

## DOG'S GENOME TO AID RESEARCH ON HUMAN DISEASES

The biological basis of the surprising variety of behaviours of dogs is much closer to comprehension with the publication of the dog's genome. Other mammals whose genetic instruction manual has been described include humans, chimpanzees, mice, and rats. The new information will probably make dogs the chief tool for understanding the genetic diseases of people. The research was carried out by nearly 250 scientists coordinated by the National Human Genome Research Institute, which is associated with Harvard University and the Massachusetts Institute of Technology.

In size, appearance, and behaviour, the dog is the most diverse species on Earth. It was the first animal domesticated from the wild. All dogs descend from gray wolves, which were originally domesticated in East Asia. Most types of dogs, however, are the product of selective breeding over the past 400 years to create specific characteristics. For scientists, this means that there are concentrations of specific versions of specific genes in specific groups of dogs, which eventually should make it easier to identify certain genes with certain diseases.

As with human DNA, only about 5% of dog DNA actually carries genetic information. The function, if any, of the rest is unknown at this time.

Text adapted from an article by David Brown,  
*The Washington Post*, Dec. 8, 2005 (206 words)

Després de llegir el text, contesteu les preguntes tot seguint les instruccions que es donen en cada cas. Totes les preguntes valen un punt.

Después de leer el texto, responda a las preguntas siguiendo las instrucciones que se dan en cada caso. Cada pregunta vale un punto.

1. The genome of which of the following has been described in the scientific literature?
  - a) gray wolves
  - b) monkeys
  - c) humans
2. Scientists expect that the genetic structure of dogs
  - a) will explain the relationship between chimpanzees and humans.
  - b) will help to understand genetic diseases affecting people.
  - c) will simplify treatment of cancer.
3. As a species, the dog is \_\_\_\_\_ diverse on Earth in terms of size.
  - a) the more
  - b) very
  - c) the most

4. Which of the following sentences has approximately the same meaning as «The biological basis of the surprising variety of behaviours of dogs is much closer to comprehension with the publication of the dog's genome»?
- a) The wide variety of behaviours of dogs is much closer to comprehension because the genetic structure of dogs has been published.
  - b) The wide variety of behaviours of dogs is surprising and closer to comprehension because of its biological basis.
  - c) We are closer to comprehending the surprising variety of behaviours of dogs because of their biological basis.
5. Change the sentence «The research was carried out by nearly 250 scientists coordinated by the National Human Genome Research Institute, which is associated with Harvard University and MIT» to begin with the word «Nearly».

Nearly \_\_\_\_\_  
\_\_\_\_\_

6. How much of the dog's DNA carries genetic information?
- a) It is unknown at this time.
  - b) It is thought to be around 5%.
  - c) All the dog's DNA carries genetic information.
7. Which of the following words is a synonym for the word «chief» in the sentence «The new information will probably make dogs the **chief** tool for understanding the genetic diseases of people»?
- a) primary
  - b) elementary
  - c) latest
8. According to the text, East Asia
- a) is home to many breeds of dogs.
  - b) is where dogs were first domesticated.
  - c) is where gray wolves were first domesticated.
9. Briefly describe the relationship between selective breeding and scientists' interest in the dog's genome.

10. According to the text, what is one similarity between humans' genome and dogs' genome?