

Problems with identifying meat? The answer is to check the barcode

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Do you want to know what you are eating? DNA barcodes can be used to identify even very closely related species, finds an article published in BioMed Central's open access journal *Investigative Genetics*. Credit: Maria E D'Amato, Evguenia Alechine, Kevin W Cloete, Sean Davison and Daniel Corach

Want to know what you are eating? DNA barcodes can be used to identify even very closely related species, finds an article published in BioMed Central's open access journal *Investigative Genetics*. Results

from the study show that the labelling of game meat in South Africa is very poor with different species being substituted almost 80% of the time.

In South Africa game meat biltong (air dried strips) is big business with over 10,000 wildlife farms and is supplemented by private hunting. This meat is considered to be 'healthier' than beef because it is lower in fat and cholesterol and perceived to be lower in additives.

Using mitochondrial COI [DNA barcoding](#) and cytb sequencing, researchers analysed samples of game meat from supermarkets, wholesalers and other outlets and compared them to known samples and library sequences. From 146 samples over 100 were mislabelled.

All the beef samples were correct, but for the most badly labelled case 92% of kudu was a different species. Only 24% of springbok and [ostrich](#) biltong was actually springbok or ostrich. The rest was horse, impala, hartebeest, [wildebeest](#), waterbok, eland, gemsbok, duiker, giraffe, kangaroo, lamb, pork or beef. Worryingly one sample labelled zebra was actually mountain zebra, a 'red listed' species threatened with extinction.

Maria Eugenia D'Amato from the University of the Western Cape commented, "The delivery of unidentifiable animal carcasses to market and the general lack of regulations increases the chances of species mislabelling and fraud. This has implications for species safety but also has cultural and religious implications. This technique is also able to provide new information about the identity of animals and meant that we found several animals whose DNA had been misidentified in the scientific libraries."

More information: Where is the game? Wild meat products authentication in South Africa: a case study. Maria E D'Amato, Evguenia Alechine, Kevin W Cloete, Sean Davison and Daniel Corach,

Investigative Genetics (in press)

Provided by BioMed Central

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