# 使用人類細胞株之論文於投稿時期刊要求說明與因應

# 緣起

- 有鑑於偶有研究人員使用已被證明錯誤的細胞株(misidentification)或細胞株有其他細胞污染(cross-contamination)，甚至誤將某細胞標示成另一細胞之問題(mislabel)，而影響論文的正確性，目前已有許多知名期刊(Ex: IJC, Nature series..)要求作者需要提出所有使用細胞株的複核資料，作爲論文送審的先決條件。
- 僅以IJC期刊爲範例，說明如何因應

IJC International Journal of Cancer

## International Journal of Cancer



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投稿之說明

- Author guidelines
  - 4.6.3 authentication of cell lines

細胞株的複核鑑定

**4.6.3 Authentication of cell lines.** As a consequence of the increasing use of cross-contaminated cell lines, the Editors of *IJC* have taken measures to ensure that papers accepted for publication are not based on misidentified cells. Therefore, studies dealing with **established human (tumor) cell lines** must provide authentication of the origin and identity of the cells. This is best achieved by DNA (STR) profiling (see below). Authentication is required for all established human tumor cell lines that have been cultured for more than 4 years up to the date of submission of the manuscript. If cell lines were obtained from a commercial source (within the last 4 years) that guarantees cell line authentication through in-house quality control measures, it is sufficient to provide their certificate/documentation, including date of purchase (N.B.: a purchase order alone or a published paper is not sufficient).

Authors should first check the **list** of confirmed misidentified and cross-contaminated cell lines to see whether the cell line they used is already known to be misidentified. Authors can either perform the profiling in their own laboratory (e.g., using a commercially available kit) or use the service provided by an approved laboratory or cell bank (**click here for a list of optional service providers**). The DNA profile should be cross-checked with the DNA profile of the donor tissue (in case of a new cell line) or with the DNA profile of other continuous cell lines such as provided by the data bank available through **www.dsmz.de/fp/cgi-bin/str.html** (personal registration required).

The following cell lines are presently exempt from this rule:

- Short-term cultures of human tumors
- Murine cell lines (as a catalog of DNA profiles is not yet available)
- Tumor cell lines established in the course of the study that is being submitted. However, we strongly advise authors to establish a means of authenticating their cell lines because as soon as the line has been in use for more than 4 years, authentication will be required again.

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BCRC爲認可的
DNA profiling
實驗室

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## Addresses of cell culture collections and DNA profiling laboratories for cell line authentication

| | Website | E-mail |
|---|---|---|
| American Type Cell Culture Collection (ATCC-USA), Molecular Authentication Resource Center (MARC) | http://www.atcc.org | MARC@atcc.org |
| Australian Cell Bank | http://www.cellbankaustralia.com | info@cellbankaustralia.com |
| China Center for Type Culture Collection (CCTCC) | http://www.cctcc.org | cctcc202@whu.edu.cn |
| Chinese Academy of Sciences Cell Bank of Type Culture Collection (CBTCCCAS) | | xiruige@sunm.shcnc.ac.cn |
| Colorado Cancer Center's DNA Sequencing & Analysis Core | http://loki.uchsc.edu/ | christopher.korch@ucdenver.edu |
| Coriell Institute for Medical Research | http://www.coriell.org | |
| European Culture Collection of Cell Cultures (ECACC) | http://www.hpacultures.org.uk | |
| German Cell Culture Collection | http://www.dsmz.de | |
| Hong Kong Cell Culture Collection (HKUCC) | | kdhyde@hkucc.hku.hk |
| Identicell, Dept of Molecular Medicine, Aarhus University Hospital, Denmark | http://www.identicell.eu | contact@identicell.dk |
| Italian Cell Bank | | paolo.romano@istge.it |
| Japan Cell Bank | http://cellbank.nibio.go.jp/ | |
| RIKEN Resource Centre, Japan | http://www.brc.riken.jp | |
| South-Korean Cell Bank | | bokghee@nih.go.kr |
| Taiwan Bioresource Collection and Research Centre (BCRC) | http://www.ccrc.firdi.org.tw | gfy@firdi.org.tw; llc51@firdi.org.tw |

# Authentication of cell lines

- Best done by DNA (STR) profiling
- All human cell lines, established for 4 years
- Commercial source, providing certificate/documentation, including date of purchase
- Check the misidentified cell list

# 細胞株購買證明

- 若由商業取得或BCRC細胞庫提供的細胞株，請保留購買證明，此證明可爲中文，只需要作者英文註明西元日期即可(以IJC之要求：必需爲論文投稿時的4年內)
- BCRC細胞庫提供的人類細胞株，可以在網頁的資料欄(others: STR-PCR profile)抄錄資料即可

# STR profile

- 購買日期超過4年的人類細胞株，則在投稿前建議需要委託進行STR profiling的分析，以證明細胞株無誤
- BCRC接受委託進行人類細胞STR profiling的分析(BCRC提供英文報告)，包括非BCRC提供的人類細胞株
- 目前規範，只有人類細胞株需要提供複核資料，其他種源的細胞不需提供，只需說明非人類細胞株即可！

# 發表時之注意事項

1. 若細胞由BCRC提供，則說明細胞來源
   obtained from BCRC (Bioresource Collection and Research Center, Taiwan)

2. 說明STR-PCR profile由BCRC (Bioresource Collection and Research Center)提供或執行

*Research Article* *Open Access*

# In silico Therapeutic Drug Screening for Reversing the Lung Adenocarcinoma Overexpressed Gene Signatures

**Yu-Lun Kuo[1#], Peter Mu-Hsin Chang[2,3#], Yu-Wen Liu[4#], Po-Hsu Chen[5], Pei-Ying Lee[4], Ren-Shyan Liu[6], Jin-Mei Lai[7], Yin-Jing Tien[5], Yu-Chung Wu[8], Li-Jen Su[9], Cheng-Yan Kao[1,10], Chun-Houh Chen[5*] and Chi-Ying F. Huang[3,4*]**

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## Materials and Methods

### Cell culture, MTT™ cell viability test, clonogenic assay, and animal model

All cell-culture-related reagents and procedures are in supplemental method. Human lung cancer cell lines A549 and H460 were purchased from the American Type Culture Collection/ Bioresource Collection and Research Center (BCRC) (Taiwan). These cells have performed STR-PCR profile at BCRC. A14 was a derivative of A549 cells stably selected with a p53 shRNA construct [15]. Human lung adenocarcinoma cell lines, $CL_{1-0}$ and $CL_{1-5}$ [16], were kind gifts from Dr. Pan-Chyr Yang. H1299 stable clones (transfected with EGFRWT (wild-type) and EGFR-L858R mutant) were kindly provided by Chen et al. [17]. Cell viability was determined using an MTT assay and clonogenic assay were described in supplemental method. *In vivo* microPET imaging of overexpression of p21 induced by trichostatin A in p21-HSV1-tk expressed H1299 animal tumor model [18] was also described in Supplemental method.

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Cancer Therapy

# Telomerase-specific oncolytic adenoviral therapy for orthotopic hepatocellular carcinoma in HBx transgenic mice

Wei-Hsiang Lin[1], Shiou-Hwei Yeh[1,2,†,*], Wan-Jen Yang[1], Kun-Huei Yeh[3], Toshiyoshi Fujiwara[4], Aisuke Nii[5], Stanley Shi-Chung Chang[6], Pei-Jer Chen[2,7,8,‡,*]

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Issue


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