Leia o texto para responder, em português, às questões **33** e **34**.

Brazil finds coffee protein with morphine effect

January 26, 2015

Brazilian scientists have discovered a protein in coffee that has effects similar to pain reliever morphine, researchers at the state University of Brasilia (UnB) and state-owned Brazilian Agricultural Research Corporation Embrapa said Saturday.

Embrapa said its genetics and biotech division, teaming up with UnB scientists, had discovered "previously unknown protein fragments" with morphine-like effects in that they possess "analgesic and mildly tranquilizing" qualities. The company added tests on laboratory mice showed that the opioid peptides, which are naturally occurring biological molecules, appeared to have a longer-lasting effect on the mice than morphine itself.

Embrapa said the discovery has "biotechnological potential" for the health foods industry and could also help to alleviate stress in animals bound for the slaughterhouse. In 2004, Embrapa managed to sequence coffee's functional genome, a major step towards efforts by the firm and UnB to combine coffee genes with a view to improving grain quality.

(www.news.com.au. Adaptado.)

Quais são as possíveis aplicações práticas da descoberta?

Ainda no segundo parágrafo do texto, lê-se:

"(…) the opioid peptides, which are naturally occurring biological molecules, appeared to have a longer-lasting effect on the mice than morphine itself."

Desta maneira, é possível entender que os peptídicos-opiódicos, elementos naturais das moléculas, parecem ter efeitos mais duradouros em ratos do que a morfina em si. Logo, a descoberta aparenta ter "potencial biotecnológico" para a indústria de alimentos saudáveis, além de aliviar o estresse em animais que estão prestes a serem mortos em açougues (como se lê no terceiro parágrafo). Ademais, o texto infere que a Embrapa conseguiu sequenciar o genoma do café para que se melhore a qualidade do grão.