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## 1. Introduction

In patents a **priority right** is a time-limited right (12 months for patents), triggered by the first filing of an application for a patent ("priority date" or "effective date of filing"). The priority right belongs to the applicant and allows him to file a subsequent application in another country for the same invention and benefit, from the same priority date and right, by 'claiming the priority' of the first application.

The Priority right gives rise to "**Simple Patent Families**":

If there are several applications or publications for an individual invention (in other countries), claiming exactly the same priority or priorities, we talk about a "Simple patent family". All of these "family members" or "family equivalents" are related to one another by common priority numbers with associated priority dates. However, deeper analysis of certain patent documents might lead to declare specific priorities as "non-active". These specific priorities are ignored when building simple families.

The Patent Equivalents database provides information on Simple family equivalents and patents classification for all the patents having sequence records in the patent sequence public repositories: EMBL patents (<http://www.ebi.ac.uk/patentdata/nucleotides/>), and Protein Patents (<http://www.ebi.ac.uk/patentdata/proteins/>)(Euro-Patents, Japan-Patents, US-Patents and Korean-Patents). All family and classification data were extracted from Open Patent Services (<http://ops.espacenet.com/>).

This manual describes the Patent Equivalents database in detail.

## 2. Public availability

This database has been indexed in SRS, and can be found in the library page, under "Literature, Bibliography and Reference Databases" section (<http://srs.ebi.ac.uk/>).

There are several views for each patent equivalents database record: Text entry, Patent Equivalents entry, and Related data, and they are described in detail in the following sections.

## 3. Text Entries

### 3.1. Lines description

#### 3.1.1. The FAMN (Family Number) line:

This line shows the simple family identifier as assigned by the EPO and provided in the Open Patent Services (<http://ops.espacenet.com/>).

**FAMN 27341889**

#### 3.1.2. The PR (PRiority) line:

The earliest active priority within the family is provided in this line. The priority number comes first, followed by the priority date (yyyymmdd).

**PR [JP19990377484](#) 19991216**

### 3.1.3. The PN (Publication Number) line (PN=1):

This line shows the master publication in the family. It gives the publication numbers, followed by the full kind code and the publication date (yyyymmdd).

The master publication within a simple family is chosen based on presence in the sequence database, annotations quality and Publication numbers correctness, therefore, the election follows the rule: EPO>USPTO>JPO>KIPO. In case of conflict within a group, the earliest publication is chosen as a master.

Please note, that since the master Publication is present in the sequence database, it will always have a PE\* line, showing exactly the same number (see section 3.1.4)

*PN EP1108790 A2 20010620*

### 3.1.4. The PE (Patent Equivalent) line (PE≥1)

These lines provide the first publication levels of all patent equivalents belonging to the simple family. The publication number is provided, then the full kind code, followed by the publication date (yyyymmdd).

PE lines can have an asterisk (\*) indicator or not.

*PE\* EP1108790 A2 20010620*  
*PE\* JP2002191370 A 20020709*  
*PE\* KR20010082585 A 20010830*  
*PE US2002197605 A1 20021226*

3.1.4.1. PE\* lines: they show patent equivalents that have a sequence record in the source databases (EMBL patents or protein patents).

3.1.4.2. PE lines (with no asterisk): these lines indicate that the patent equivalents do not have a record in the sequence database(s) (EMBL patents or protein patents).

### 3.1.5. The SL\* (Subsequent Level) line

These lines show the subsequent publication levels of some patents. The publication numbers is followed by the full kind code and the publication date (yyyymmdd). These lines always have an asterisk, since the patent offices sent the sequences to the source databases (EMBL patents and/or Protein patents) at a second publication level. The PE line immediately above, shows the corresponding first level of publication of the patent and normally, it does not have an asterisk, since the sequences were not sent at this level to the sequence repositories, (EMBL patents and Protein patents).

*PE US2006228712 A1 20061012*  
*SL\* US7332310 B2 20080219*

### 3.1.6. The IC (International Classification) line:

This line shows all the international classes assigned to the master publication (see section 3.1.3)

*IC C12P13/00 G01N33/53 C07H21/00 C07K14/195 C07K16/12 C07K16/40*  
*C12M1/00 C12N1/15 C12N1/19 C12N1/21 C12N5/10 C12N9/00 C12N9/02*  
*C12N15/09 C12N15/60 C12P7/40 C12P19/00 C12P21/02 C12P21/08 C12Q1/37*  
*C12Q1/68 G01N33/566 G01N33/569 G01N33/68 G01N37/00 C12N9/04 C12P13/08*  
*C07H21/04 C07K14/34 C12P13/04 C12P19/34 C12R1/15*

### 3.1.7. The EC (European Classification) line

This line shows the European classification assigned to the master publication (see section 3.1.3).

EC [C07K14/34](#) [C12N9/00L](#) [C12N9/02](#) [C12P13/08](#) [C12R1/15](#)  
\\

### 3.2. A Text entry example

FAMN 27341889  
PR [JP19990377484](#) 19991216  
PN [EP1108790](#) A2 20010620  
PE\* [EP1108790](#) A2 20010620  
PE\* [JP2002191370](#) A 20020709  
PE\* [KR20010082585](#) A 20010830  
PE [US2002197605](#) A1 20021226  
PE [US2006228712](#) A1 20061012  
SL\* [US7332310](#) B2 20080219  
IC C12P13/00 G01N33/53 C07H21/00 C07K14/195 C07K16/12 C07K16/40 C12M1/00  
C12N1/15 C12N1/19 C12N1/21 C12N5/10 C12N9/00 C12N9/02 C12N15/09 C12N15/60  
C12P7/40 C12P19/00 C12P21/02 C12P21/08 C12Q1/37 C12Q1/68 G01N33/566  
G01N33/569 G01N33/68 G01N37/00 C12N9/04 C12P13/08 C07H21/04 C07K14/34  
C12P13/04 C12P19/34 C12R1/15  
EC [C07K14/34](#) [C12N9/00L](#) [C12N9/02](#) [C12P13/08](#) [C12R1/15](#)  
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## 4. Patent Equivalents Entries

1. PATENTEQUIVALENTS:27341889			
Priority Information:			
JP19990377484 16-DEC-1999			
Patent Information:			
Patent Number	Kind	Date	Title
<a href="#">EP1108790</a> <sup>1</sup>	A2	20-JUN-2001	Novel polynucleotides
<a href="#">JP2002191370</a> <sup>1</sup>	A	9-JUL-2002	NEW POLYNUCLEOTIDE
<a href="#">KR20010082585</a> <sup>1</sup>	A	30-AUG-2001	Novel polynucleotides
<a href="#">US2002197605</a>	A1	26-DEC-2002	
<a href="#">US2006228712</a>	A1	12-OCT-2006	Novel polynucleotides
<a href="#">US7332310</a> <sup>1</sup>	B2	19-FEB-2008	Mutant of homoserine dehydrogenase from <i>
<sup>1</sup> - Patent cited by sequence database entry.			
EPO Classification:			
<a href="#">C07K14/34</a> ; <a href="#">C12N9/00L</a> ; <a href="#">C12N9/02</a> ; <a href="#">C12P13/08</a> ; <a href="#">C12R1/15</a>			
International Classification:			
C12P13/00; G01N33/53; C07H21/00; C07K14/195; C07K16/12; C07K16/40; C12M1/00; C12N1/15; C12N1/19; C12N1/21; C12N5/10; C12N9/00; C12N9/02; C12N15/09; C12N15/60; C12P7/40; C12P19/00; C12P21/02; C12P21/08; C12Q1/37; C12Q1/68; G01N33/566; G01N33/569; G01N33/68; G01N37/00; C12N9/04; C12P13/08; C07H21/04; C07K14/34; C12P13/04; C12P19/34; C12R1/15			
Sequence Information:			
Entry ID	Patent Number	Description	
<a href="#">PATENT_DNA:AR544553</a>	US6746847-A/1	Sequence 1 from patent US 6746847.	
<a href="#">PATENT_DNA:AR544556</a>	US6746852-A/1	Sequence 1 from patent US 6746852.	
<a href="#">PATENT_DNA:AR544592</a>	US6746854-A/1	Sequence 1 from patent US 6746854.	
<a href="#">PATENT_DNA:AR544595</a>	US6746855-A/1	Sequence 1 from patent US 6746855.	
<a href="#">PATENT_DNA:AR544610</a>	US6746858-A/1	Sequence 1 from patent US 6746858.	
<a href="#">PATENT_DNA:AR544611</a>	US6746859-A/1	Sequence 1 from patent US 6746859.	
<a href="#">PATENT_DNA:AR544624</a>	US6746860-A/1	Sequence 1 from patent US 6746860.	
<a href="#">PATENT_DNA:AR544658</a>	US6746861-A/1	Sequence 1 from patent US 6746861.	
<a href="#">PATENT_DNA:AR544660</a>	US6746867-A/1	Sequence 1 from patent US 6746867.	
<a href="#">PATENT_DNA:AR544693</a>	US6746871-A/1	Sequence 1 from patent US 6746871.	
<a href="#">PATENT_DNA:AR544731</a>	US6747004-A/1	Sequence 1 from patent US 6747004.	
<a href="#">PATENT_DNA:AR544732</a>	US6747014-A/1	Sequence 1 from patent US 6747014.	
<a href="#">PATENT_DNA:AR544789</a>	US6747128-A/1	Sequence 1 from patent US 6747128.	
<a href="#">PATENT_DNA:AR544791</a>	US6747129-A/1	Sequence 1 from patent US 6747129.	
<a href="#">PATENT_DNA:AR544819</a>	US6747133-A/1	Sequence 1 from patent US 6747133.	
<a href="#">PATENT_DNA:AR544840</a>	US6747134-A/1	Sequence 1 from patent US 6747134.	

Figure 1: Patent Equivalents entry view in SRS. The earliest priority of the family is provided, then a table with all the Patent equivalents information is shown, followed by classification data and a table linked to all the individual sequence database records in EMBL and/or Protein Patents.

#### 4.1. Priority Information

This section provides the earliest active priority within the simple family

[JP19990377484](#) 16-DEC-1999

#### 4.2. Patent equivalents Table

This table gives all the simple family equivalents, the full kind codes, the publication dates, and the Patent Title whenever available in Patent Abstracts. Only the first publication level of each family member is shown. Exceptionally, when the source database(s) (EMBL patents and Protein patents) received the sequences at a second publication level, this number is also shown and preceded, in the row immediately above, by the corresponding first publication level of the patent document (Figure 2 below). All the family equivalents that have sequence records in EMBL patents and/or Protein Patents, are marked (<sup>1</sup> Patent cited by sequence database entry).

<b>US2006228712</b>	A1	12-OCT-2006	Novel polynucleotides
<b>US7332310</b> <sup>1</sup>	B2	19-FEB-2008	Mutant of homoserine dehydrogenase from <i

**Figure 2:** The number US7332310<sup>1</sup> B2 shows the granted patent as second publication 19-FEB-2008). This number is marked as being cited by a sequence database entry, since it was received at this level in the source databases (EMBL patents and Protein Patents). The same patent application was published before (12-OCT-2006) at A1 level (Patent application as first publication) and this is displayed in the row immediately above (US2006228712 A1 12-OCT-2006).

#### 4.3. EPO classification

This section shows the European classification assigned to the master publication (section 3.1.3).

#### 4.4. International Classification

This section shows all the international classes assigned to the master publication (section 3.1.3).

#### 4.5. Sequences Table

This table summarizes all the sequence records from the simple family, that are present in Protein Patents and/or EMBL patents. The table gives the Entry ID (source databases ID), the patent numbers as provided in the original data, and the Description field from EMBL patents or Protein Patents.

## 5. Related Data Entries

**Directly related data for [PATENTEQUIVALENTS:27341889]**

Show all | [Expand all](#) | [Collapse all](#)

▣ Literature, Bibliography and Reference Databases	
<a href="#">Patent Abstracts</a>	<a href="#">5</a>
▣ Nucleotide sequence databases	
<a href="#">Patent DNA</a>	<a href="#">10686</a>
<a href="#">NAGENESEQ</a>	<a href="#">3569</a>
▣ Active protein sequence databases	
<a href="#">EPO Proteins</a>	<a href="#">3500</a>
<a href="#">JPO Proteins</a>	<a href="#">7000</a>
<a href="#">USPTO Proteins</a>	<a href="#">3500</a>
<a href="#">AAGENESEQ</a>	<a href="#">3502</a>
▣ Other databases	
<a href="#">Patent Protein NR2</a>	<a href="#">3518</a>
<a href="#">Patent DNA NR2</a>	<a href="#">3549</a>

**Figure 3:** Related data view in SRS. Links to the available Patent Abstracts as well as to source sequence databases and the Non-redundant datasets are provided through this view.

### 5.1. Literature, Bibliography and Reference Databases

This section of the entry provides links to all the available patent abstracts within the family

### 5.2. Nucleotide sequence databases

This section provides links to all the DNA sequences available, from the family members. Patent DNA links to EMBL patents subdivision.

### 5.3. Active Protein Sequence databases

This section links to all available protein sequence records from the family. This section points to EPO proteins, JPO proteins and USPTO proteins databases.

### 5.4. Other Databases

This section provides links to the Non redundant databases at Level 2 (Patent Proteins NR2 and Patent DNA NR2)