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## Research Cells Contaminated

By Stephen Luntz

**Many researchers are using cell lines that are not what they think they are, potentially leading to seriously erroneous results, according to a paper in Nature that argues it is time the scientific community took action.**

Dr Amanda Capes-Davis of the Children's Medical Research Institute and Chair of the International Cell Line Authentication Committee says that 10–15% of the human cell lines used in research have been contaminated by faster-growing cell lines that have overgrown the original cells. As a result, any samples are likely to be of the contaminant yet scientists continue using them unaware.

Capes-Davis uses the example of the KB oral cancer cell line, which has been contaminated with HeLa cervical cancer cells, the most commonly used cell line in research. Although cultures labelled as KB have been known to be HeLa since 1967, Capes-Davis says roughly 40 papers are published each year based on research using KB cells, most without checking if they have the real thing.

"It's not getting less common, which is disturbing," says Capes-Davis. "We've known this happens for more than 40 years." Capes-Davis and fellow authors of the letter argue that billions of dollars of research funding are wasted each year as a result.

The contamination comes from lots of causes, Capes-Davis says, primarily "sharing a bottle of medium in a biohazard cabinet at a point where the original cells are growing slowly and can easily be overgrown".

However, Capes-Davis thinks the core of the problem is a lack of awareness among scientists. "We've created a database of lines that are known to be misidentified, and are trying to create a one-stop shop where people go before they do experiments.

"We'd like it if journals refused to publish papers where identification had not taken place, and there are about dozen journals that have done this," says Capes-Davis. "We also want grants bodies to make it a requirement of grants."

Besides databases of unreliable cell lines, Capes-Davis says several test centres worldwide can authenticate cell lines before they are used.