

Naming a Cell Line

If your work entails generating new cell lines, when successful lines emerge, it will be necessary to give them a designation. The field has moved on somewhat since the early days and it would no longer be deemed adequate to call your cell line "L" or "C6". Short names such as these are hard to find in searches and may be duplicated by other cell lines (1). The most important aspect of naming a cell line is that it should be unique and choosing a single letter or binomial is unlikely to achieve that.

Essential Requirements for Cell Line Names

- Do not use the donor's name or initials to avoid compromising patient confidentiality.
- Cell line names should be at least six characters long but not a recognisable word (like "glioma").
- Characters which may be used should be chosen so as not to compromise subsequent indexing or computer searching. Characters that may be used include upper and lower case letters, Arabic numerals, dashes, or underscores.
- Do not use spaces, asterisks, sub- or superscripts, slashes, query marks, or other symbols.
- The name chosen for the new cell line should be checked to be unique by searching the internet (Google, PubMed, etc.) for potentially similar names. Different variants of the name should be tested during the search, such as names with spaces or hyphens separating different parts of the name (e.g., T406, T 406, T-406) and potential abbreviated variants of the name (e.g., NCI-H420 or H420).

Recommended Style for Cell Line Names

Standardised nomenclature has already been developed for embryonic stem cell and induced pluripotent stem cell lines (2,3). The recommended style for other types of cell lines is as follows:

1. Use an origin identifier, e.g. SK for Sloan Kettering or WI for Wistar Institute. The origin relates to the institute or laboratory in which the cell line was established.
2. Use a series or tissue identifier, e.g. Gl for glioma or Lu for lung.
3. Use a number to identify the specific cell line, e.g. the number taken from the sample log completed when the tissue is received.
4. Another number, though preferably an alphanumeric binomial, would then define a subline, clone or transfected culture.

Hence, a cell line from Medical Oncology, Glasgow, isolated from lung, tissue biopsy #113 would become MOG-Lu-113 and a clone derived from it (often using the coordinates of a microwell plate) would be MOG-Lu-113-D4.

The cell line name should always be listed in full in the Materials and Methods section of a publication, and when first used in a presentation. Any subsequent abbreviations should be clearly linked to the full cell line name.

Once chosen, the cell line name should be used consistently and not changed unnecessarily. A centralized registry of cell line names would be required to track name changes; such a registry does not exist at the present time.

References

1. Sarntinijai S, Ade AS, Athey BD, States DJ. A bioinformatics analysis of the cell line nomenclature. *Bioinformatics* 2008; 24(23): 2760-6.
2. Luong MX, Auerbach J, Crook JM, Daheron L, Hei D, Lomax G, Loring JF, Ludwig T, Schlaeger TM, Smith KP, Stacey G, Xu RH, Zeng F. A call for standardized naming and reporting of human ESC and iPSC lines. *Cell Stem Cell* 2011; 8(4): 357-9. PMID: 21474098.
3. Rust W, Pollok B. Reaching for consensus on a naming convention for pluripotent cells. *Cell Stem Cell* 2011 8(6): 607-8. PMID: 21624803.