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(54) Title: IN VITRO MUTAGENESIS, PHENOTYPING, AND GENE MAPPING

(57) Abstract: Cellular libraries useful for *in vitro* phenotyping and gene mapping. In a representative approach, a method for preparing a homozygous cellular library includes the steps of providing a heterozygous cellular library comprising a plurality of isolated parent cells; including site-specific mitotic recombination in the plurality of isolated parent cells; culturing the plurality of isolated parent cells, whereby a population of daughter cells is produced; and selecting daughter cells comprising a homozygous genetic modification, whereby a homozygous cellular library is prepared.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/13625

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : C12N 15/00, 5/00, 15/01		
US CL : 435/325, 320.1, 375., 440-448, 462		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 435/325, 320.1, 375., 440-448, 462		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST, MEDLINE, USPATFUL, BIOSIS, EMBASE		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,207,371 B1 (ZAMBROWICZ et al) 27 March 2001 (27-03-2001), see the entire document.	1-71
Y	US 6,139,833 A(BURGESS et al) 31 October 2000 (31-10-2000), see the entire document.	1-71
YP	US 2002/0123058 A1 (TREADGILL et al) 05 September 2002 (05-09-2002), see the entire document.	1-71
X	BURNS, N. et al. Large scale analysis of gene expression, protein localization, and gene disruption in Saccharomyces cerevisiae. Genes and Development 1994, Vol 8, PAGES 1087-1105	1-3, 9-11, 35-37, 39, 45, 55-62, 69-71
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Y		4-8, 12-34, 38, 40-44, 46-54, 63-68
X	KURTZ, M.B. et al. Isolation of Hem3 mutants from Candida albicans by sequential gene disruption. Molecular General Genetics 1989, Vol. 217, pages 47-52, see the entire document.	1-3, 9-11, 35-37, 39, 45, 55-62, 69-71
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Y		4-8, 12-34, 38, 40-44, 46-54, 63-68
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230		Authorized officer Ram R. Shukla <i>Jamie Ford</i> Telephone No. 703-308-0196

INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 00/54574 A2 (THE UNIVERSITY OF CHICAGO) 21 September 2000 (21-09-2000), see the entire document.	1-71