

## Derwent Biotechnology Resource

### FILE DESCRIPTION

**Derwent Biotechnology Resource**, formerly **Derwent Biotechnology Abstracts**, produced by Thomson Derwent and Institute for Scientific Information (ISI), provides comprehensive coverage of journal articles, patents, and conference proceedings describing research in the field of biotechnology. It covers all aspects of biotechnology, including genetic engineering, biochemical engineering, fermentation, cell culture and waste disposal. Beginning in 2002 coverage has been expanded to include bioinformatics, functional genomics, pharmacogenomics, high throughput screening, biochips, and tissue engineering. Each month data from about 3,000 documents are added to the file in weekly updates. The number of records per update will increase throughout 2002. Each record in the database contains a detailed abstract together with controlled-language indexing, including an enhanced classification system from 2002 forward. Patent coverage is enhanced with complete *Derwent World Patents Index*® abstracts from June 2002 forward. Approximately 37 percent of the records are patent records. Literature records also include complete bibliographic information and author abstracts, which are provided by ISI from June 2002 forward.

### SUBJECT COVERAGE

Coverage in Derwent Biotechnology Resource includes, but is not limited to:

- Agricultural Biotechnology
- Animal and Plant Cell Cultures
- Bioinformatics and Analysis
- Biomufacturing and Biocatalysis
- Diagnostics
- Disease
- Food and Food-Additives
- Fuels, Mining and Metal Recovery
- Genetic Techniques and Applications
- Other Chemicals
- Pharmaceuticals
- Therapeutics
- Waste-disposal and Bioremediation

### SOURCES

Over 1,100 journals published in 20 languages are regularly and promptly scanned for relevant papers. The journal list has been revised to include the very latest journals in biotechnology. The new journal list is prioritized to ensure that the highest yielding and most relevant scientific journals are available online first. In addition, the worldwide biotechnology patents literature from *Derwent World Patents Index*® and conference proceedings are also covered.

### TIPS

#### USE FILE 357

to find journal articles and patents in all aspects of biotechnology.

#### USE SH=

to search Section Headings and Subheadings

SELECT SH=GENOMIC TECHNOLOGIES

#### USE LIMIT suffixes /PAT or /NPT

to separate search results into patents and nonpatents.

SELECT S2/PAT

### DIALOG FILE DATA

Inclusive Dates: 1982 to November 2010

Update Frequency: Closed

File Size: 478,188 records

### CONTACT

Derwent Biotechnology Resource is produced by Thomson Scientific. Questions concerning file content should be submitted by Web Form at [www.thomsonscientific.com/support/techsupport](http://www.thomsonscientific.com/support/techsupport) or directed to:

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## SAMPLE JOURNAL ARTICLE RECORD

DIALOG(R)File 357:Derwent Biotech Res.  
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AZ= 0291502 DBA Accession No.: 2002-13349  
/TI **Selective enzymatic epoxidation of dienes: generation of functional enantiomerically enriched diene monoepoxy monomers - Pseudomonas sp. oxidase and Caldariomyces fumago chloroperoxidase for methacrylate, acrylate, dimethylhexadiene and divinylbenzene epoxidation for stereospecific compound production**

AU= AUTHOR: HU SH; GUPTA P; PRASAD AK; GROSS RA; PARMAR VS  
CS= CORPORATE AFFILIATE: Polytech Univ Univ Delhi  
CS= CORPORATE SOURCE: Gross RA, Polytech Univ, Dept Chem, NSF, Ctr Biocatalysis and Bioproc Macromol, 06 Metrotech Ctr, Brooklyn, NY 11201 USA

SO=, JN=, PY= JOURNAL: TETRAHEDRON LETTERS (43, 38, 6763-6766) 2002  
SN= ISSN: 0040-4039  
LA= LANGUAGE: English  
/AB ABSTRACT: AUTHOR ABSTRACT - Enantiomerically enriched diene monoepoxides were selectively synthesized using oxidases from Pseudomonas sp. and chloroperoxidase from Caldariomycesfumago. These monoepoxides are useful monomers for generating functional chiral polymeric materials. (C) 2002 Elsevier Science Ltd. All rights reserved. DERWENT ABSTRACT: Divinylbenzene epoxidation was carried out in n-octane-based two-phase bioreactor system, using oxidases from Pseudomonas putida. 0.25 g Divinylbenzene in 20 ml n-octane was added into 1 l of culture medium of P. putida and the progress of the reaction was monitored by TLC and gas chromatography. After 72 hr of incubation the culture was extracted with ether, the organic layer was separated, dried and evaporated to afford the crude product, which was purified by flash-column chromatography. 30% Of products were achieved and physical and spectral data of the divinylbenzene monoepoxides were determined. Methacrylate, acrylate and dimethylhexadiene was stirred with t-BuOOH in 2 ml of 10 mM sodium citrate buffer (pH 5.5) and 200 ul acetone. 2.5 mg Caldariomyces fumago chloroperoxidase (EC-1.11.1.10) was added and the reaction mixture was stirred at RT for 2 hr, after which Na2S03 was added and the mixture was extracted with ether. The combined organic portions were dried over MgSO, the ether removed and the crude product was purified by flash-column chromatography using dichloromethane as eluting solvent to afford the pure epoxides 73-87% yields and 81-97% enantiomeric excesses(4 pages)

EC= E.C. NUMBERS: 1.11.1.10  
/DE DESCRIPTORS: stereospecific diene monoepoxide prep., divinylbenzene, unsaturated methacrylate, acrylate, dimethylhexadiene epoxidation, Pseudomonas sp. oxidase, Caldariomyces fumago, chloroperoxidase reactor, TLC, gas chromatography, appl. chromatography support polymer bacterium fungus enzyme EC-1.11.1.10 bioreactor (21, 41)

/SH, SH= SECTION: OTHER CHEMICALS-Stereospecific Compounds-BIOMANUFACTURING and BIOCATALYSIS-Biocatalyst Application; BIOMANUFACTURING and BIOCATALYSIS-Biochemical Engineering

## SAMPLE PATENT RECORD

DIALOG(R)File 357:Derwent Biotech Res.  
(c) 2002 Thomson Derwent & ISI. All rts. reserv.

AZ= 0284360 DBA Accession No.: 2002-06207 PATENT  
/TI **Producing animals using embryonic stem cells which originate from cloned embryo in nuclear transfer procedure, useful to produce agricultural animals and endangered species - embryonic stem cell nuclear transfer into host egg for the production of cattle, primate, sheep, pig, dog, cat, goat, fowl, turkey, guinea-hen, ostrich, eagle and osprey**

AU= AUTHOR: WEST M D  
PA= PATENT ASSIGNEE: ADVANCED CELL TECHNOLOGY INC 2001  
PC=, PN=, PD=, PATENT NUMBER: WO 200184920 PATENT DATE: 20011115 WPI ACCESSION NO.:  
AX=, DW= 2002-075220 (200210)  
AC=, AN=, AD= PRIORITY APPLIC. NO.: US 567437 APPLIC. DATE: 20000510  
AC=, AN=, AD= NATIONAL APPLIC. NO.: WO 2001US15075 APPLIC. DATE: 20010510  
LA= LANGUAGE: English  
/AB ABSTRACT: DERWENT ABSTRACT: NOVELTY - An animal produced from embryonic stem (ES) cells (I) which originate from a cloned embryo, is new. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) poultry, mammals and farm animals produced from (I); (2) ES cells produced from an embryo made by nuclear transfer; (3) a business model whereby cryopreserved clonal ES cells are marketed instead of live animals for the production of farm animals; (4)

## SAMPLE PATENT RECORD (cont'd)

producing (M1) an ES-derived cloned mammal, comprising: (a) isolating a somatic cell from an animal with desired characteristics; (b) transfecting the cell with a positive selection marker; (c) using the cell as a cell or nuclear donor during a nuclear procedure; (d) culturing the resultant nuclear transfer embryo to develop into a blastocyst or post-blastocyst stage embryo; (e) isolating totipotent from the embryo and expanding the cells in culture to produce ES cells; (f) optionally cryopreserving the expanded ES cells; (g) inserting the ES cells into a host embryo of 1-200 cells which is not resistant to the selectable marker; (h) culturing the resultant embryo under selective conditions for the marker to obtain embryos substantially consisting of cells that comprise the genome of ES cells; and (i) transferring the embryo to a recipient female; (5) deriving (M2) a cloned animal from an ES cell comprising: (a) isolating a somatic cell from an animal with desired characteristics; (b) using the cell as a cell or nuclear donor in nuclear transfer; (c) using the resultant nuclear transfer fusion to produce an embryo of the blastocyst stage or later; (d) isolating totipotent cells from the embryo and expanding them in culture to produce ES cells; (e) inserting some of the ES cells into a host embryo of 2-200 cells which is incapable of development; and (f) culturing the resultant embryo to a suitable size and transferring it into a recipient female; (6) producing (M3) an avian from ES cells comprising: (a) isolating ES cells from an avian with desired characteristics; (b) expanding the ES cells in culture and optionally cryopreserving the expanded cells; (c) obtaining eggs that are unable to develop into an embryo; (d) injecting the ES cells into the eggs; and (e) incubating the eggs to produce avian offspring with the genotype of the ES cells. BIOTECHNOLOGY - Preferred Method: In M1 about 2-20 ES cells are inserted into the host embryo which is a bovine, primate, ovine, porcine, canine, feline or caprine. In M2 the host embryo is a tetraploid and one of the species defined above, more preferably a cow. In M3 the avian is a chicken, turkey, guinea hen, ostrich, eagle, osprey, bird of prey or avian near extinction. In any of the methods the ES cell may be genetically modified. USE - The invention is used to produce animals, particularly agricultural animals, stem cell lines and endangered species. ADVANTAGE - The combination of nuclear transfer and ES cell technologies improves the efficiency of delivering optimized animals and facilitates the introduction of genetic modifications into farm animals. EXAMPLE - Bovine ovaries were recovered at a slaughterhouse and placed in phosphate buffered saline (PBS) at 34 degrees C. Follicles were aspirated and oocytes with a homogenous cytoplasm, considerable perivitelline space and intact cumulus cells were placed in maturation medium M199 (Gibco) with 10% fetal calf serum (FCS), 5 micro liter/ml bovine follicle-stimulating hormone and 10 micro liter/ml Pen-strep for (. . .) they were transferred to the same medium containing 10% FCS until blastocyst stage. Blastocysts were placed in mitotically inactivated mouse embryonic fibroblast (MF) feeder layer and embryonic stem (ES) cell medium and the zona pellucida and trophoblast were mechanically removed. The remaining inner cell mass (ICM) was placed under the MF. After 1 week in culture ES-like cells were passaged to a fresh mitotically inactivated MF. For nuclear transplantation oocytes 18 hours post-maturation were placed in TL HECM-Hepes under mineral oil (Sigma) an enucleated using standard technique. Donor cells were placed in the perivitelline space and fused with the eggs cytoplasm at 23 hours post maturation, and activated using standard techniques. (29 pages)

/DE DESCRIPTORS: cattle, primate, sheep, pig, dog, cat, goat, fowl, turkey, guinea-hen, ostrich, eagle, osprey cloning, prep., embryonic stem cell nuclear transfer, nuclear transplantation, cryopreservation, appl. agricultural animal, endangered sp. prep mammal bird preservation (21, 24)

/SH, SH= SECTION: THERAPEUTICS-Tissue Culture/Engineering-GENETIC TECHNIQUES and APPLICATIONS-Gene Expression Techniques and Analysis; BIOMANUFACTURING and BIOCATALYSIS-Animal/Plant Cell Culture

## SEARCH OPTIONS

## BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
— /AB	— AB	All Basic Index Fields <sup>1</sup> Abstract	Word Segment & Word	S FERTILI?ATION(1N)EMBRYO? S CHLORO/AB S CHLOROPEROXIDASE/AB S CLONED(W)MAMMAL/AB
/DE	DE	Descriptor	Segment & Word	S VINYL/DE S DIVINYLBENZENE/DE S ANIMAL(W)ENZYME/DE
/SH /TI	SH TI	Section Heading <sup>2</sup> Title	Word Segment & Word	S GENETIC(W)TECHN?/SH S METHYL/TI S DIMETHYLHEXADIENE/TI S STEM(W)CELL?(F)PRIMATE/TI

<sup>1</sup> Chemical substance names are segmented in all Basic Index fields; for example, DICHLOROHEXANE is retrieved when searched as a single term or by searching the segments: DI, CHLORO, HEXANE or CHLOROHEXANE. To exclude the segments use the /FW suffix; e.g., S HEXANE/FW to retrieve the word set off by spaces or punctuation marks.

<sup>2</sup> Searchable in the Basic Index and in the Additional Indexes.

## ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
AC= AD= AN= AU= AX=	AN AD AN AU AX	Patent Application Country <sup>3</sup> Patent Application Date <sup>3</sup> Patent Application Number <sup>3</sup> Author <sup>4</sup> DWPI Accession Number <sup>8</sup>	Phrase Phrase Phrase Phrase Phrase	S AC=US S AD=20000510 S AN=US 567437 S AU=(PRASAD AK OR PRASAD A K) S AX=2002-075220 S AX=1999-288710 S AX=99-351247 S AX=87-308092
AX= AY= AZ= — CD= CF= CS=	AX AY AZ AZ CD CF CS	WPI Accession Number DBR Accession Year DBR Accession Number DIALOG Accession Number CODEN <sup>5,6</sup> Conference Information <sup>5,9</sup> Corporate Source <sup>10</sup>	Phrase Phrase Phrase Phrase Phrase Word Word	S AY=98 S AZ=88-00618 S CD=JCEBD5 S CF=(BIOMOLECULAR(F)ELECTRONICS) S CS=(POLYTECH(W)UNIV(S)BROOKLYN) S CS=(ADVANCED(W)CELL(W)TECHNOL?) S DW=200210 S EC=1.11.1.10 S JN=TETRAHEDRON LETT? S LA=ENGLISH S PA=(ADVANCED(W)CELL(W)TECHNOL?) S PA=ADVANCED CELL TECH? S PC=EP S PD=20011115 S PN=WO 200184920 S PY=2001 S SC=M1 S SH=BIOMANUFACTURING? S SN=0040-4039 S SO=(TETRAHEDRON(W)LETT?) S UD=9999
DW= EC= JN= LA= PA=	DW EC JN LA PA	Derwent (DWPI) Week Enzyme Commission Number Journal Name <sup>6,7</sup> Language Patent Assignee <sup>11</sup>	Phrase Phrase Phrase Phrase Word & Phrase	S DW=200210 S EC=1.11.1.10 S JN=TETRAHEDRON LETT? S LA=ENGLISH S PA=(ADVANCED(W)CELL(W)TECHNOL?) S PA=ADVANCED CELL TECH? S PC=EP S PD=20011115 S PN=WO 200184920 S PY=2001 S SC=M1 S SH=BIOMANUFACTURING? S SN=0040-4039 S SO=(TETRAHEDRON(W)LETT?) S UD=9999
PC= PD= PN= PY= SC= SH= SN= SO= UD=	PC PD PN PY SC SH SN SO —	Patent Country Patent Date Patent Number Publication Year Section Code <sup>12</sup> Section Heading <sup>2,13</sup> International Standard Serial Number (ISSN) <sup>9</sup> Source Information <sup>14</sup> Update	Phrase Phrase Phrase Phrase Phrase Phrase Phrase Word Phrase	S PC=EP S PD=20011115 S PN=WO 200184920 S PY=2001 S SC=M1 S SH=BIOMANUFACTURING? S SN=0040-4039 S SO=(TETRAHEDRON(W)LETT?) S UD=9999

<sup>3</sup> Includes data from both priority and national applications.

<sup>4</sup> Beginning with UD=200206W1, Author names in non-patent records have no space between initials. Search both forms to cover the entire time span of the database.

<sup>5</sup> Discontinued at the end of May, 2002.

<sup>6</sup> May also be searched using JL= (Journal Information).

<sup>7</sup> Beginning with UD=200206W1, Journal Names are indexed as complete names, not abbreviated. Search both forms, complete and abbreviated, to cover the entire time span of the database.

<sup>8</sup> DWPI Accession Numbers have 4-digit year beginning with year 2000. Earlier DWPI Accession Numbers have 2-digit year, unless they were entered in File 357 after the beginning of 2000. Search DWPI Accession Numbers with both forms of the year if the accession number is in 1998 or 1999.

<sup>9</sup> Beginning in 1995.

<sup>10</sup> Includes patent assignee (PA=) and Corporate Affiliate.

<sup>11</sup> May also be searched using CS= or CA= (Corporate Affiliate).

<sup>12</sup> May also be searched using CL= (Class); SC= entries are cascaded to the first letter, e.g., S SC=M. Discontinued at the end of 2001.

<sup>13</sup> New Section Headings, without corresponding Section Codes, begin with the first update of 2002.

<sup>14</sup> Display includes Journal Name, Corporate Source, Patent Assignee, Publication Year and Cite Information.

# Derwent Biotechnology Resource

File 357

## SPECIAL FEATURES

For command descriptions, enter HELP LIMIT, HELP SORT, HELP RANK, HELP MAP, HELP IDPAT, HELP CURRENT online.

<b>LIMIT</b>	/ -- DIALOG Accession Number /ENG -- English Language /NONENG -- Non-English Language /NPT -- Non-Patent Records /PAT -- Patent Records /YYYY -- Publication Year	S S1/0283036-9999999 S S7/ENG S S9/NONENG S S8/NPT S S2/PAT S S4/2001
<b>SORT</b>	<b>AU, CS, JN, PD, PY, SH, TI</b>	SORT S8/ALL/JN,AU PRINT S6/5/1-34/JN/PY,D
<b>RANK</b>	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked.	RANK DE RANK AU S4
<b>MAP</b>	AN, AX, CD, EC, PN	MAP PN TEMP S2
<b>IDPAT</b>	Identify patent duplicates and display all or selected patent groups.	IDPAT IDPAT S1 SHORT
<b>CURRENT</b>	Search only the most recent year plus one (CURRENT1) to five (CURRENT5) years.	B 357 CURRENT2

## PREDEFINED FORMAT OPTIONS

NO.	DIALOGWEB FORMAT	RECORD CONTENT
1	--	DIALOG Accession Number
2	--	Full Record except Abstract
3	Medium	Bibliographic Citation
4	--	Full Record with Tagged Fields
5	--	Full Record
6	Free	Title and Accession Numbers
7	Long	Full Record except Indexing
8	Short	Title and Indexing
9	Full	Full Record
K	--	KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats

## OTHER OUTPUT OPTIONS

For an explanation, enter HELP TYPE, HELP UDF, HELP TAG online.

<b>USER DEFINED FORMATS</b>	Display codes listed in the Search Options tables can be used to customize output.	TYPE S3/TI,AU,JN,PY/ALL
<b>TAG</b>	Output can be displayed with tags identifying each display field.	TYPE S2/5/ALL TAG
<b>DIRECT RECORD ACCESS</b>	If the accession number of a specific record is known, it can be used to display the record directly.	TYPE 001618/5 DISPLAY 002775/TI,SO PRINT 001623/5

### FOR ONLINE HELP:

See HELP FIELDS 357 for searchable fields; HELP FORMAT 357 for output formats; HELP LIMIT 357 for limits; HELP RATES 357 for cost information; HELP SORT 357 for sorts.