

# Non-invasive Measurement of Physiology

## Ensuring Animal Welfare through Analysis

With increasing public concern for the humane treatment of domestic, wild and zoo animals, ensuring animal welfare is paramount. Those responsible for keeping captive animals must respond quickly to symptoms of animal stress as well as pro-actively manage the welfare of their animals.

APHA specialises in research to assess the physiological indices of stress and reproduction by non-invasive means in many different species.



Apart from the obvious negative welfare effects of blood sampling, the technique can also trigger other adverse physiological effects such as an increase in heart rate and blood pressure, which can be fatal.

As a result APHA has developed a range of non-invasive techniques to measure stress hormones (cortisol and corticosterone) and reproductive indicators (such as progesterone) in faeces and saliva. Using these substrates means disturbance to the animals is minimised, and avoids the need for expensive training in regulating procedures.

## **Analytical Capability**

We have developed assays for a wide range of zoo, wild and domestic/captive species including:

- Rats
- Mice
- Pheasants
- Parrots
- Pigs
- Sheep
- Dogs
- Cattle
- Horses
- Primates
- Rhino
- Elephants
- Wild Boar
- Giraffe

We are constantly developing new assays and have the capability and expertise to respond to requests for assays suitable for novel species.

## **APHA Expertise**

Our specialists in stress and reproductive hormone analysis conduct research and provide advice to Defra.

We also provide services to private clients such as Flamingoland, the Durrell Wildlife Conservation Trust, the Game and Wildlife Conservation Trust and a number of Universities.

## **Flexible services tailored to your needs**

Our services can be tailored to meet your requirements; ranging from basic analytical services to a comprehensive consultancy package.

We can provide:

- Hormone measurement from faeces and/or saliva
- Advice and assistance with sampling methods and techniques
- Data interpretation and report production

We also offer a wide range of behavioural assessment techniques, analysis and advice to enable a comprehensive welfare assessment for differing species in a variety of environments.

## **Contact details**

For more information about our non-invasive physiological testing services please email: [noninvasivephysiology@defra.gsi.gov.uk](mailto:noninvasivephysiology@defra.gsi.gov.uk), or call Fiona Bellamy on +44 (0) 1904 462740

