



STOP

JULY 2020

THE SPREAD OF RESISTANCE

ANTICOAGULANT RESISTANCE PROJECT

AN ARMS RACE

Anticoagulants revolutionised rodent control in the 1950s but some rodents soon became resistant to them. The second-generation anticoagulants were introduced to overcome resistant rodents. But rats and mice resistant to some of these compounds are now widespread in the UK.

GENETIC MUTATION

Resistance is due to a single mutation in a 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 to avoid based on the mutations we find! The Campaign for Responsible Rodenticide Use (CRRU) is funding this service in the UK in collaboration with the **Animal and Plant Health Agency (APHA) at Weybridge, Surrey.**



INTERACTIVE MAPPING TOOL

Information from DNA resistance tests will be shared with the Rodenticide Resistance Action Committee (RRAC) to update a freely accessible interactive mapping tool for pest controllers!

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

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



PLEASE SEE THE SAMPLE COLLECTION PROTOCOL (OVERLEAF) FOR DETAILS ABOUT SENDING IN A TAIL SAMPLE FOR RESISTANCE SCREENING

SAMPLE COLLECTION PROTOCOL

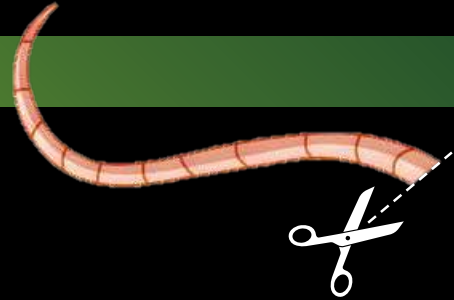
COLLECTING TAILS

- 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).
- CRRU may choose not to test samples that are taken very close to where resistance has already be found. In that case, we will contact you to tell you the type of resistance that you are near and provide further advice if needed.

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 Animal and Plant Health Agency 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.
- 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 -**

Dr Richard Ellis
Central Sequencing Unit
APHA Weybridge
New Haw,
Addlestone,
Surrey KT15 3NB

Tel: 02078955876
Email: Sequencing.Facility@apha.gov.uk
Web: www.gov.uk/apha

If your samples are from a location within a 5km radius of an existing data point then the samples may not 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:
www.thinkwildlife.org