Cell Line Industry Articles
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Trust is a fundamental building block, specifically in the scientific community. We must trust that researchers and authors have reported accurate findings, including those that could bias the outcome. Cell Line contamination and misidentification has been prevalent for more than 50 years. There is widespread use of misidentified cell lines and, although the scientific community is fully aware of the problem, they have not come to an agreement on the possible solutions, until now.

We found conclusive information from a variety of sources and discussions that validate the need for Cell Line Authentication and Mycoplasma testing. It is a movement that has taken time, and from the information gathered, it is our belief that we can be ahead of a rapidly approaching wave.

Excerpts from various Journals, websites and publications:

"AACR strongly encourages the authentication of cell lines used in the research reported in its journals."
Source: AACR website

"*We will require Cell Line Authentication in the near future, as we adhere to the ASN-0002 Guidelines. Our hope is that other Publication's will do the same.*"
Source: Phone interview with Patrick C.H. Lo, PhD, Research Editor, Bio Techniques, The International Journal of Life Sciences Methods

"In keeping with NIH guidelines, the Journal considers it to be good practice for cultured cell lines to be authenticated".
Source: Excerpt from the Journal of Molecular Biology website

"If contaminated cell lines are used in research, the data obtained may not be reproducible or dependable".
Source: Riken Bioresource Center Cell Bank, Japan

"Use of false cell lines remains a major problem in biological research."
Source: *www.ncbi.nlm.nih.gov/pubmed/22700458*

"However, a substantial proportion of cell lines is mislabeled or replaced by cells derived from a different individual, tissue or species. The scientific community has failed to tackle this problem and consequently thousands of misleading and potentially erroneous papers have been published using cell lines that are incorrectly identified."
Source: *www.ncbi.nlm.nih.gov/pubmed/20448633*

"Laboratories employing continuous cell lines derived from both human and non-human animal species will need to monitor cross-contamination using one of the cell species identification methods. For existing human cell lines, investigators will be encouraged to (1) check the universal database to see if the cell line is represented within the public STR database, (2) ensure that the STR database indicates that this cell line is not misidentified, and (3) perform an STR analysis and compare the results to those within the STR database.

"We recommend performing authentication when a cell line is received from an outside source (repository, other investigator). An aliquot could be tested at the time of preparation of the initial frozen cell stock. The culture should have its profile reconfirmed after expanding two or three passages, to check if any contaminants previously below the detection threshold have grown to be more evident (Fig. 4). Cells from the initial frozen stock may then be used for experiments with confidence that the identity is correctly established."
Source: *www.ncbi.nlm.nih.gov/pmc/articles/PMC2995877*