

Goal 1: Make Cell Line Misidentification More Visible

A number of laboratories and cell line repositories have uncovered misidentified cell lines, in publications dating from the 1960s. More information will come from public databases such as the NCBI cell line database, currently in preparation as part of the standard. These online, interactive databases give cell banks and laboratories an effective way to compare samples and share authentication test results. But it is important that the older reports are not lost and that any incorrect or inaccurate information added to the literature, or to online databases, should be addressed.

To make this information more visible and informative, ICLAC aims to:

1. Review reports of misidentified or cross-contaminated cell lines
2. Gather information to provide a written response, where needed, to the scientific community
3. Manage a master list of misidentified cell lines for the research community and for feedback to the NCBI cell line database

As a resource for the research community in this area, members of the group have previously developed a single list of cross-contaminated or misidentified cell lines. The list will be used as an initial template for this goal, with ongoing updates and online release of updated information. It can then be used as a tool to help ensure that reports of cell line misidentification are recorded, accessible to the research community and any inaccuracies corrected.

Goal 2: Promote Authentication Testing

The standard referred to above is an important resource for authenticating cell lines. However, there is a need for education and resources to help laboratories apply the standard in their own situations. How this is done will depend on the resources available to the group. Possibilities include:

- Provide advice to scientists planning a project or grant application, starting new work or initiating new cell lines
- Guidelines on application of the standard and recommended test measures
- Shared policies on difficult issues
- Shared data to provide more effective datasets for shared online databases
- Approaches to journals and funding bodies to encourage mandatory authentication testing, with assistance if needed to make such testing recommendations easier to make.

Ground Rules

ICLAC members have been invited to join the group based on expertise in cell line misidentification, authentication testing, or database applications. Members act in a voluntary capacity and their individual contributions and commitment to addressing the problem of cell line misidentification are respectfully acknowledged. Administrative support and website resources have been made available to the group from the ATCC SDO as part of an ongoing commitment to authentication testing.

Contributions from members are subject to the policies of their individual institutions. All shared policies and sharing of data must be approved by the contributing organisation.

The committee meets every three months by teleconference. Correspondence and other business are carried out by email as far as possible, to allow members from different time zones to contribute.

A new finding of cell line misidentification can be reported by any member. New reports will be distributed to the members with an opportunity to give feedback and contribute further data where available. If members accept or endorse the initial report, the curator of the list of cross-contaminated or misidentified cell lines will add that entry to the list. If any member challenges the initial report, the

cell line will be reviewed by the members and a decision made on its status based on available data. No response from the members will be taken as agreement to the cell line being added to the list.

A change in status for cell lines already entered on the list can be reported using a similar process. For example, if authentic stock is found, the cell line can be moved from Table 1 (no known authentic stock) to Table 2 (authentic stock known).

Duration and Terms of Reference

No duration has been set for the committee. To promote effective use of resources, the committee will review its purpose and goals on an annual basis via teleconference. The Terms of Reference can be modified by the group following teleconference discussion. All changes must be reviewed by the members via email before being adopted.