

Case study

Isolation of DNA from animal saliva[†] with Performagene™

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About the study

The research mission of the Rutgers University Department of Animal Sciences is to develop and enhance excellence in basic and applied research in focused areas within Animal Science. As the only entity in the state that addresses the needs of New Jersey animal agriculturists, they are recognized as regional leaders in animal sciences. Dr. Andre Pietrzykowski is studying the molecular mechanisms of adaptation, particularly of domestication of animals as well as the evolution of gene regulatory systems.

In order to collect the required number of DNA samples from a variety of animals, Dr. Pietrzykowski was provided with samples fortuitously collected from animals housed at the Philadelphia Zoo as well as the Department of Animal Sciences farm. Over a three year period, he is aiming to collect 100 DNA samples from a wide variety of animals.

Main challenges

Dr. Pietrzykowski and the Rutgers University, Department of Animal Sciences face several main challenges in order to achieve the study goals. First, the Department of Animal Sciences is committed to the well-being of the animals. As a result, they wanted to find a way to collect the DNA samples during routine handling of the animals. They also required a method that would give them high quality DNA so that they could perform the analysis required.

Collection methods

Blood collection was not an option for Dr. Pietrzykowski as it would not meet the requirement for collection of DNA during the routine handling of the animals. Performagene kits allowed for non-invasive collection of DNA while providing the quality and quantity of DNA required for the study.

"Performagene kits were used to collect DNA from saliva from a wide variety of animals. These kits are easy-to-use and are non-invasive, causing no harm to the animals."

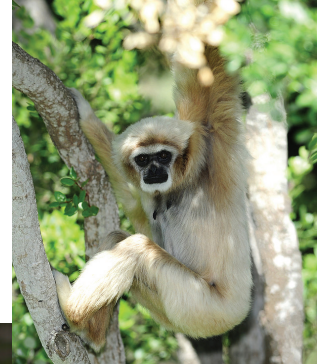
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[†] This data was generated using a previous version of the product (Oragene•ANIMAL). Please contact us for more information.

Results summary

To date, Dr. Pietrzykowski has collected more than 20 DNA samples from a variety of animals including gibbons, cheetahs, kangaroos, ruffed lemurs and capybaras, among others. The DNA collection was completed easily by one person (Zoo veterinarian) during the routine handling of the animals. DNA samples collected with the Performagene kits remain stable at ambient temperature, with no degradation of the DNA, making them ideal for field collection at the Philadelphia Zoo. In addition, there is no need for any special equipment or reagents to collect and store the DNA saliva samples.

The samples collected from all animals have shown high quality DNA results and qRT-PCR analysis has been performed successfully on the samples collected to date. In addition, Dr. Pietrzykowski was able to eliminate costs associated with cold storage for DNA samples such as ice boxes, dry ice and refrigerators.



Why Performagene?

Performagene kits have been chosen by Dr. Pietrzykowski to collect DNA from saliva for a wide variety of animals for several reasons:

The kits are completely non-invasive. The goal of this study is to obtain DNA from a variety of animals without causing any harm to the animals. The Performagene saliva collection kits easily allow for this.

The kits are easy-to-use. No special equipment or reagents were needed to collect and store the DNA from saliva. This can be a big challenge for field collections and even in the more controlled environment at the Zoo.

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