

WIN!

an iPod shuffle



# HPA Culture Collections

## News & Product Update...



Autumn-Winter 2010

Training • GPCR cell lines from InSCREENeX • New Cell Lines from CRUK & CBA • EVA Free Virus Sample Initiative • Rapid Generation of Recombinant Cell Lines

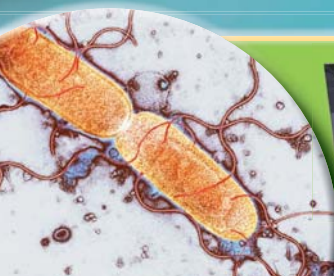
New Edition Out Now!

# Fundamental Techniques in Cell Culture, Laboratory Handbook

2nd Edition

In response to popular demand the European Collection of Cell Cultures (ECACC), in partnership with Sigma-Aldrich have produced a 2nd Edition of 'Fundamental Techniques in Cell Culture'. This compact laboratory handbook provides a wealth of information from the sourcing of cell lines, safety and laboratory design to aspects of cryopreservation and quality control. Additionally a series of 10 detailed protocols are provided, which are routinely used in the ECACC laboratories.

See inside to find out how to obtain a **FREE copy!**.....



## New Antibiotic Resistant Bacterial Strains

(including NDM-1) – now available see inside for listing...

## HPA Culture Collections

A strategic business unit within the Health Protection Agency.



[www.hpacultures.org.uk](http://www.hpacultures.org.uk)

Tel: +44 (0) 1980 612512

email: [hpacultures@hpa.org.uk](mailto:hpacultures@hpa.org.uk)

## Limited Offer! Free Access to Virus Samples – enabled by EVA



A scheme to allow early post graduate research virologists access to virus strains at no charge has been enabled by the European Virus Archive (EVA) network. EVA was established in 2009 with the support of EU funding to improve the preservation, availability and distribution of virus isolates to international researchers. For a limited period, scientists at the start of their career e.g. PhD students and junior post docs are encouraged to apply to the National Collection of Pathogenic Viruses (NCPV) to obtain free strains subsidised by EVA. In exchange for the material applicants are simply required to provide information on their current research activities.

For full details on how to apply for the supply of subsidised virus strains from the NCPV – please visit our website at [www.hpacultures.org.uk/ncpv/evaoffer.jsp](http://www.hpacultures.org.uk/ncpv/evaoffer.jsp)

## Get your FREE copy NOW!

To obtain a free copy of the  
Fundamental Techniques  
in Cell Culture, Laboratory  
Handbook, 2nd Edition -  
Register online at

[www.hpacultures.org.uk/promotions/labhandbook.jsp](http://www.hpacultures.org.uk/promotions/labhandbook.jsp)



## Training Opportunity – ECACC Cell Culture Courses



Our training courses held in 2010 were fully booked and attracted a diverse range of attendees including researchers from as far as Singapore, Malaysia, Brazil and the USA. Dates for the next courses scheduled for 2011 are shown below.

**Plan ahead & sign up now!**



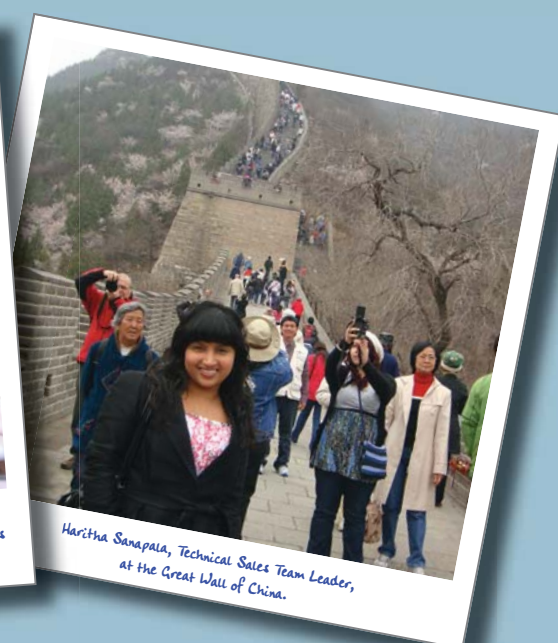
Why not enhance your knowledge and skills by attending one of our Cell Culture Training Courses in 2011?

Cell Culture Course	Date	Duration	Format	Price
Level 1	22nd -24th March 2011	3 days	Lectures & Practical Sessions	£1400
Level 1	18th – 20th October 2011	3 days	Lectures & Practical Sessions	£1400
Level 2	1st – 4th March 2011	4 days	Lectures & Practical Sessions	£1800
Level 2	4th – 7th October 2011	4 days	Lectures & Practical Sessions	£1800

For more details about course content and how to register – visit our website at [www.hpacultures.org.uk](http://www.hpacultures.org.uk)

## Strengthening our relationship with SIGMA-ALDRICH®

ECACC is forging close links with Sigma-Aldrich China in an initiative to make authenticated cell lines more accessible to researchers in China. Earlier this year Bryan Bolton, Commercial Manager, and Haritha Sanapala, Technical Sales Team Leader, for the HPA Culture Collections visited Sigma-Aldrich and their customers in Shanghai and Beijing. Sigma-Aldrich China are now in the process of establishing a local cell line cryostorage facility in Shanghai for ECACC cell lines to improve customer service for our Chinese customers by reducing delivery times and costs.



## New Antimicrobial Resistant Strains – available now!

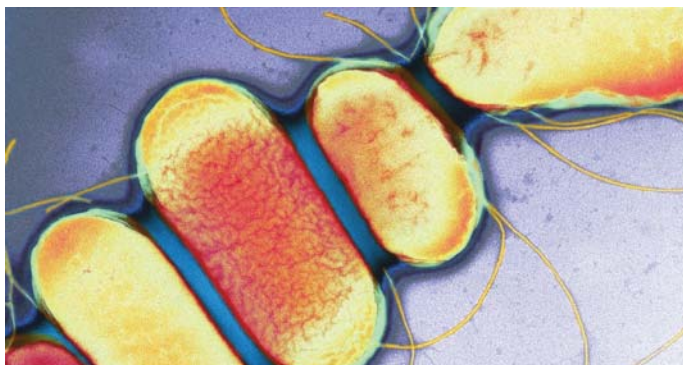


### 1. Penicillinase without ESBL activity

NCTC 11560 = *E. coli*

NCTC 11954 = *E. coli* ATCC 35218

NCTC 11561 = *S. aureus*



### 2. Extended spectrum beta-lactamases

#### 2.1 TEM-types

NCTC 13351 = *E. coli* with TEM-3 ESBL – Transconjugant of strain isolated in Clermont Ferrand in 1985 and described by Sirot *et al.* J Antimicrob Chemother 1987, 20, 323.

NCTC 13352 = *E. coli* with TEM-10 ESBL – Transconjugant of original TEM-10 producer isolated in Chicago in 1988 and described by Quinn *et al.* Antimicrob Agents Chemother 1989, 33, 1451.

#### 2.2 SHV types

NCTC 13368 *Klebsiella pneumoniae* – SHV-18 (ATCC 700603)

#### 2.3 CTX-M types

NCTC 13353 = EO 487 *E. coli* producing CTX-M-15 ESBL – Kingston Hospital 2003; [Control strain for group 1 blaCTX-M multiplex PCR assays]; Woodford *et al.* J Antimicrob Chemother 2004, 54, 735-43.

NCTC 13441 = EO 499 *E. coli* producing CTX-M-15 ESBL – Uropathogenic strain O25:H4 sequence type (ST) 131. Clinical isolate harbouring sequenced plasmid pEK499 (see NCTC 13400); [Control strain for group 1 blaCTX-M multiplex PCR assays]. Woodford *et al.* J Antimicrob Chemother 2004, 54, 735-43.

NCTC 13400 = Tr499 = DH5α *E. coli* Source of sequenced pEK499 plasmid (from NCTC 13441), which encodes CTX-M-15 enzyme. Plasmid pEK499 (117,536 bp) is a fusion of type FII and FIA replicons, and harbours 10 antibiotic resistance genes: *bla*<sub>CTX-M-15</sub>, *bla*<sub>OXA-1</sub>, *bla*<sub>TEM-1</sub>, *aac6'-lb-cr*, *mph(A)*, *catB4*, *tet(A)*, and integron-borne *dfrA7*, *aadA5* and *sulI* genes. GenBank accession number EU935739. Woodford *et al.* Antimicrob Agents Chemother. 2009 ; PMID: 19687243.

NCTC 13451 = J499 = J53 *E. coli* Source of sequenced pEK499 plasmid (from NCTC 13441), which encodes CTX-M-15 enzyme. Plasmid pEK499 (117,536 bp) is a fusion of type FII and FIA replicons, and harbours 10 antibiotic resistance genes: *bla*<sub>CTX-M-15</sub>, *bla*<sub>OXA-1</sub>, *bla*<sub>TEM-1</sub>, *aac6'-lb-cr*, *mph(A)*, *catB4*, *tet(A)*, and integron-borne *dfrA7*, *aadA5* and *sulI* genes. GenBank accession number EU935739. Woodford *et al.* Antimicrob Agents Chemother. 2009 ; PMID: 19687243.

NCTC 13450 = Tr516 = DH5α *E. coli* Source of sequenced pEK516 plasmid, which encodes CTX-M-15 enzyme. Plasmid pEK516 (64,471-bp) belongs to incompatibility group IncFII and carries seven antibiotic resistance genes: *bla*<sub>CTX-M-15</sub>, *bla*<sub>OXA-1</sub>, *bla*<sub>TEM-1</sub>, *aac6'-lb-cr*, *catB4*, *tet(A)*, and *aac3-Ila*. GenBank accession number EU935738. Woodford *et al.* Antimicrob Agents Chemother. 2009 ; PMID: 19687243.

NCTC 13452 = J204 = J53 *E. coli* Source of sequenced pEK204 plasmid, which encodes CTX-M-3 enzyme. Plasmid pEK204 (93,732-bp) belongs to incompatibility group IncI1, and harbours two antibiotic resistance genes: *bla*<sub>CTX-M-3</sub>, and *bla*<sub>TEM-1</sub>. GenBank accession number EU935740. Woodford *et al.* Antimicrob Agents Chemother. 2009; PMID: 19687243.

NCTC 13461 = *E. coli* strain harbouring (unsequenced) *bla*<sub>CTX-M</sub> group 1 gene.

NCTC 13462 = *E. coli* strain harbouring (unsequenced) *bla*<sub>CTX-M</sub> group 2 gene.

NCTC 13463 = *E. coli* strain harbouring (unsequenced) *bla*<sub>CTX-M</sub> group 8 gene.

NCTC 13464 = *Enterobacter cloacae* strain harbouring (unsequenced) *bla*<sub>CTX-M</sub> group 9 gene.

NCTC 13465 = *Klebsiella pneumoniae* strain harbouring (unsequenced) *bla*<sub>CTX-M</sub> group 25 gene.

Woodford N, Fagan EJ, Ellington MJ. Multiplex PCR for rapid detection of genes encoding CTX-M extended-spectrum (beta)-lactamases. J Antimicrob Chemother. 2006; 57:154-5.

#### 2.4 VEB type

NCTC 13437 *Pseudomonas aeruginosa* VIM-10; VEB-1 +ve

Woodford N, Zhang J, Kaufmann ME, Yarde S, Tomas Mdel M, Faris C, Vardhan MS, Dawson S, Cotterill SL, Livermore DM. Detection of *Pseudomonas aeruginosa* isolates producing VEB-type extended-spectrum beta-lactamases in the United Kingdom. J Antimicrob Chemother. 2008 Dec;62(6):1265-8.

### 3. AmpC beta-lactamases

NCTC 13405 = 684 *Enterobacter cloacae* with inducible AmpC β-lactamase, wild type. Control for AmpC detection tests.

NCTC 13406 = 684-con *Enterobacter cloacae* with AmpC β-lactamase derepressed (i.e. constitutive hyper-producing) mutant of NCTC 13405. Control for AmpC detection tests.

### 4. Carbapenemases

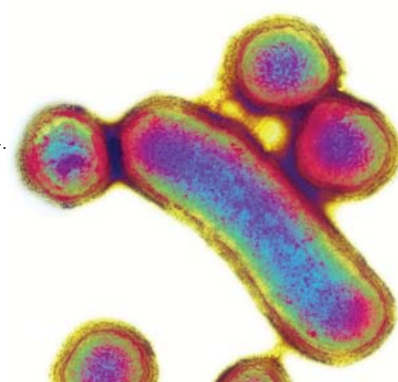
#### 4.1 Class A carbapenemase

NCTC 13438 = H0 7362 0453 *Klebsiella pneumoniae* producing KPC-3 carbapenemase.

Woodford N, Zhang J, Warner M, Kaufmann ME, Matos J, Macdonald A, Brudney D, Sompolinsky D, Navon-Venezia S, Livermore DM. Arrival of *Klebsiella pneumoniae* producing KPC carbapenemase in the United Kingdom. J Antimicrob Chemother. 2008 Dec;62(6):1261-4.

#### 4.2 Class B carbapenemases (metallo-beta-lactamases)

NCTC 13437 *Pseudomonas aeruginosa* VIM-10; VEB-1 +ve  
Woodford N, Zhang J,



Kaufmann ME, Yarde S, Tomas Mdel M, Faris C, Vardhan MS, Dawson S, Cotterill SL, Livermore DM. Detection of *Pseudomonas aeruginosa* isolates producing VEB-type extended-spectrum beta-lactamases in the United Kingdom. *J Antimicrob Chemother.* 2008 Dec;62(6):1265-8.

NCTC 13439 *Klebsiella pneumoniae* VIM-1; qnrS1 (outbreak strain)  
NCTC 13440 *Klebsiella pneumoniae* VIM-1; qnrS1 (sporadic)

Aschbacher R, Doumith M, Livermore DM, Larcher C, Woodford N. Linkage of acquired quinolone resistance (qnrS1) and metallo-beta-lactamase (blaVIM-1) genes in multiple species of Enterobacteriaceae from Bolzano, Italy. *J Antimicrob Chemother.* 2008 Mar;61(3):515-23.

NCTC 13443 = H0 9030 0671 *Klebsiella pneumoniae* with NDM-1 metallo-beta-lactamase.

NCTC 13476 *E. coli* IMP-type (unsequenced)

#### 4.3 Class D carbapenemases (OXA carbapenemases)

NCTC 13301 *Acinetobacter baumannii* OXA 23  
NCTC 13302 *Acinetobacter baumannii* OXA 25 (OXA-24/40-like)  
NCTC 13303 *Acinetobacter baumannii* OXA 26  
NCTC 13304 *Acinetobacter baumannii* OXA 27

Afzal-Shah M, Woodford N, Livermore DM. Characterization of OXA-25, OXA-26, and OXA-27, molecular class D beta-lactamases associated with carbapenem resistance in clinical isolates of *Acinetobacter baumannii*. *Antimicrob Agents Chemother.* 2001 Feb;45(2):583-8

NCTC 13305 *Acinetobacter baumannii* (A 15) OXA 58

Coelho J, Woodford N, Afzal-Shah M, Livermore D. Occurrence of OXA-58-like carbapenemases in *Acinetobacter* spp. collected over 10 years in three continents. *Antimicrob Agents Chemother.* 2006 Feb;50(2):756-8.

NCTC 13421 *Acinetobacter baumannii* OXA 23 Clone 2  
NCTC 13424 *Acinetobacter baumannii* OXA 23 Clone 1  
NCTC 13420 *Acinetobacter baumannii* SE Clone

Turton JF, Kaufmann ME, Warner M, Coelho J, Dijkshoorn L, van der Reijden T, Pitt TL. A prevalent, multiresistant clone of *Acinetobacter baumannii* in Southeast England. *J Hosp Infect.* 2004 Nov;58(3):170-9.

Coelho JM, Turton JF, Kaufmann ME, Glover J, Woodford N, Warner M, Palepou MF, Pike R, Pitt TL, Patel BC, Livermore DM. Occurrence of carbapenem-resistant *Acinetobacter baumannii* clones at multiple hospitals in London and Southeast England. *J Clin Microbiol.* 2006 Oct;44(10):3623-7.

NCTC 13422 *Acinetobacter baumannii* NW Clone  
NCTC 13423 *Acinetobacter baumannii* T strain

Turton JF, Kaufmann ME, Glover J, Coelho JM, Warner M, Pike R, Pitt TL. Detection and typing of integrons in epidemic strains of *Acinetobacter baumannii* found in the United Kingdom. *J Clin Microbiol.* 2005 Jul;43(7):3074-82.

Turton JF, Kaufmann ME, Gill MJ, Pike R, Scott PT, Fishbain J, Craft D, Deye G, Riddell S, Lindler LE, Pitt TL. Comparison of *Acinetobacter*

*baumannii* isolates from the United Kingdom and the United States that were associated with repatriated casualties of the Iraq conflict. *J Clin Microbiol.* 2006 Jul;44(7):2630-4.

Turton JF, Gabriel SN, Valderrey C, Kaufmann ME, Pitt TL. Use of sequence-based typing and multiplex PCR to identify clonal lineages of outbreak strains of *Acinetobacter baumannii*. *Clin Microbiol Infect.* 2007 Aug;13(8):807-15.

NCTC 13442 *Klebsiella pneumoniae* OXA 48

## 5. Plasmid-mediated fluoroquinolone resistance (Qnr)

NCTC 13439 *Klebsiella pneumoniae* VIM-1; qnrS1 (outbreak strain)  
NCTC 13440 *Klebsiella pneumoniae* VIM-1; qnrS1 (sporadic)

Aschbacher R, Doumith M, Livermore DM, Larcher C, Woodford N. Linkage of acquired quinolone resistance (qnrS1) and metallo-beta-lactamase (blaVIM-1) genes in multiple species of Enterobacteriaceae from Bolzano, Italy. *J Antimicrob Chemother.* 2008 Mar;61(3):515-23.

## 6. Multiple antibiotic resistance plasmids

NCTC 13400 = Tr499 = DH5 $\alpha$  *E. coli* Source of sequenced pEK499 plasmid (from NCTC 13441), which encodes CTX-M-15 enzyme. Plasmid pEK499 (117,536 bp) is a fusion of type FII and FIA replicons, and harbours 10 antibiotic resistance genes: *bla*<sub>CTX-M-15</sub>, *bla*<sub>OXA-1</sub>, *bla*<sub>TEM-1</sub>, *aac6'-Ib-cr*, *mph(A)*, *catB4*, *tet(A)*, and integron-borne *dfrA7*, *aadA5* and *sulI* genes. GenBank accession number EU935739. Woodford *et al.* *Antimicrob Agents Chemother.* 2009 ; PMID: 19687243.



NCTC 13451 = J499 = J53 *E. coli* Source of sequenced pEK499 plasmid (from NCTC 13441), which encodes CTX-M-15 enzyme. Plasmid pEK499 (117,536 bp) is a fusion of type FII and FIA replicons, and harbours 10 antibiotic resistance genes: *bla*<sub>CTX-M-15</sub>, *bla*<sub>OXA-1</sub>, *bla*<sub>TEM-1</sub>, *aac6'-Ib-cr*, *mph(A)*, *catB4*, *tet(A)*, and integron-borne *dfrA7*, *aadA5* and *sulI* genes. GenBank accession number EU935739. Woodford *et al.* *Antimicrob Agents Chemother.* 2009 ; PMID: 19687243.

NCTC 13450 = Tr516 = DH5 $\alpha$  *E. coli* Source of sequenced pEK516 plasmid, which encodes CTX-M-15 enzyme. Plasmid pEK516 (64,471-bp) belongs to incompatibility group IncFII and carries seven antibiotic resistance genes: *bla*<sub>CTX-M-15</sub>, *bla*<sub>OXA-1</sub>, *bla*<sub>TEM-1</sub>, *aac6'-Ib-cr*, *catB4*, *tet(A)*, and *aac3-IIa*. GenBank accession number EU935738. Woodford *et al.* *Antimicrob Agents Chemother.* 2009 ; PMID: 19687243.

NCTC 13452 = J204 = J53 *E. coli* Source of sequenced pEK204 plasmid, which encodes CTX-M-3 enzyme. Plasmid pEK204 (93,732-bp) belongs to incompatibility group IncI1, and harbours two antibiotic resistance genes: *bla*<sub>CTX-M-3</sub> and *bla*<sub>TEM-1</sub>. GenBank accession number EU935740. Woodford *et al.* *Antimicrob Agents Chemother.* 2009 ; PMID: 19687243.

## Inventory Control, Audit and Sample Tracking at ECACC

### How easily can you find your frozen cells?

ECACC stores over 1 million frozen cryovials from 80,000 different cell lines in multiple ultra low temperature freezers. As you might expect we need to find any one of these vials quickly and efficiently in order to respond to customer requests and orders.



To enable us to do this we commissioned the development of bespoke inventory control software called ICAST with essential features such as:

- Flexible data entry by barcode scanning, RFID tag scanning, keyboard or voice recognition
- Configurable storage to accommodate many different tray formats
- Powerful searching facility using all data fields and partial match searches possible
- Secure audit trail providing full history of sample, user or storage location
- Full reporting capability
- Ease of use – intuitive interface allowing easy navigation

Because so many visitors to our facility have been impressed by our Inventory Control System we have licensed out the software in order that other organisations can benefit from it. Should you want to find out more about ICAST then please visit our website or go direct to our commercial partners Labmacs at [www.labmacs.com](http://www.labmacs.com)

## Background to the Fungi Collection

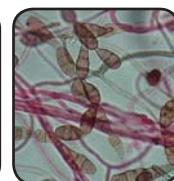
The National Collection of Pathogenic Fungi (NCPF) was founded in 1946, when the Public Health Laboratory Service (PHLS) was created by the British Government to monitor the state of infectious disease in the UK. The Mycological Reference Laboratory had been set up in the war years under the Directorship of Dr T E Duncan at the London School of Hygiene and Tropical Medicine (LSHTM). Immediately after the war, the Medical Research Council decided that microbial collections should be decentralised, with the organisms held at relevant centres of excellence for taxonomic expertise. Thus the NCPF was created out of Dr Duncan's LSHTM collection of medical fungi. To this nucleus were added many strains previously held at the National Collection of Type Cultures (NCTC) in Colindale, north London and the Commonwealth Mycological Institute's Collection at Kew.



Botanical Nomenclature). There are also strains used in antifungal drug susceptibility work and subspecific strain-typing research. NCPF includes rare species or organisms of special interest. Following recent scientific developments the collection now has DNA extracts for a large number of its organisms.

The current 4100 strains include:

- 700 strains of dermatophytes and related organisms
- 1400 strains of moulds
- 1700 strains yeasts
- 300 strains dimorphic fungal pathogens



The current collection holds over 4000 strains from mainly human or animal infections from the UK and abroad including several type strains. These type strains either originate from the old collections or deposition of nomenclatural type strains of new species and other taxonomic groupings (as an essential requirement of the International Code of

The HPA Culture Collections website contains a core selection of either 5, 10 or 20 isolates of each species. If researchers have specific requests they can contact the collection directly to discuss other strains that may be available.

## Ride to the Rock

Jamie Taylor, our Eukaryotic Cell Line Authentication & Characterisation Lead at ECACC, successfully completed an impressive charity cycle ride from Somerset, UK, to the Rock of Gibraltar, covering 1600 miles in 14 days.

The two chosen charities who benefited from this challenge were The Anthony Nolan Trust and Help for Heroes. So far, approximately £7000 has been raised. If you would like to contribute to the fund raising you can still do so by visiting [www.ridetothe-rock.co.uk](http://www.ridetothe-rock.co.uk)



## Human control DNA at your fingertips

Human Random Control (HRC) DNA panels from ECACC offer a source of high quality purified genomic DNA from 480 randomly selected UK Caucasian blood donors, in a convenient, ready to use format. Available

as a series of five, panels, each containing 2µg DNA from each of 96 individuals at a standard concentration (100ng/µl), ECACC HRC DNA panels represent a readily available, cost effective and renewable source of control DNA, suitable for a wide range of applications.



# New Cell Lines



We have an active program to acquire new cell line deposits from researchers world-wide for entry into the ECACC catalogue. If you have generated a new cell line, why not consider depositing with ECACC?

The benefits of depositing cell lines into the ECACC catalogue include:

- Quality Control and Authentication
- Second site storage – giving you peace of mind that your cells are secure
- Shop window for commercialisation opportunities

All at no cost to you.

CANCER RESEARCH UK

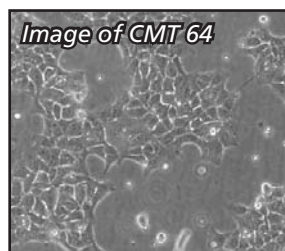


ECACC is working closely with CRUK to make authenticated cell lines more readily available to the scientific community. We are pleased to announce that in the first instalment of this collaboration 12 new cell lines licensed from CRUK are now available for research use and include:

## CMT 64 - Mouse Lung Carcinoma Metastasis Cell Line

**Catalogue No.:** 10032301

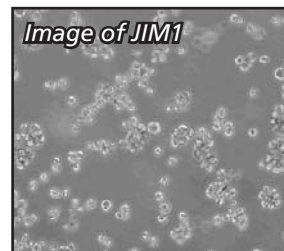
**Description:** CMT 64 was isolated from a primary alveogenic lung carcinoma tumour mass in C57BL/lcrf mouse, achieving stable morphology and growth rate in culture, similar to the growth rate and morphology in the primary tumour, and in lung metastasis induced after subcutaneous inoculation of mice. CMT 64 cells can be maintained in completely defined serum-free medium. Tumours derived from tissue culture cells grown in serum-free and serum-containing medium can form lung metastases in appropriate animal host.



## JIM1 - Human Myeloma Cancer Cell Line

**Catalogue No.:** 10032303

**Description:** JIM1 is a myeloma tumour line demonstrating typical plasma cell phenotype (CD38, PCA-1 8A and CD24 positive), deficient in DNA repair. JIM1 was derived from plasma myeloma cells derived from pleural fluid of advanced multiple myeloma patient.



**Reference:** Hamilton MS *et al.*, (1991) Normal and neoplastic human plasma cells express bcl-2 antigen. *Leukemia*. Sep; 5(9):768-71 PMID: 1943229.

## CMT 167 (clone of CMT 64) - Mouse Lung Carcinoma Metastasis Cell Line

**Catalogue No.:** 10032302

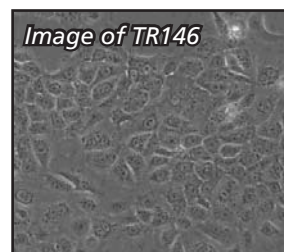
**Description:** CMT 167 is a highly metastatic subclone of murine alveogenic lung carcinoma cell line CMT 64. CMT 167 was isolated by subcloning and in vivo screening for high metastatic potential.

**Reference:** Franks LM *et al.*, (1976) Metastasizing tumors from serum-supplemented and serum-free cell lines from a C57BL mouse lung tumor. *Cancer Res*. Mar; 36(3):1049-55. PMID: 1253168.

## TR146 - Human Squamous Carcinoma Cell Line

**Catalogue No.:** 10032305

**Description:** TR146 was derived from the neck node of a 67 year-old female (primary tumour was sited in buccal mucosa). The patient had had previous radiotherapy (6,000 rads) and neck dissection. TR146 is tumourigenic in female (nu/nu) mice leading to the production of rapidly progressing tumours. Histology: well-differentiated keratinizing squamous cell carcinoma.



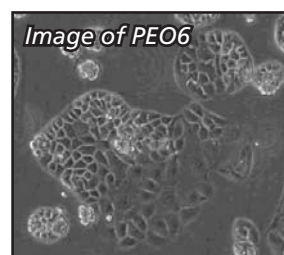
**Reference:** Rupniak HT *et al.*, (1985) Characteristics of four new human cell lines derived from squamous cell carcinomas of the head and neck. *J Natl Cancer Inst*. Oct; 75(4):621-35. PMID: 2413234.

Don't forget ECACC cell lines can be ordered via Sigma-Aldrich  
**SIGMA-ALDRICH®**

## Human Ovarian Adenocarcinoma Cell Lines

Model system for research into the mechanism of oestrogen action on ovarian adenocarcinoma tumour cells, and for the study of efficacy and toxicity of oestrogen antagonists.

A series of cell lines from an ovarian adenocarcinoma panel (derived from 4 patients at varying stages of ovarian cancer, isolated from various malignant sites, and at various treatment stages). Four of the cell lines, PEO1, PEO4, PEO6, and PEO16, have been xenografted into immune-deprived mice and found to be tumorigenic. Table 1 below summarises the clinical characteristics of patients from whom the cell lines were derived.



Cell Line	ECACC Cat No.	Morphology of primary tumour	Site <sup>a</sup>	Patient	Prior treatment <sup>b</sup>
PEO1	10032308	Poorly differentiated serous adenocarcinoma	PA	1	PEO1 collected after CDDP, 5-FU, and chlorambucil
PEO4	10032309	As above	PA	1	PEO4 collected after clinical resistance developed to above agents
PEO6	10032310	As above	PA	1	PEO6 collected prior to death
PEA1	10032306	Poorly differentiated adenocarcinoma	PE	2	PEA1 collected prior to treatment
PEA2	10032307	As above	PA	2	PEA2 collected on relapse after CDDP and prednimustine
PEO16	10032312	Poorly differentiated serous adenocarcinoma	PA	3	PEO16 collected after radiotherapy
PEO14	10032311	Well differentiated serous adenocarcinoma	PA	3	PEO14 collected prior to treatment
TO14	10081203 <i>Coming soon</i>		SM	4	TO14 metastatic tumour (in omentum) collected prior to treatment
PEO23	10032313		PA	4	PEO23 collected on relapse after CDDP and chlorambucil

**Table1:** Human Ovarian Adenocarcinoma Cell Lines. <sup>a</sup>Site - location cell line was derived from: PA, peritoneal ascites; PE, pleural effusion; SM, solid metastasis. <sup>b</sup> Treatment patient received in relation to time cells were collected, 5-FU, 5-fluorouracil; CDDP, cis-platinum. Adapted from: Langdon SP, *et al.*, (1988) Characterization and properties of nine human ovarian adenocarcinoma cell lines. *Cancer Research* Nov 1; 48(21):6166-72. PMID: 3167863.



## EXCLUSIVE Agreement with InSCREENex

HPA Culture Collections are pleased to announce they have signed an exclusive agreement with InSCREENex GmbH for the marketing and distribution of InSCREENex's products and services.

InSCREENex's SCREENflex™ technology is a unique molecular cut and paste technology for the generation of novel stable genetically modified cell lines for research and drug discovery. Based on the concept of the pre-establishment of a series of host "master" cell lines containing an exchangeable genetic cassette, SCREENflex technology can be employed to generate stable recombinants within one month from receipt of the cDNA sequence for a given target – three times faster than conventional strategies.

### NEW Custom Cell Line Generation Service

With our partners, InSCREENex, ECACC offers custom genetically modified, mammalian cell systems for research and drug discovery.

The InSCREENex SCREENflex™ technology creates stable transgenic cell lines in a third of the time of conventional recombinant techniques. More importantly, the SCREENflex cell systems are of unparalleled quality with regard to expression levels and stability of the transgene, enabling you to perform assays with the highest possible precision.

SCREENflex™ is a combination of specially designed SCREENflex master host cell lines optimized for transgene expression using a precise genetic modification step to introduce a "cassette". Using molecular "cut and paste" this sequence is cleanly removed and replaced with a gene of interest. Unlike other similar technologies SCREENflex exchanges sequences it does not add them.

#### SCREENflex™ Technology



- Target genes are stably and consistently expressed
- No need for selection antibiotics
- Different master cell lines are available for different applications
- Cell line establishment within 1 month of receipt of a target cDNA sequence
- Available as seed vials or bulked as Frozen, Assay Ready reagent

### For more information and quotations

for customised cell line generation

email: [hpacultures@hpa.org.uk](mailto:hpacultures@hpa.org.uk) or call us: +44 (0)1980 612512

### NEW

## "Off the shelf" SCREENflex™ GPCR Cell Lines

Available as single seed vials or as Frozen, Assay Ready reagent

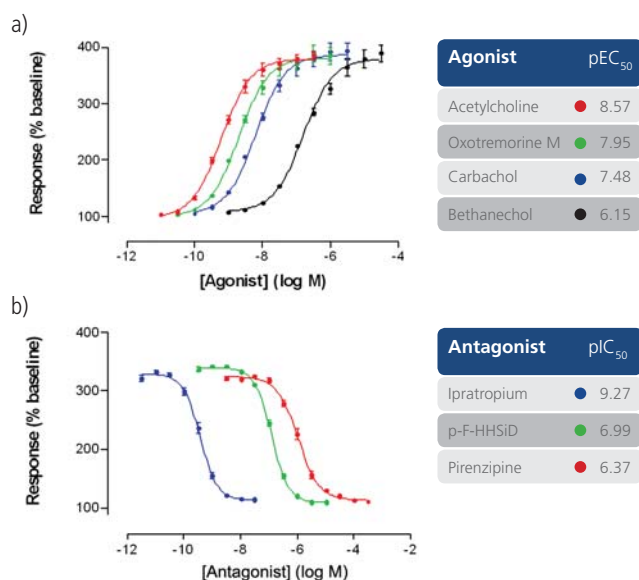
Receptor	Cell Line Name	ECACC Cat no.
β <sub>2</sub> Adrenergic receptor (ADRB <sub>2</sub> ) (Human) also known as β <sub>2</sub> -adrenoceptor	T26J-1/09 (CHO-Beta-2 (ADRB <sub>2</sub> ))	10031601
Free Fatty Acid Receptor 3 (FFAR3) (Human) also known as GPR 41 or GPCR41	T35J-5/09 (CHO-FFAR3 (FFAR3))	10031602
M3 Muscarinic Receptor (Human)	T02J-7/10 (CHO-M3 (CHRM3))	10031603
Histamine Receptor H2 (Human) (HRH2)	T02J-9/10 (CHO-H2 (HRH2))	10031604
Glucagon Receptor (Human) (GCGR)	T02J-10/10 (CHO-GCGR (GCGR))	10031605

The cell lines listed above are available for trial at an introductory offer of £520 per seed vial for a limited period.

**More GPCR targets will be available soon....**

NOTE: SCREENflex products are not available for customers in the United States

#### HTS compatibility of SCREENflex cell lines



#### Analysis of HTS compatibility of a SCREENflex based GPCR cell line (CHO-K1)

Four known agonists (a) and three known antagonists (b) of the human acetylcholine receptor (muscarinic) CHRM3 were used to obtain dose response curve using FLIPRTETRA™ system and FLIPR® Calcium 5 Assay (384 well format). (Data kindly provided by Simon Lydford, MDS Analytical Technologies)

#### SCREENflex™ technology has been described in several peer-reviewed papers:

Nehlsen K, *et al.* BMC Biotechnol. 2009

Schucht R, *et al.* Cell Biol Toxicol. 2009

Schucht R, *et al.* Mol Ther. 2006

## NEW! Cell Lines have arrived from Australia



The first consignment of cell lines from Cell Bank Australia (CBA) has arrived at ECACC. ECACC recently made a reciprocal agreement with CBA which enable ECACC cell lines to be more accessible to Australian researchers and CBA cell lines to European researchers. The table below lists the new cell lines that are now available, further deposits will follow.

The stock available for supply are ampoules generated at CBA; authenticated and quality control tested to the same standards operated by ECACC.

Cell Line Name	CBA no.	ECACC Cat no.	Species
<b>Colorectal carcinoma lines</b>			
LIM 1215	CBA-0161	10092301	human
<b>Merkel cell carcinoma lines</b>			
MCC13	CBA-1338	10092302	human
MCC14/2	CBA-1340	10092303	human
MCC26	CBA-1341	10092304	human
<b>Mesothelioma cell lines</b>			
AB1	CBA-0144	10092305	mouse
AB12	CBA-0146	10092306	mouse
AB22	CBA-0148	10092307	mouse
AC29	CBA-0156	10092308	mouse
JU77	CBA-0140	10092309	human
AE17	CBA-0156	10092310	mouse
LO68	CBA-0141	10092311	human
NO36	CBA-0142	10092312	human
ONE58	CBA-0143	10092313	human
<b>Melanoma cell lines</b>			
MM127	CBA-1344	10092314	human
MM170	CBA-1346	10092315	human
MM370	CBA-1348	10092316	human
MM383	CBA-1350	10092317	human
MM386	CBA-1349	10092318	human
MM415	CBA-1351	10092319	human
MM426	CBA-1352	10092320	human

Visit our website for full cell line details.

# WIN!

Another chance to win an iPod shuffle in your choice of colour!



	6	7	4		9		3
		8		1		4	9
				8			5
	9			3			6 7
		1	6		8	9	
7	8			9			1
	3			6			
8		2		4		6	
	7		8		3	5	4

## Sudoku Competition

Work out the 3 numbers in the coloured squares.

- Red \_\_\_\_
- Green \_\_\_\_
- Blue \_\_\_\_

Then visit our website at the Sudoku entry page [www.hpacultures.org.uk/promotions/sudoku.jsp](http://www.hpacultures.org.uk/promotions/sudoku.jsp) and submit your answer. Closing date: 31st January 2011.

Products and Services available from the HPA Culture Collections: [Visit www.hpacultures.org.uk](http://www.hpacultures.org.uk)

### Products:

- Cell Lines and Hybridomas
- Primary Cells
- Neuron Culture Kits
- HepaRG® Cells
- DNA & RNA Products
- Bacteria, Plasmids, Transposons
- Mycoplasmas
- Fungi
- LENTICULE Discs
- Viruses

### Services

- Cell Culture Management Services
- Contract Cell Culture
- Custom Genetic Modification (Cell Lines)
- Assay Ready Cells
- Cell Line Identity Verification
- DNA Extraction
- Genetic Support Services
- Contract Freeze-Drying
- Mycoplasma Testing & Eradication
- NCPV Contract Services
- Patent Deposits
- Safe Deposits
- Sterility Testing
- Training

## HPA Culture Collections

A strategic business unit within the Health Protection Agency.



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