of alternatives as a future field of research, or to start thinking about how they might conduct their

future research to apply the 3Rs as effectively as possible. At **PhD** level we have historically provided ethics and experimental design training to doctoral students and plan to develop this in partnership with the University of Nottingham into an online training offer in experimental design. For **postdoctoral, early career** and **other researchers**, as well as scientists in industry we offer our FELASA-accredited (Federation of European Laboratory Animal Science Associations) Training School in Experimental Design in partnership with the University of Nottingham.

- 2.3. It is critical that alternatives research is encouraged and that there are places to publish such research. Basic research requires development, methods require validation, and the evidence base for advanced human-based scientific methods will grow over time. FRAME contributes to this effort by publishing our journal, Alternatives To Laboratory Animals or *ATLA*. A core goal of the ATLA team is to increase the number of article citations, which will indicate that the research published is having an impact on the field.
- 2.4. We aim to grow our reputation as the go-to source of information for researchers interested in alternatives or wishing to replace the use of animals. FRAME has excellent academic credentials and understanding of the challenges of both basic and applied research, and so is well-placed to meet the needs of researchers. We will continue to develop our services around searching for alternatives, amplifying the reach of all alternatives research, and promoting funding opportunities.

### 3. CREATING CHANGE

---

**To actively promote uptake of non-animal methods, ensure that barriers to adoption are reduced, and engage in constructive challenge of the status quo where necessary.**

- 3.1. We need to address the barriers to change to encourage more scientists to develop and use non-animal methods. Such barriers include the availability of alternatives, awareness of alternatives, awareness of the reasons why they should be used, the regulatory context, and traditional attitudes that reinforce animal use among some academics and journals. FRAME is concerned with acting and addressing issues at all parts of the system to create lasting change.
- 3.2. We need to continue to find new ways to clearly articulate the evidence base underpinning positive claims about non-animal methods (efficacy, cost effectiveness) and ensure the arguments for human-centered approaches are scientifically credible and persuasive.
- 3.3. Our approach to training and education will engage future researchers at all stages of their education from school age upwards, to question the validity of and necessity for animal research in their area of work, and to consider developing or using human-focused approaches.
- 3.4. There are many people and organisations working in this field and there need to be greater linkages between them. We will raise the profile of those working in the field and amplify the voices, campaigns, and efforts of those whose vision we share, as well as encouraging peer to peer support.
- 3.5. We will look for ways to engage policy-makers, funders, and journals in discussion about how to reduce barriers and provide incentives to change.

## 4. BUILDING RESILIENCE

---

**To ensure that FRAME continues to be a sustainable and resilient organisation with sufficient support and income to continue its work in the long term.**

- 4.1. The FRAME trustees undertook a significant restructuring in 2017/18 resulting in a move to virtual working and a consolidation of staffing. We are currently a small charity which necessitates us having a clear focus on what we want to achieve, whilst also presenting some business continuity considerations.
- 4.2. FRAME has an excellent track record of attracting legacy income and also has a loyal and longstanding supporter base of individuals and organisations. Legacy income is extremely valuable but is by its nature highly variable creating challenges for strategic planning. For FRAME to be able to grow over the longer term and to mitigate changes in the funding environment it is important to develop a wider income generation strategy which incorporates other funding sources such as individual donations, community fundraising, trusts and foundations, as well as project funding, to diversify income sources.
- 4.3. FRAME currently has a small staffing base working remotely. It is important to grow the central staffing base to be able to deliver a programme of activity that makes a genuine difference.
- 4.4. We have a loyal supporter base who have been with us for many years. We want to build on this community of support, by making people feel part of FRAME, whether that's as a donor, alumni of the FRAME laboratory or the training school, or as part of our network of scientists. We aim to encourage people to move from being a passive supporter to an active ambassador, helping to promote our work, generate new leads and areas of work, grow fundraising income, and actively contribute to FRAME's future direction.

### Key Activities

FRAME is engaged in several activities and delivers a range of services, some on a regular basis, and some ad hoc. Below is an overview of the key ones.

#### **FRAME Laboratory**

The Lab is based at the University of Nottingham. It was founded in 1991 and the first Director was Dr Richard Clothier. Under Richard's leadership the Frame Laboratory focused on developing new in vitro methods for toxicity testing, in particular in cosmetics, and was instrumental in advising the government on the legislative changes that underpinned the UK, and subsequent EU ban on animal testing in cosmetics. The current FRAME laboratory Director is Dr Andrew Bennett. Andrew's focus is on basic research developing human cell-based models of the liver and other systems to predict more accurately than animal models disease progression and pharmaceutical pathways for intervention. Recently, students and researchers at the FRAME laboratory have published work on areas including Irritable Bowel Syndrome (IBS), hepatitis, diabetes and cancer.

#### **Research funding**

FRAME provides a competitive summer studentship award to final year undergraduate students to allow them to develop/implement a project that aims to replace the use of animals in a specific area of research. This can be a lab-based project or desk-based research on attitudes and creating change. We have also recently

launched our Innovation Grant scheme. This is for proof of principle awards, to allow researchers to be able to develop novel ideas and new methodologies which might otherwise be overlooked.

### **Alternatives to Laboratory Animals (ATLA)**

FRAME publishes a peer-reviewed, scientific research journal, in partnership with Sage publishing. Two members of the FRAME team work exclusively on ATLA, alongside our Editor-in-Chief, Dr Judith Madden. ATLA is currently published 6 times a year and is a major source of disseminating research on alternatives. FRAME subsidises copies of ATLA to be sent free of charge to institutions and researchers in the developing world who traditionally have had less exposure to animal replacement methodologies.

### **FRAME Training School on Experimental Design**

FRAME runs a highly regarded training school on experimental design, training researchers on how to correctly implement the 3Rs philosophy, how to find alternatives, and how to plan animal research which requires using the minimum number of animals and exposing them to the least amount of harm or distress.

### **Online resources**

We publish a variety of online tools and information about understanding the legislation in relation to animal testing, as well searching for alternatives, and specialist blogs and thought pieces highlighting the issues.