



STOP SPREADING RESISTANCE

Anticoagulant Resistance Project

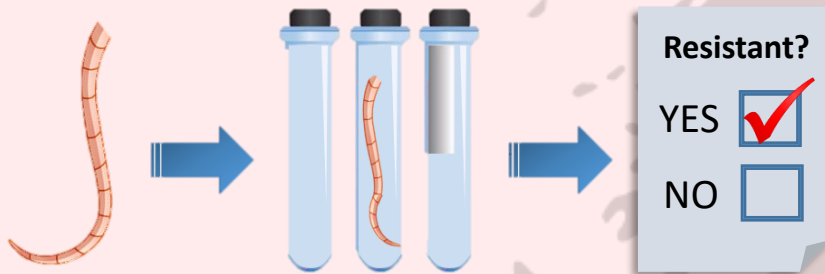
AN ARMS RACE

Anticoagulants revolutionised rodent control in the 1950s but soon after their arrival rat and mouse populations were developing resistance to these poisons. Even resistance against newer poisons bromadiolone and difenacoum was detected in 1980s and has been spreading ever since!



GENETIC MUTATION

Resistance is due to a single mutation in rodent's DNA. Thanks to early genomic work we are able to identify resistant animals from a simple tissue sample (e.g. a tail cutting).



SEND IN TAILS FOR FREE RESISTANCE SCREENING

We can tell you which anticoagulants won't work based on the mutations we find!

The Rodenticide Resistance Action Committee (RRAC) are funding this service along with the help of the Vertebrate Pests Unit (VPU) team at Reading University, UK.

INTERACTIVE MAPPING TOOL

(<http://guide.rrac.info/resistance-maps/united-kingdom>)

With information from resistance tests RRAC has created a freely accessible interactive mapping tool for pest controllers!

THE MORE TAILS THAT ARE TESTED THE MORE INFORMATION WE CAN PUT ON THE MAP!

Please see the [Sample Collection Protocol](#) (overleaf) for details about sending in a tail sample for resistance screening

SAMPLE COLLECTION PROTOCOL

Collecting tails

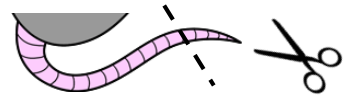
Email Emily Coan (e.e.coan@reading.ac.uk) with postcodes of the sites you want to collect tails from **BEFORE** you collect them. Emily will tell you whether you are already near an existing data point and will be happy to give you advice.

- Please collect 1-3 tails per site. If a tail fails testing you will be invited to send up to a maximum of 3 replacement tails.
- Collect tails from dead bodies or preferably trapped rodents (fresh, clean and intact bodies are needed for tests to work. If you suspect bodies are more than 3 days old and are not of good quality, do not use it)

THREE EASY STEPS

1 Cut

- A tail tip (2-3 cm) is required to provide DNA from each rodent. Each tail tip must be removed using a clean blade or sturdy scissors



2 Bag

- Tails should be stored in a sealable plastic bag (e.g. Zip-Lok)
- Please put each tail in a separate bag

Use our template as a guide for labelling your bagged tails:

Name: [your name]

Date: [date the tail was collected]

Species: [Brown rat / House mouse]

Site Postcode: [postcode of the site or GPS co-ordinates]

Email: [your personal or work email]

3 Post

- Once the tail sample has been placed in a bag, it should be sent to the University of Reading for DNA testing **OR** if you can't post it the same day put the tail in a freezer (within 12 hrs of collection) until it can be posted off
- An exact location must be provided with a sample (GPS co-ordinates **OR** a post code / Zip code) otherwise it cannot be processed. Please include your email address so we can contact you!
- The samples must be labelled correctly and packed in a way that samples cannot be touched by un-authorised people

***Within 12 hours of a tail sample being collected it should be frozen **OR** sent using **NEXT DAY DELIVERY** to -**

Emily Coan
Vertebrate Pests Unit
Harborne Building
School of Biological Sciences
University of Reading
Whiteknights
Reading RG6 6AS
UK

Tel: 0118 3788329

Email: e.e.coan@reading.ac.uk

If your samples are from a location within a **5km** radius of an existing data point then the samples cannot be analysed free of charge. If you would like to check whether you are near any resistance go to RRAC's online interactive questionnaire and map:

<http://guide.rrac.info/resistance-maps/resistance-maps/>

*** Please send on a Monday, Tuesday or Wednesday to ensure swift delivery**

Visit our webpage for more information: <https://research.reading.ac.uk/resistant-rats/>