Chemical Substances in the Patent Literature

In this workshop, you will learn

- About files providing access through structural means
- How to create DWPI fragment code strategies with STN Express
- How to use the Command Window to upload text queries
- How to manage records from multiple files

Session Agenda

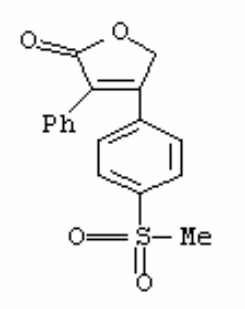
- Databases for Substance Retrieval
- Build "Standard" Structure Query
- Build "WPI" Structure Query for Fragment Codes
- Develop Chemical Coding for IFICDB
- Optionally, Transfer Results from other Sources (MMS)
- Conduct Appropriate Searchers
- Merge Answer Sets
- Group by Invention (FSORT)
- DISPLAY Records

Databases for Substance Retrieval

Many databases on STN provide access to the patent literature for a specific substance or a class of substances. Search approaches may provide varying levels of precision and recall.

File	Search Features	File Features
REGISTRY	Names MF Structures	Specific substances classified with a CAS RN
CAplus	CAS RN substance class terms	Literature indexed to CAS RN's
MARPAT	Structures	Substances described generically by a Markush structure
USPATFULL	CAS RN	US chemical patents indexed to CAS RN's
IFIPAT/IFIUDB/ IFICDB	Names IFI chemical coding partial CAS RN	Indexed specific compounds and Markush structures
WPINDEX/ WPIDS/WPIX	Derwent fragment coding DCR - structures DCR - names DCR MF DCR - substance class terms DRN	A merged structure and fragment code search database

Search Question: *What patents describe the class of compounds represented by the following structure?*



Search Strategy

For comprehensive structure search

Step 1 Build Standard structure query for structure search in REG, MARPAT, MARPATPREVIEW, WPIDS

Step 2 Build WPI structure and generate DWPI fragment code strategy

Step 3 Develop chemical coding search for IFIUDB/IFICDB

Step 4 Optionally, transfer results from other sources (MMS)

Step 5 Conduct appropriate searches

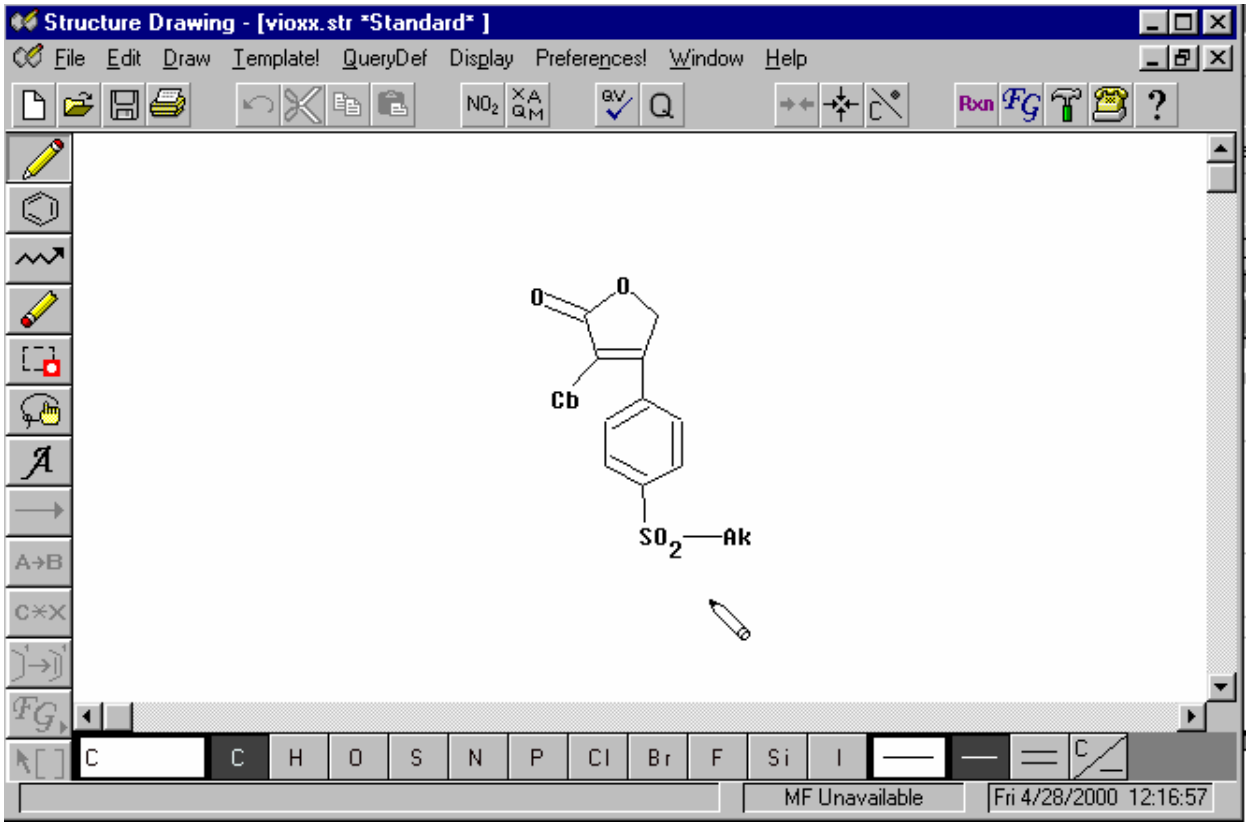
Step 6 Merge answer sets

Step 7 Group by invention (FSORT)

Step 8 DISPLAY records

Step 1: Build a Standard Structure Query

This structure may be most conveniently created in the Structure Drawing module of STN Express. The STR command is also available for "GRA/NOD/BON" searchers.



This structure may be used to search:

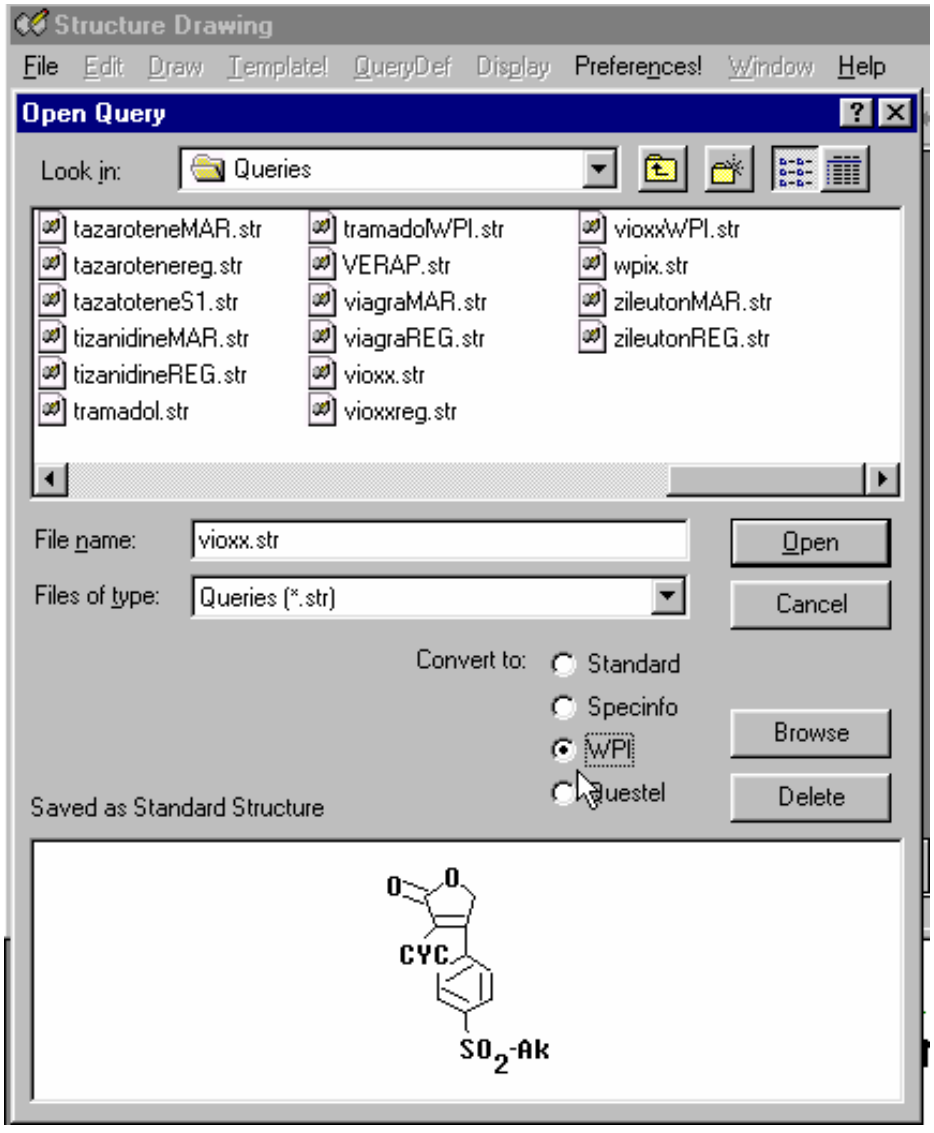
- REGISTRY*
- MARPAT/MARPATPREV*
- WPIDS/WPIX DCR

*Search together using CASLINK or HCASLINK

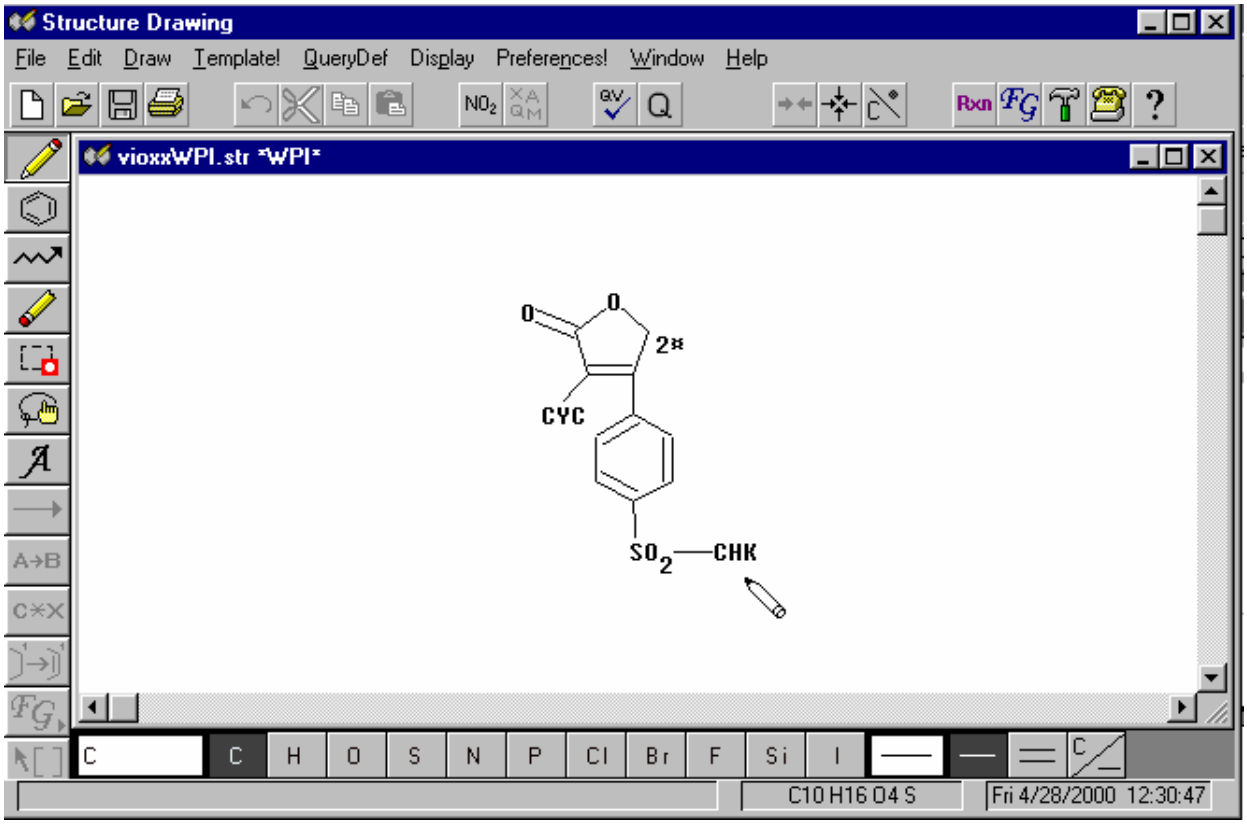
Step 2: Build WPI Structure and Generate DWPI Fragment Code Strategy

This is easily accomplished by converting the standard structure above.

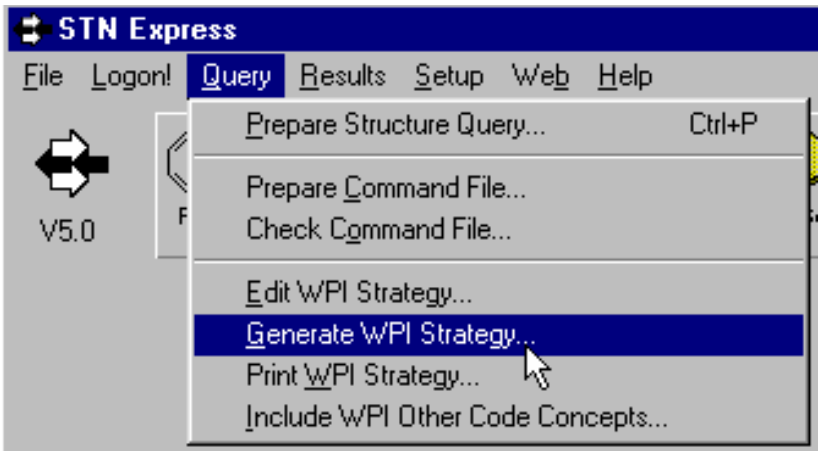
Open and Convert a Standard Structure



Modify and Save as a WPI Structure

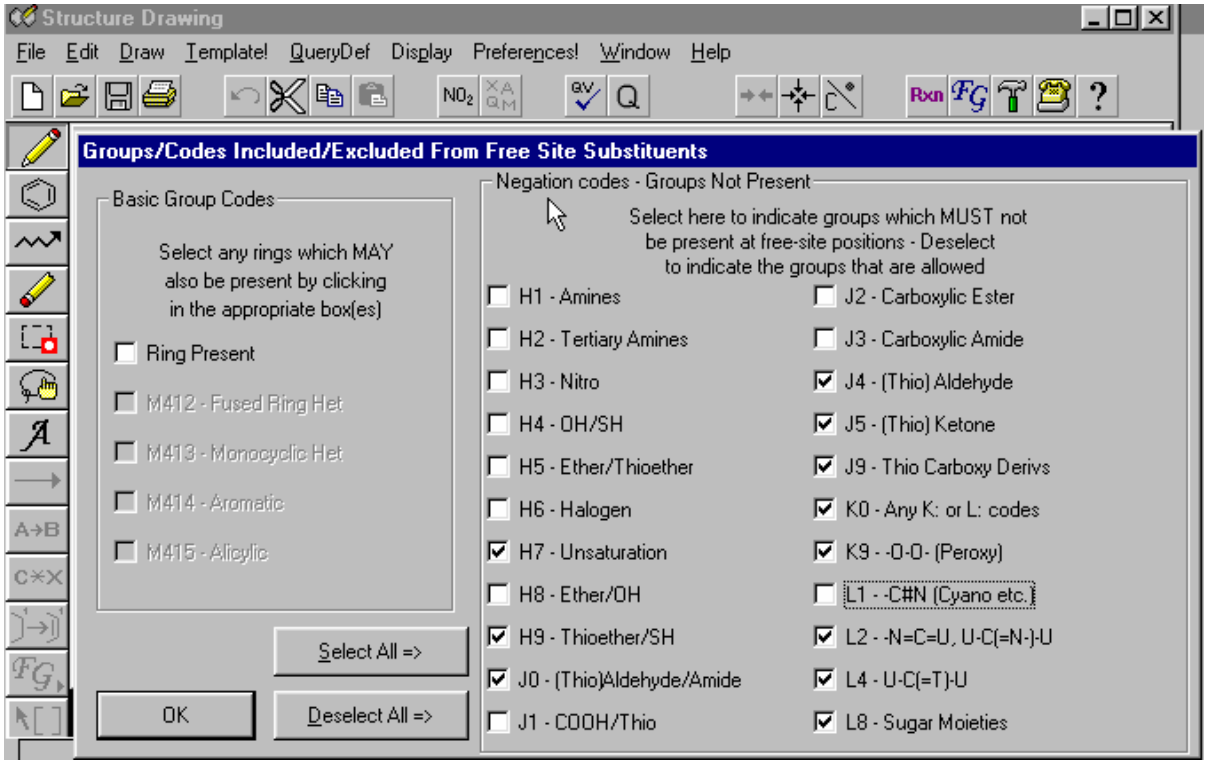


Generate a WPI Fragment Code Strategy



Negation Codes for Free Site Substitution

Since free sites have been indicated in the structure, a dialog box provides for deselecting negation codes, thereby allowing various substituents at the open positions.



Select SUBS

Appropriate online search fields, Subheadings, may be selected:

/M0 Pre-1970 Non-Steroid, sections B,C

/M1 Nat Prod and Polymers, sections B, C

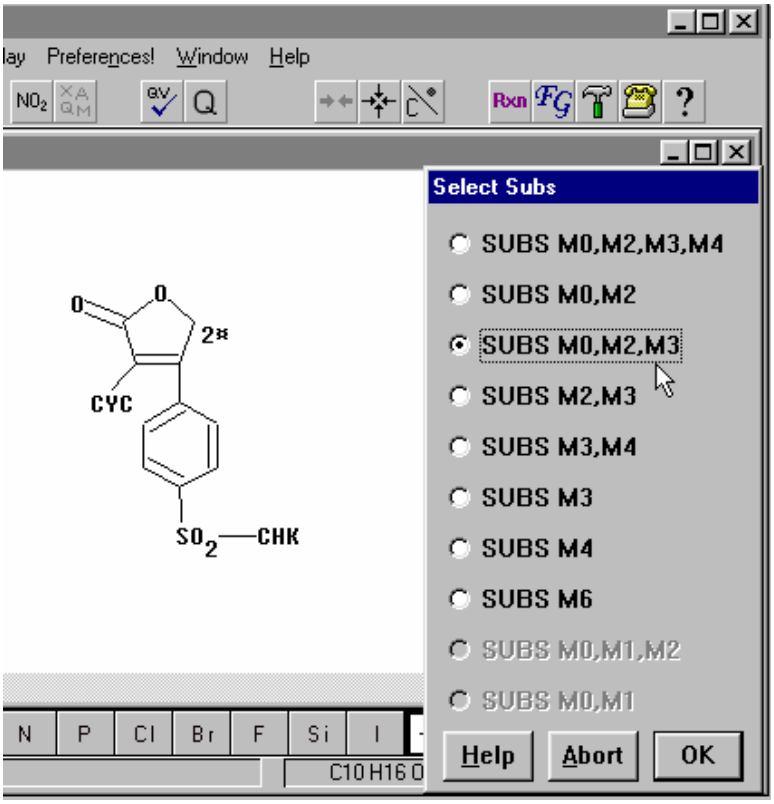
/M2 Gen Chem- sections B,C

/M3 Gen Chem- section E

/M4 Dyes - section E

/M5 Steroids - sections B,C,E

/M6 Galenicals - section B

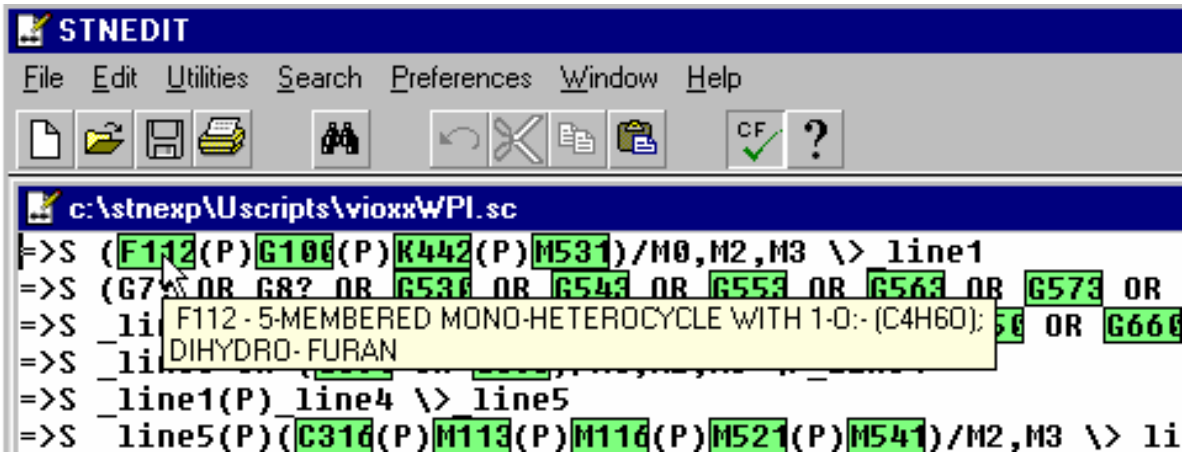


The Fragment Code Strategy

This strategy is created in the format of a STN Express Command File for uploading to STN. Prior to uploading, the strategy should be reviewed for:

- Multiplier codes
- Ring substituent positions and number
- Negation codes

The code definitions may be reviewed with "Check Command File" from the Utilities menu, and placing the cursor over the code in question.



Step 3: Develop Chemical Coding for IFIUDB/IFICDB

IFI Claims provides access via fragment codes in two files; IFIUDB and IFICDB, to Markush structures, generic substances, and specific substances not included in the IFI compound term dictionary.

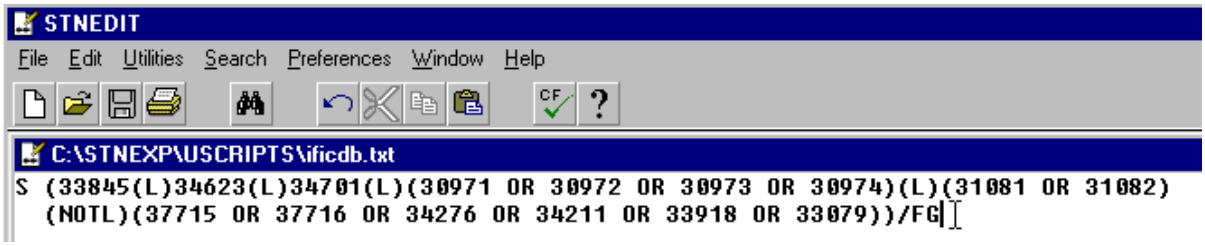
Database	Features
IFIUDB - Non-subscriber access	Uniterms representing functional groups, rings, and atoms present. Linked only with the AND operator.
IFICDB - Subscriber access	More precise Uniterms, including terms representing number of occurrences and negation Uniterms. Linked with (L) proximity between fragments of a single substance and (S) proximity to the role of the substance.

Appropriate indexing terms may be explored in the IFIREF file. Fragment terms are searched in the FG field of IFICDB and by Uniterm in the UN field of IFIUDB.

EXPAND in IFIREF:

```
=> FILE IFIREF

=> E F O2S SULFONE/FG
E#   FREQUENCY    AT     TERM
---  ---------    --     ----
E1         0      1      F O2S SULFINIC ACID, SULFINATE FG (P-1)/FG
E2         0      1      F O2S SULFINIC ACID, SULFINATE FG (P-2+)/FG
E3         0        --> F O2S SULFONE/FG
E4         0      1      F O2S SULFONE FG/FG
E5         0      1      F O2S SULFONE FG (M)/FG
E6         0      1      F O2S SULFONE FG (P-1)/FG
E7         0      1      F O2S SULFONE FG (P-2+)/FG
E8         0      1      F O2S2 GENERIC FG/FG
E9         0      1      F O2S2 S-S(=O)2/FG
E10        0       1      F O2S2 S-S(=O)2 (P-1)/FG
E11        0       1      F O2S2 S-S(=O)2 (P-2+)/FG
E12        0       1      F O2S2SI GENERIC FG/FG

=> E E4+ALL
E13        0    -->    F O2S SULFONE FG/FG
                  UN   40457
********* END***

=> E E6+ALL
E14        0    -->    F O2S SULFONE FG (P-1)/FG
                  UN   33845
```

Having identified appropriate fragment coding terms, a query may be developed as a text file for uploading and searching.


STNEDIT
File Edit Utilities Search Preferences Window Help
C:\STNEXP\USCRIPTS\ificdb.txt
S (33845(L)34623(L)34701(L)(30971 OR 30972 OR 30973 OR 30974)(L)(31081 OR 31082)
(NOTL)(37715 OR 37716 OR 34276 OR 34211 OR 33918 OR 33079))/FG

Step 4: Optionally, Transfer Results from other Sources

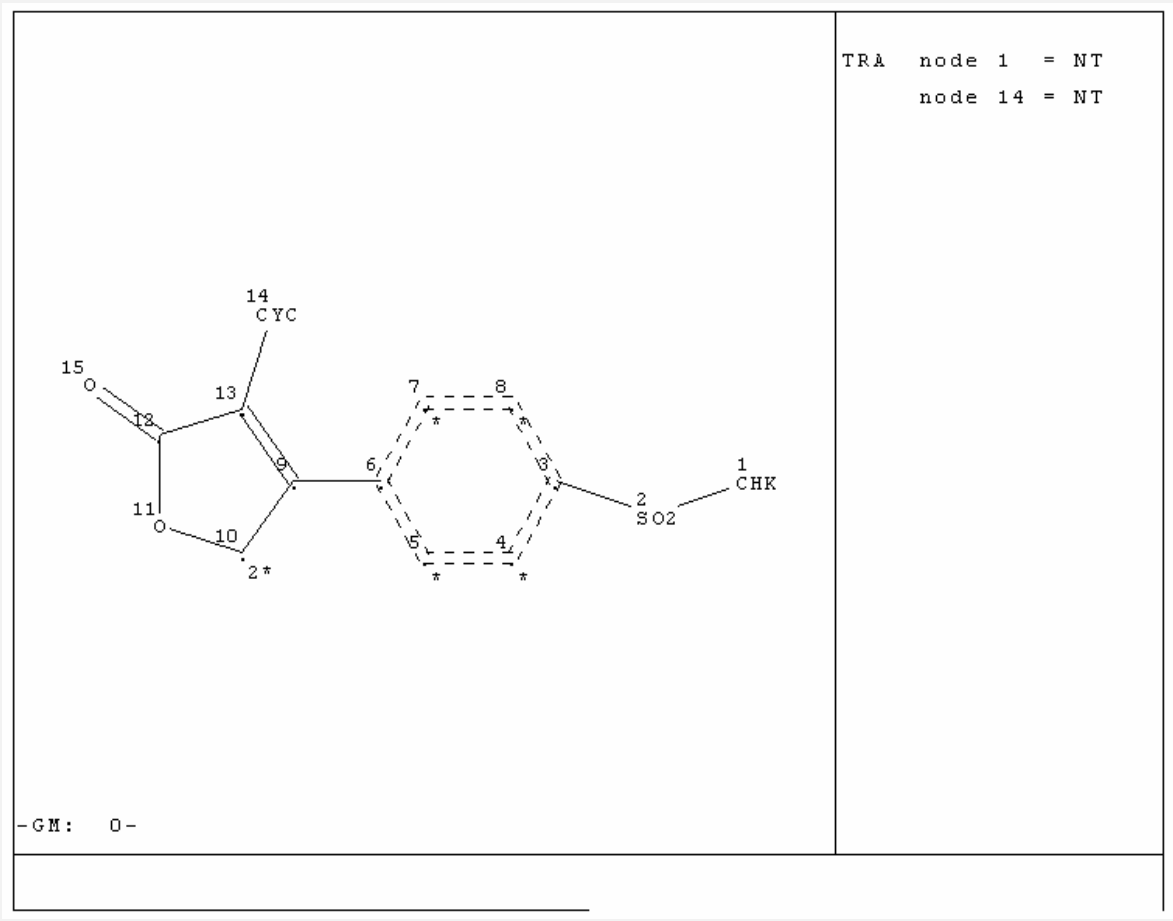
Results of a structure search of MMS, or the WPIM segment, may be transferred to STN for further processing with other records retrieved using STN files and search techniques.

Compound numbers from the WPIM segment may be listed, and converted into a text file for uploading to STN.

Markush Darc search:

```
WELCOME TO MARKUSH DARC / BIENVENUE SUR MARKUSH DARC
    •
    •
    •
DATA BASE # ?  3
 ****    BASE MMS              -   14/04/00    ****
     776074 COMPOUNDS - LAST CN : 9954-TG301

 THIS DATABASE IS MADE UP WITH    4 SEGMENTS
 Segment: BACKF    ( 1 )
 Segment: MPHARM   ( 2 )
 Segment: WPIM     ( 3 )
 Segment: FRONTF   ( 4 )
 YOU CAN SELECT ANY SEGMENTS
 SEGMENT(S)  (1,2,.. or  <CR> for all) ?
3
 SELECTED SEGMENT(S):
          WPIM

 -ST- (BA,CN,QT,QG,RF,RE,AA,SB,BL,BI,GD,INFO) ? QT

 ***  QT    ***

****    SELECTED DATA BASE :    MMS       ****
 -QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATTR,VE)  ?  GR
 *GRAPH
 ?  1:8-3
```

```
? 6-9:14
? 9-13
? 12-15
?
-QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATTR,VE)  ? AT
*ATOMS
? CHK 1
? SO2 2
? O 11,15
? CYC 14
?
-QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATTR,VE)  ? BO
*BONDS
? NO 3:8-3
? DO 9-13,12-15
?
-QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATTR,VE)  ? FS
*FREE SITES
? 2 10
? 1 4,5,7,8
?
-QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATTR,VE)  ? ATTR
-ATTR- (FS,CH,AV,AM,CR,MU,PA,DT,SP,TRA)  ? TRA
*TRANSLATION ATTRIBUTES
? NT 1,14
?
-QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATTR,VE)  ? VE
```



-QU- (CN,CA,GM,GI,GR,BO,AT,FS,AP,VP,ATIR,VE) ? **FI**
OTHER SPECIFICATIONS (Y/N) ? **N**
FILE SEGMENTS(Y/N) ? **N**

-ST- (BA,CN,QT,QG,RF,RE,AA,SB,BL,BI,GD,INFO) ? **RE**

*** RE ***

* SEARCH IN PROGRESS *
* SEARCH STILL IN PROGRESS *
* SEARCH STILL IN PROGRESS *

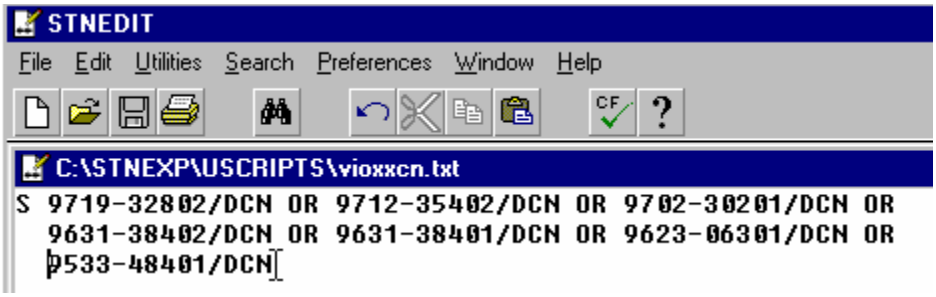
R2 - RE / MMS - : 15885 ANSWER(S)

```
-ST- (BA,CN,QT,QG,RF,RE,AA,SB,BL,BI,GD,INFO) ? AA

***  AA    ***

      0 ANSWER(S) FOR    838 CANDIDATES
      0 ANSWER(S) FOR   1361 CANDIDATES

-   AA    - NUMBER OF ANSWER(S)        :     0
- FILE RX - NUMBER OF CANDIDATE(S)     :     3
- CANDIDATES REMAINING TO BE PROCESSED : 13694


CONTINUE AA (A), BATCH SEARCH (B), CANCEL (C),POWER-BATCH (P) ? AA

*** AA ***    CONTINUED

      0 ANSWER(S) FOR   2562 CANDIDATES
    •
    •
    •
      7 ANSWER(S) FOR  15369 CANDIDATES
      7 ANSWER(S) FOR  15822 CANDIDATES

 R3  - AA / MMS     :      7 ANSWER(S)


 R4  - RX / MMS     :     95 ANSWER(S)


        ESTIMATED COST FOR :
     95 CANDIDATES TO BE PROCESSED IN BATCH  :       0.00     USD
PERFORM BATCH SEARCH (B), CANCEL (C), POWER-BATCH (P) ?  B

BATCH SEARCH REQUESTED, PLEASE ENTER A NAME ( 8 CHAR.) ? VIOXX

27/04/00 21*05*26 BATCH SEARCH # :     1, NAME : VIOXX


-ST- (BA,CN,QT,QG,RF,RE,AA,SB,BL,BI,GD,INFO) ? SV CN
NAME ( 8CHAR.) ? VIOXXCN
     NAME   TYPE NUMBER    ORIGIN       DATE   SPACE  DATABASE
 1  VIOXXCN  CN      7   MARKUSH DARC  27/04/00   1    MMS
```

```
-ST- (BA,CN,QT,QG,RF,RE,AA,SB,BL,BI,GD,INFO) ? LI


 R3  - AA / MMS     :      7 ANSWER(S)

? 1-7
     1    CN = 9719-32802
     2    CN = 9712-35402
     3    CN = 9702-30201
     4    CN = 9631-38402
     5    CN = 9631-38401
     6    CN = 9623-06301
     7    CN = 9533-48401
?

-ST- (BA,CN,QT,QG,RF,RE,AA,SB,BL,BI,GD,INFO) ? FI
```

Derwent compound numbers to search in WPIDS (/DCN).

This list of numbers may formatted into a text query for uploading to STN using a simple text editor or using software macros.



Step 5: Conduct Appropriate Searches

REG/CAplus, MARPAT, MARPATPREV via HCASLINK

A structure query may be run automatically in both the REGISTRY and MARPAT files using (H)CASLINK. This will retrieve:

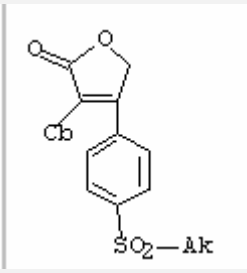
- Patents indexed to specific compounds via CAS RN's - REGISTRY
- Patents indexed to Markush structures - MARPAT

Search in HCASLINK:

```
=> FILE HCASLINK

FILE 'REGISTRY' ENTERED AT 16:42:26 ON 28 APR 2000
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2000 American Chemical Society (ACS)

FILE 'MARPAT' ENTERED AT 16:42:26 ON 28 APR 2000


FILE 'MARPATPREV' ENTERED AT 16:42:26 ON 28 APR 2000


FILE 'HCAPLUS' ENTERED AT 16:42:26 ON 28 APR 2000


CLUSTER 'HCASLINK' ENTERED

 Predefined command sequences will be executed in
 REGISTRY, MARPAT, MARPATPREV, and HCAPLUS.


=>
Uploading vioxx.str

L1      STRUCTURE UPLOADED
```

=> D L1

L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> S L1 SSS SAM

S L1 SSS SAM FILE=REGISTRY
FILE 'REGISTRY'
SAMPLE SEARCH INITIATED 16:42:53
SAMPLE SCREEN SEARCH COMPLETED - 38 TO ITERATE

100.0% PROCESSED 38 ITERATIONS 10 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 391 TO 1129
PROJECTED ANSWERS: 11 TO 389

L2 10 SEA SSS SAM L1

S L2 SSS SAM FILE=MARPAT
FILE 'MARPAT'
SAMPLE SEARCH INITIATED 16:42:56
SAMPLE SCREEN SEARCH COMPLETED - 17 TO ITERATE

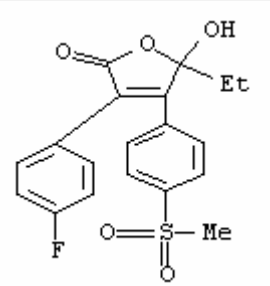
100.0% PROCESSED 17 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 93 TO 587
PROJECTED ANSWERS: 1 TO 80

L3 1 SEA SSS SAM L1

=> D SCAN L2

L2 10 ANSWERS REGISTRY COPYRIGHT 2000 ACS
IN 2(5H)-Furanone, 5-ethyl-3-(4-fluorophenyl)-5-hydroxy-4-[4-(methylsulfonyl)phenyl]- (9CI)
MF C19 H17 F O5 S



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> D SCAN L3

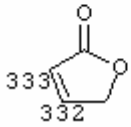
L3 1 ANSWERS MARPAT COPYRIGHT 2000 ACS
IC ICM A61K045-06
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 28
TI Immunosuppressive combinations containing a cyclooxygenase-2 inhibitor and
a leukotriene A4 hydrolase inhibitor
ST immunosuppressant cyclooxygenase inhibitor; leukotriene hydrolase inhibitor transplant rejection
IT Kidney diseases
(Goodpasture's syndrome; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Hemolytic anemia
(autoimmune; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Allergy inhibitors
(delayed hypersensitivity; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Respiratory tract diseases
(hypersensitivity; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)

IT Addison's disease
(idiopathic; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Hypersensitivity
(immediate hypersensitivity; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Allergy inhibitors
Anti-inflammatory drugs
Antiasthmatics
Autoimmune diseases
Autoimmune thyroiditis
Contact dermatitis
Encephalomyelitis
Glomerulonephritis
Graft vs. host reaction
Graves' disease
Immunosuppressants
Meningitis
Myasthenia gravis
Septic shock
Sjogren's syndrome
Thrombocytopenia
Transplant rejection
Urticaria
(immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Delayed hypersensitivity
Granuloma
(inhibitors; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Connective tissue diseases
(mixed; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Lung diseases
(pneumonitis, hypersensitive; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Hypersensitivity
(respiratory tract; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Purpura (disease)
(thrombocytopenic, autoimmune; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT Inflammation
Thyroid diseases
(thyroiditis; immunosuppressive combinations contg. cyclooxygenase-2

inhibitor and LTA4 hydrolase inhibitor)
IT 39391-18-9
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(2, inhibitors; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT 142259-95-8, RP-64966 179021-09-1 179021-10-4 179022-08-3
186901-93-9 186901-94-0 186901-95-1 186901-96-2 186901-97-3
186901-98-4 194997-63-2
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LTA4 hydrolase inhibitor; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT 71125-38-7, Meloxicam 80937-31-1, Flosulide 88149-94-4, DuP 697
123653-11-2, NS-398 162011-83-8 169590-41-4 169590-42-5
170569-86-5 177660-77-4 177660-80-9 177660-88-7 181695-76-1
185344-61-0 194997-65-4 194997-66-5 194997-67-6
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclooxygenase-2 inhibitor; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT 162011-90-7
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT 99-91-2 321-28-8, 2-Fluoroanisole 383-63-1, Ethyl trifluoroacetate
454-31-9, Ethyl difluoroacetate 27918-19-0, 4-
Sulfonamidophenylhydrazine
hydrochloride
RL: RCT (Reactant)
(immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT 455-91-4P 18931-60-7P 170570-77-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)
IT 90119-07-6, Leukotriene A4 hydrolase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; immunosuppressive combinations contg. cyclooxygenase-2 inhibitor and LTA4 hydrolase inhibitor)

MSTR 1

G1 = 332-6 333-15



G2 = cycloalkyl<(3-12)> (SO (1-) G3)
G7 = alkyl<(1-20)>
DER: or pharmaceutically acceptable salts
MPL: claim 1

ALL ANSWERS HAVE BEEN SCANNED

=> S L1 SSS FULL

```
S L1 SSS FUL FILE=REGISTRY
FILE 'REGISTRY'
FULL SEARCH INITIATED 16:45:34
FULL SCREEN SEARCH COMPLETED -    608 TO ITERATE

100.0% PROCESSED     608 ITERATIONS                          137 ANSWERS
SEARCH TIME: 00.00.01

L4          137 SEA SSS FUL L1

S L4 SSS FUL FILE=MARPAT
FILE 'MARPAT'
FULL SEARCH INITIATED 16:45:37
FULL SCREEN SEARCH COMPLETED -    455 TO ITERATE

100.0% PROCESSED     455 ITERATIONS                           20 ANSWERS
SEARCH TIME: 00.00.06

L5           20 SEA SSS FUL L1

S L5 SSS FUL FILE=MARPATPREV
FILE 'MARPATPREV'
FULL SEARCH INITIATED 16:45:47
FULL SCREEN SEARCH COMPLETED -      3 TO ITERATE

100.0% PROCESSED       3 ITERATIONS                           0 ANSWERS
SEARCH TIME: 00.00.01

L6            0 SEA SSS FUL L1

S L4 FILE=HCAPLUS
L7          86 FILE HCAPLUS

DUP REM L6 L5 L7
L6 HAS NO ANSWERS
PROCESSING COMPLETED FOR L6
PROCESSING COMPLETED FOR L5
PROCESSING COMPLETED FOR L7
L8           91 DUP REM L6 L5 L7 (15 DUPLICATES REMOVED)
               ANSWERS '1-20' FROM FILE MARPAT
               ANSWERS '21-91' FROM FILE HCAPLUS
```

```
=> S L8 AND P/DT

S L7 AND P/DT FILE=HCAPLUS
L9          47 FILE HCAPLUS

S L5 AND P/DT FILE=HCAPLUS
L10         20 FILE HCAPLUS

S L6 AND P/DT FILE=HCAPLUS
L11          0 FILE HCAPLUS

S L10 AND L5 FILE=MARPAT
L12         20 FILE MARPAT

S L11 AND L6 FILE=MARPATPREV
L13          0 FILE MARPATPREV

DUP REM L13 L12 L9
L13 HAS NO ANSWERS
PROCESSING COMPLETED FOR L13
PROCESSING COMPLETED FOR L12
PROCESSING COMPLETED FOR L9
L14          52 DUP REM L13 L12 L9 (15 DUPLICATES REMOVED)
                ANSWERS '1-20' FROM FILE MARPAT
                ANSWERS '21-52' FROM FILE HCAPLUS

=> SAVE TEMP L14 VIOXXCAS/A
ANSWER SET L14 HAS BEEN SAVED AS 'VIOXXCAS/A'
```

DWPI

The WPIDS file may be searched in various ways:

- Search the same uploaded "Standard" structure used in HCASLINK. This searches the newer DCR segment of WPIDS or WPIX
- SELECT Derwent Compound Numbers and Derwent Registry Numbers to search the earlier segments of the file based on this structure search.
- Search by the fragment code strategy developed in STN Express

Search by structure in the DCR segment:

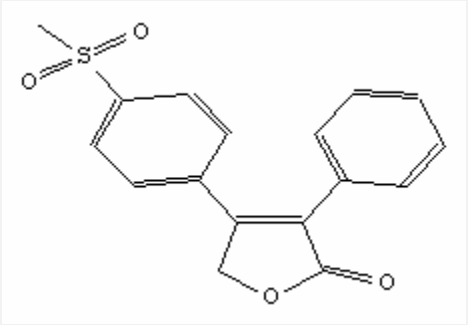
=> S L1 SSS FULL
FULL SEARCH INITIATED 16:48:06
FULL SCREEN SEARCH COMPLETED - 15 TO ITERATE

100.0% PROCESSED 15 ITERATIONS 5 ANSWERS
SEARCH TIME: 00.00.03

L15 5 SEA SSS FUL L1

=> D TRIAL

L15 ANSWER 1 OF 5 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN.S DCR-208737
CN.S 3-PHENYL-4-(4-(METHYLSULFONYL)PHENYL)-2-(5H)-FURANONE
MF C17 H14 O4 S



=> D IALL 1-5

•
•
•

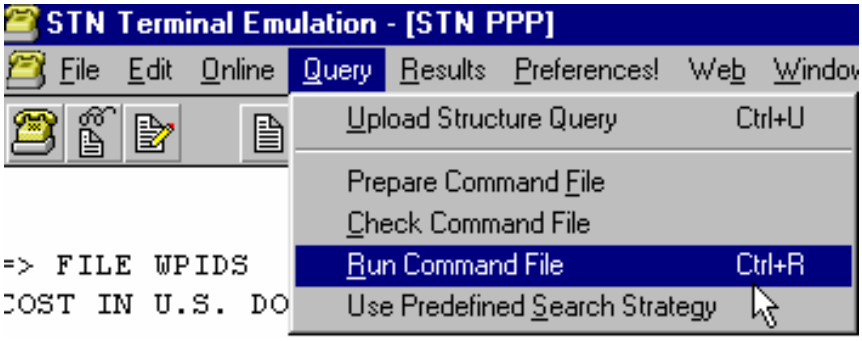
=> SEL L15 SDCN SDRN
E1 THROUGH E5 ASSIGNED

=> D SELECT E1-E5
E1 2 RA06CV/SDCN
E2 1 RA027J/SDCN
E3 1 RA06B8/SDCN
E4 1 RA06D0/SDCN
E5 1 RA06D5/SDCN

Retrieve bibliographic records indexed to DCR data:

```
=> S L15/DCR
L16             8 L15/DCR

=> S E1-E5/DCN
                6 RA06CV/DCN
                6 RA027J/DCN
                2 RA06B8/DCN
                3 RA06D0/DCN
                2 RA06D5/DCN
L17             8 (RA06CV/DCN OR RA027J/DCN OR RA06B8/DCN OR RA06D0/DCN OR
RA06D5/
                  DCN)

=> S L17 NOT L16
L18             0 L17 NOT L16
```

Run Command File to upload fragment code strategy:




```
=> S (F112(P)K442)/M0,M2,M3

             295 F112/M0
            3184 F112/M2
            3055 F112/M3
            1906 K442/M0
           23598 K442/M2
           19997 K442/M3
L19         1287 (F112(P)K442)/M0,M2,M3
```

=> S (G7? OR G8? OR G530 OR G543 OR G553 OR G563 OR G573 OR G583 OR G600)/M0,M2,M3

```
           795 G7?/M0
          4959 G7?/M2
          5901 G7?/M3
     •
     •
     •
            48 G600/M0
           482 G600/M2
           295 G600/M3
L20     145376 (G7? OR G8? OR G530 OR G543 OR G553 OR G563 OR G573 OR G583 OR
               G600)/M0,M2,M3
```

=> S L20 OR (G610 OR G623 OR G630 OR G640 OR G650 OR G660 OR G670 OR G680)/M0,M2,M3

```
           71 G610/M0
          910 G610/M2
         1067 G610/M3
     •
     •
     •
          156 G680/M0
          765 G680/M2
          928 G680/M3
L21     150166 L20 OR (G610 OR G623 OR G630 OR G640 OR G650 OR G660 OR G670 OR
               G680)/M0,M2,M3
```

=> S L21 OR (G690 OR G695)/M0,M2,M3

```
           13 G690/M0
          189 G690/M2
           98 G690/M3
           10 G695/M0
          111 G695/M2
          146 G695/M3
L22     150232 L21 OR (G690 OR G695)/M0,M2,M3
```

=> S L19(P)L22

```
L23       1060 L19(P)L22
```

```
=> S L23(P)(C316(P)M113(P)M116)/M2,M3

          49724 C316/M2
          63506 C316/M3
          51024 M113/M2
          41571 M113/M3
          28416 M116/M2
          20873 M116/M3
L24         610 L23(P)(C316(P)M113(P)M116)/M2,M3

=> S L24(P)(F012(P)F013(P)F014(P)(G013 OR G015 OR G017 OR
G018)(P)"L942")/M2,M3

          88694 F012/M2
          70727 F012/M3
      •
      •
      •
          15229 "L942"/M2
           9572 "L942"/M3
L25         188 L24(P)(F012(P)F013(P)F014(P)(G013 OR G015 OR G017 OR
G018)(P)"L942")/M2,M3

=> S L25(P)(G030 OR G031 OR G032 OR G060)/M2,M3

          38116 G030/M2
          38972 G030/M3
          11093 G031/M2
           9704 G031/M3
           4231 G032/M2
           4286 G032/M3
           7182 G060/M2
           5229 G060/M3
L26         187 L25(P)(G030 OR G031 OR G032 OR G060)/M2,M3

=> S (L23(P)M900/M0) OR (L24(P)M901/M2,M3) OR
(L24(P)M902/M2,M3)

          51884 M900/M0
             21 L23(P)M900/M0
          15655 M901/M2
          29676 M901/M3
              7 L24(P)M901/M2,M3
          87479 M902/M2
```

```
        155739 M902/M3
           163 L24(P)M902/M2,M3
L27        191 (L23(P)M900/M0) OR (L24(P)M901/M2,M3) OR (L24(P)M902/M2,M3)

=> S L27 OR L26

L28        378 L27 OR L26

=> S L28(P)G100/M0,M2,M3

         26373 G100/M0
        171351 G100/M2
        206369 G100/M3
L29        355 L28(P)G100/M0,M2,M3

=> S L29(P)(M210 OR M220 OR M225 OR M226)/M2,M3

        227732 M210/M2
        300925 M210/M3
        103065 M220/M2
        198246 M220/M3
         80099 M225/M2
        186696 M225/M3
         60593 M226/M2
        158761 M226/M3
L30        334 L29(P)(M210 OR M220 OR M225 OR M226)/M2,M3

=> S L28(P)((M411 OR M413)(P)(J522 OR J523))/M0,M2,M3

          5090 M411/M0
        110347 M411/M2
        344201 M411/M3
         13416 M413/M0
        114039 M413/M2
        103116 M413/M3
          4391 J522/M0
         38939 J522/M2
         25483 J522/M3
          1166 J523/M0
         11806 J523/M2
         12739 J523/M3
L31        272 L28(P)((M411 OR M413)(P)(J522 OR J523))/M0,M2,M3

=> S (M270(P)(M281 OR M282 OR M283))/M2,M3
```

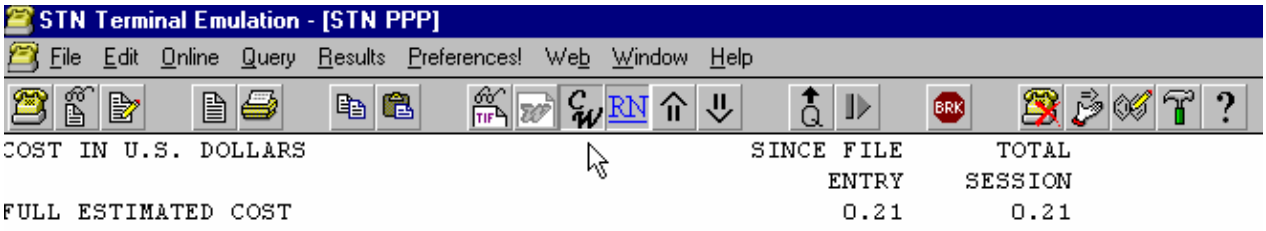
```
         53397 M270/M2
         50761 M270/M3
        200630 M281/M2
        259411 M281/M3
        153223 M282/M2
        185469 M282/M3
        118838 M283/M2
        143038 M283/M3
L32      98062 (M270(P)(M281 OR M282 OR M283))/M2,M3

=> S L32 OR (M271(P)(M281 OR M282 OR M283))/M2,M3

         38164 M271/M2
         31036 M271/M3
        200630 M281/M2
        259411 M281/M3
        153223 M282/M2
        185469 M282/M3
        118838 M283/M2
        143038 M283/M3
         65773 (M271(P)(M281 OR M282 OR M283))/M2,M3
L33     163834 L32 OR (M271(P)(M281 OR M282 OR M283))/M2,M3

=> S L31(P)L33

L34        263 L31(P)L33

=> S L34(P)F015/M2,M3

         64684 F015/M2
         44574 F015/M3
L35        138 L34(P)F015/M2,M3

=> S L28(P)(J521(P)M413)/M0,M2,M3

          7719 J521/M0
         63791 J521/M2
         31178 J521/M3
         13416 M413/M0
        114039 M413/M2
        103116 M413/M3
L36        188 L28(P)(J521(P)M413)/M0,M2,M3

=> S L36(P)(M270 OR M271)/M2,M3
```

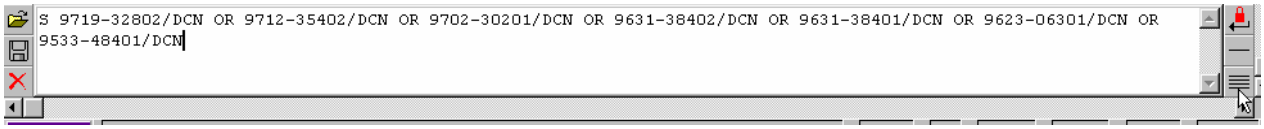
```
         53397 M270/M2
         50761 M270/M3
         38164 M271/M2
         31036 M271/M3
L37        180 L36(P)(M270 OR M271)/M2,M3

=> S L36(P)(M211(P)(M270 OR M271))/M2,M3

        186464 M211/M2
        244338 M211/M3
         53397 M270/M2
         50761 M270/M3
         38164 M271/M2
         31036 M271/M3
L38        147 L36(P)(M211(P)(M270 OR M271))/M2,M3

=> S L38(P)(G111 OR G112)/M2,M3

         42022 G111/M2
         50828 G111/M3
         31520 G112/M2
         42915 G112/M3
L39        105 L38(P)(G111 OR G112)/M2,M3

=> S (M900/M0(P)(L36 OR (L29(P)L31)))

         51884 M900/M0
L40          5 (M900/M0(P)(L36 OR (L29(P)L31)))

=> S L40 OR (M901/M2,M3(P)(L36 OR (L29(P)L31)))

         15655 M901/M2
         29676 M901/M3
             5 M901/M2,M3(P)(L36 OR (L29(P)L31))
L41         10 L40 OR (M901/M2,M3(P)(L36 OR (L29(P)L31)))

=> S L41 OR (M902/M2,M3(P)(L38 OR (L30(P)(L34 OR L37))))

         87479 M902/M2
        155739 M902/M3
           111 M902/M2,M3(P)(L38 OR (L30(P)(L34 OR L37)))
L42        121 L41 OR (M902/M2,M3(P)(L38 OR (L30(P)(L34 OR L37))))
```

```
=> S L39 OR L42 OR (L30(P)(L35 OR L37))

          213 L30(P)(L35 OR L37)
L43       279 L39 OR L42 OR (L30(P)(L35 OR L37))

=> S L43(NOTP)(H2 OR H7 OR H9 OR J0 OR J9 OR K9 OR "L2")/M2,M3

        68551 H2/M2
        27968 H2/M3
        42620 H7/M2
        56862 H7/M3
         9898 H9/M2
         8696 H9/M3
        98759 J0/M2
       135475 J0/M3
         2237 J9/M2
         4041 J9/M3
          687 K9/M2
         4697 K9/M3
         6454 "L2"/M2
         5160 "L2"/M3
L44       184 L43(NOTP)(H2 OR H7 OR H9 OR J0 OR J9 OR K9 OR "L2")/M2,M3

=> S L44(NOTP)("L4" OR "L8")/M2,M3

        16740 "L4"/M2
        12987 "L4"/M3
        27073 "L8"/M2
        12274 "L8"/M3
L45       181 L44(NOTP)("L4" OR "L8")/M2,M3

=> S L45 AND ?FURAN?
        23896 ?FURAN?
L46        21 L45 AND ?FURAN?

=> D TRIAL 1-5

L46  ANSWER 1 OF 21  WPIDS COPYRIGHT 2000   DERWENT INFORMATION LTD
AN   1999-326967 [27]   WPIDS
DNC  C1999-096725
TI   New furanone derivatives useful as selective cyclooxygenase -2
     inhibitors.
DC   B03
IC   ICM  C07D307-58
```

```
      ICS  A61K031-34
MC    CPI: B14-C01; B14-C03; B14-C04; B14-D05A; B14-H01; B14-L06; B14-L08;
           B14-N03; B14-S04
PNC   2
CYC   82
      ●
      ●
      ●
```

Upload the DCN text file derived from MMS:






```
 => S 9719-32802/DCN OR 9712-35402/DCN OR 9702-30201/DCN OR
9631-38402/DCN OR 9631-38401/DCN OR 9623-06301/DCN OR 9533-
48401/DCN
             1 9719-32802/DCN
             1 9712-35402/DCN
             1 9702-30201/DCN
             1 9631-38402/DCN
             1 9631-38401/DCN
             1 9623-06301/DCN
             1 9533-48401/DCN
L47          6 9719-32802/DCN OR 9712-35402/DCN OR 9702-30201/DCN OR
     9631-38402/DCN OR 9631-38401/DCN OR 9623-06301/DCN OR 9533-48401/DCN

 => D TRIAL 1-6

L47  ANSWER 1 OF 6  WPIDS COPYRIGHT 2000   DERWENT INFORMATION LTD
AN   1997-212667 [19]   WPIDS
DNC  C1997-068658
```

```
 TI   Treating cyclo-oxygenase-2 mediated disease, e.g. pain - using
combination of selective cyclo-oxygenase-2 inhibitor and prostaglandin or
antiulcer agent for simultaneous ulcer treatment or gastroprotection.
 DC   B05
 IC   ICM  A61K031-557
 ICI  A61K031-557, A61K031:
 MC   CPI: B04-H03; B14-C01; B14-C03; B14-C04; B14-D05C; B14-E08; B14-H01;
           B14-J01A4; B14-K01A; B14-N14
      •
      •
      •
```

Combine DWPI answer sets:

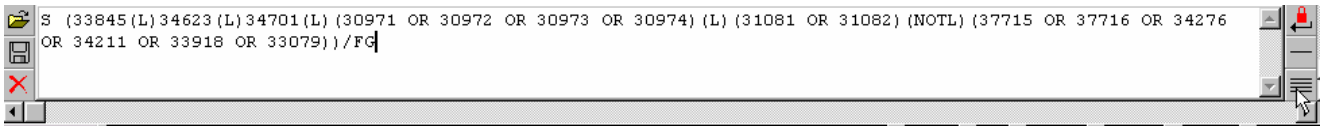
```
=> S L16 OR L46 OR L47
L48         31 L16 OR L46 OR L47

=> SAVE TEMP VIOXXWPI/A
ENTER L#, L# RANGE, ALL, OR (END):L48
ANSWER SET L48 HAS BEEN SAVED AS 'VIOXXWPI/A'

=> S L45 NOT L48
L49        158 L45 NOT L48

=> SAVE TEMP L49 VIOXXWPICODE/A
ANSWER SET L49 HAS BEEN SAVED AS 'VIOXXWPICODE/A'
```

IFI Claims

In IFICDB a code strategy may be combined with text words to add precision. The query may be developed offline as a text file for uploading.

Upload the FG query:

```
=> FILE IFICDB

The (S) proximity operator should be used to correctly link chemical
uniterms with role numbers.  Enter 'HELP (S)' at an arrow prompt for
more information on using the (S) operator when searching this file.
```




```
=> S (33845(L)34623(L)34701(L)(30971 OR 30972 OR 30973 OR
30974)(L)(31081 OR 31082)(NOTL)(37715 OR 37716 OR 34276 OR 34211
OR 33918 OR 33079))/FG
 33845 F O2S SULFONE FG (P-1)
 34623 R I C4O FURAN RING (P)
 34701 R I C6 BENZENE RING (P)
 30971 F CO2 CARBOXYLIC ESTER FG (P-1)
 30972 F CO2 CARBOXYLIC ESTER FG (P-2)
 30973 F CO2 CARBOXYLIC ESTER FG (P-3)
 30974 F CO2 CARBOXYLIC ESTER FG (P-4+)
 31081 F C2 DOUBLE BOND FG (P-1)
 31082 F C2 DOUBLE BOND FG (P-2+)
 37715 RING UNIT, 1 (M)
 37716 RING UNITS, 2 (M)
 34276 NITROGEN IN RING (M)
 34211 FUSED OR BRIDGED RING (M)
 33918 F O3S SULFONIC ACID, SULFONATE FG (M)
 33079 F NO2S SULFONAMIDE FG (M)
         30770 33845/FG
         33651 34623/FG
        258899 34701/FG
        124314 30971/FG
```

```
          67875 30972/FG
          33517 30973/FG
          26640 30974/FG
         157760 31081/FG
          90299 31082/FG
         115989 37715/FG
          53767 37716/FG
         127721 34276/FG
         110365 34211/FG
          27539 33918/FG
           6340 33079/FG
 L50        1324  (33845(L)34623(L)34701(L) (30971 OR 30972 OR 30973 OR
30974) (L) (31081 OR 31082) (NOTL) (37715 OR 37716 OR 34276 OR 34211 OR 33918 OR
33079))/FG

 => S L50(L)34622/FG
 34622 R I C4O FURAN RING (M)
          9845 34622/FG
 L51         69 L50(L)34622/FG

 => S L50 AND FURAN? NOT L51
          6867 FURAN?
 L52        223 L50 AND FURAN? NOT L51

 => D L51 TI IIND 3

 L51   ANSWER 3 OF 69  IFICDB  COPYRIGHT 2000 IFI
 TI    (METHYLSULFONYL)PHENYL-2-(5H)-FURANONES AS COX-2 INHIBITORS;
       ANTIINFLAMMATORY, ANTIPYRETIC AND ANALGESIC PROPERTIES, POTENTIAL
       ANTI-CANCER EFFECTS
 U.S. PATENT CLASSIF.:
   MAIN:                514473000
   SECONDARY:           549477000
 INT. PATENT CLASSIF.:
   MAIN:                C07D307-02
   SECONDARY:           A61K031-34
 FIELD OF SEARCH:       514473000; 549477000
 ART UNIT:              162
 CONTROLLED TERMS:      General Uniterms:

 ADMINISTERING 00097; ANALGESICS 00239; ANTICARCINOGENIC AGENTS 00291;
 ANTIINFLAMMATORY AGENTS 00321; ANTIPYRETICS 00331; CARRIERS 00874; DYSMENORRHEA
 01856; ENZYME INHIBITORS 01987; INFLAMMATION 02874; MAMMALS 03254; OSTEOPOROSIS
 03804; PAIN 03846; PROCESS 06232; ALZHEIMER*S DISEASE 08103; ENZYMES/CT/ 10003;
 DRUGS/CT/ 10030; COMPOSITION 21450; HYDRATES 02721-10; CYCLOOXYGENASE 08215-10
```

Fragment Uniterms:

ACYCLIC (P) 30003; CARBOCYCLIC RING (P) 30035; HETEROCYCLIC RING (P) 34236; CHLORINE, ORGANIC 40002; F AMINE SALT FG, INORGANIC ANION 40004; F AMINE SALT FG, ORGANIC ANION 40005; F CHO2 CARBOXYLIC ACID FG, O=C-OH 40023; F CO2 CARBOXYLIC ESTER FG, O=C-O 40128; F C2 DOUBLE BOND FG, C=C 40144; F O EITHER FG 40417; F O2S SULFONE FG, S(=O)2 40457; R I C4O FURAN RING 40546; R I C6 BENZENE RING 40551

CDB FRAGMENT CODES: ACYCLIC (P) 30003; CARBOCYCLIC RING (P) 30035; CARBOCYCLIC RING (M) 30036; CHLORINE, ORGANIC (P) 30047; F AMINE SALT FG, INORGANIC ANION (P-1) 30066; F AMINE SALT FG, ORGANIC ANION (P-1) 30069; F CARBOXYLIC ACID, ESTER, HALIDE, ANHYDRIDE FG (M) 30286; F CHO2 CARBOXYLIC ACID FG, O=C-OH (P-1) 30295; F CHO2 CARBOXYLIC ACID FG, O=C-OH (P-2) 30296; F CO2 CARBOXYLIC ESTER FG, O=C-O (M) 30970; F CO2 CARBOXYLIC ESTER FG, O=C-O (P-1) 30971; F C2 DOUBLE BOND FG, C=C (P-1) 31081; F C2 DOUBLE BOND FG, C=C (P-2+) 31082; F O EITHER FG (M) 33696; F O EITHER FG (P-1) 33697; F OTHER FG (M) 33775; F OXY FG (M) 33781; F O2S SULFONE FG, S(=O)2 (M) 33844; F O2S SULFONE FG, S(=O)2 (P-1) 33845; FG ON ALIPHATIC CARBON (M) 34198; FG ON C (M) 34199; FG ON CH2 (M) 34201; FG ON CH3 (M) 34202; FG ON MAXIMUM RING (M) 34203; HETEROCYCLIC RING (P) 34236; HETEROCYCLIC RING (M) 34237; MAXIMUM RING UNSATURATION (M) 34263; ONE CARBON ATOM BETWEEN FG'S (M) 34279; OXYGEN IN RING (M) 34282; PARTIAL RING UNSATURATION (M) 34286; R I C4O FURAN RING (M) 34622; R I C4O FURAN RING (P) 34623; R I C6 BENZENE RING (M) 34700; R I C6 BENZENE RING (P) 34701; THREE CARBON ATOMS BETWEEN FG'S (M) 37745-10 30

=> D L52 TI 1-10

L52 ANSWER 1 OF 223 IFICDB COPYRIGHT 2000 IFI
TI PYRONE DERIVATIVES AS PROTEASE INHIBITORS AND ANTIVIRAL AGENTS; TREATMENT OF BACTERIAL AND VIRAL INFECTIONS AND DISEASES, INCLUDING AIDS

L52 ANSWER 2 OF 223 IFICDB COPYRIGHT 2000 IFI
TI 4-PIPERIDINYL) H-2-BENZOPYRAN DERIVATIVES USEFUL AS ANTIPSYCHOTIC AGENTS; SIDE EFFECT REDUCTION; SCHIZOPHRENIA

```
L52   ANSWER 3 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    FUNGICIDES FOR THE CONTROL OF TAKE-ALL DISEASE OF PLANTS; CONTROLLING
      GAEUMANNOMYCES

L52   ANSWER 4 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    1,4,4-(TRISUBSTITUTED)CYCLOHEXANE MONOMERS AND RELATED COMPOUNDS;
      PHARMACEUTICALS CONTAINING THEM; INHIBIT THE PRODUCTION OF TUMOR
      NECROSIS FACTOR (TNF); USEFUL IN THE TREATMENT OF ALLERGIC AND
      INFLAMMATORY DISEASES; ALSO USEFUL AS INHIBITORS OF PHOSPHODIESTERASE IV

L52   ANSWER 5 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    COMPOSITIONS AND METHODS FOR REDUCING RESPIRATORY DEPRESSION AND
      ATTENDANT SIDE EFFECTS OF MU OPIOID COMPOUNDS; REDUCING, TREATING OR
      PREVENTING DRUG-MEDIATED RESPIRATORY DEPRESSION IN AN ANIMAL BY
      ADMINISTERING A .DELTA. RECEPTOR AGONIST COMPOUND

L52   ANSWER 6 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    4,4-(DISUBSTITUTED)CYCLOHEXAN-1-OLS MONOMERS AND RELATED COMPOUNDS;
      ANTIINFLAMMATORY, ANTIALLERGENS, TUMOR NECORSIS FACTOR INHIBITOR

L52   ANSWER 7 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    3-ARYL-5-HALOGEN-PYRONE DERIVATIVES AS PEST CONTROL AGENTS; HERBICIDES

L52   ANSWER 8 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    ALPHA- AND BETA-AMINO ACID HYDROXYETHYLAMINO SULFONAMIDES USEFUL AS
      RETROVIRAL PROTEASE INHIBITORS; INHIBITORS OF HIV PROTEASE

L52   ANSWER 9 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    PROCESS FOR MAKING OXIMES AND USE THEREOF TO PREPARE CYCLIC UREA
      FUNGICIDES

L52   ANSWER 10 OF 223  IFICDB  COPYRIGHT 2000 IFI
TI    ALPHA-BRANCHED ANILINES, TOLUENES, AND ANALOGS THEREOF AS FACTOR XA
      INHIBITORS; ANTICOAGULANTS AND TREATMENT OF THROMBOEMBOLIC DISOEDERS

=> SAVE TEMP L51 VIOXXIFI/A
ANSWER SET L51 HAS BEEN SAVED AS 'VIOXXIFI/A'

=> SAVE TEMP L52 VIOXXIFI2/A
ANSWER SET L52 HAS BEEN SAVED AS 'VIOXXIFI2/A'
```

USPATFULL

While USPATFULL is not structure searchable those US chemical patents, for which the US or a family equivalent has been indexed in the CAplus file, do have CAS indexing data. Therefore the USPATFULL file is essentially structure searchable through the REGISTRY File.

The answer set from the REGISTRY file search conducted earlier as part of the HCASLINK search may be used as a query L-number in USPATFULL.

Search USPATFULL via CAS RN's

```
=> FILE USPAT

FILE 'USPATFULL' ENTERED AT 11:10:46 ON 29 APR 2000
CA INDEXING COPYRIGHT (C) 2000 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 25 Apr 2000 (20000425/PD)
FILE LAST UPDATED: 25 Apr 2000 (20000425/ED)
HIGHEST PATENT NUMBER: US6055665
CA INDEXING IS CURRENT THROUGH 25 Apr 2000 (20000425/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 25 Apr 2000 (20000425/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2000
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Nov 1999

    .
    .
    .

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> S L4
L53         20 L4
```

=> D TRIAL

```
L53  ANSWER 1 OF 20  USPATFULL
AN     2000:41041  USPATFULL
TI     Antispastic use of triazolo-pyridazine derivatives
INCL   INCLM: 514/248.000
NCL    NCLM:  514/248.000
IC     [7]
       ICM: A61K031-495
       ICS: A61K031-50
GI     SECTION      PAGES      FORMAT     SIZE
       ----------   --------   --------   ------
       FRONT PAGE   1          PAGE.FP    30K
       DESCRIPTION  2-12       PAGE.DESC  1138K
       CLAIMS       12-17      PAGE.CLM   461K
       COMPLETE     1-17       PAGE.ALL   1556K

       Use PAGE(n) to retrieve a specific page
```

=> D TI 1-10

```
L53  ANSWER 1 OF 20  USPATFULL
TI     Antispastic use of triazolo-pyridazine derivatives

L53  ANSWER 2 OF 20  USPATFULL
TI     Combination

L53  ANSWER 3 OF 20  USPATFULL
TI     Pyridazinones as inhibitors of cyclooxygenase-2

L53  ANSWER 4 OF 20  USPATFULL
TI     Method of treating colonic adenomas
```

(continued on next page)

```
L53  ANSWER 5 OF 20  USPATFULL
TI     Stilbene derivatives useful as cyclooxygenase-2 inhibitors

L53  ANSWER 6 OF 20  USPATFULL
TI     Process of preparing phenyl heterocycles useful as COX-2 inhibitors

L53  ANSWER 7 OF 20  USPATFULL
TI     Use of inhibitors of cyclooxygenase in the treatment of
       neurodegenerative diseases

L53  ANSWER 8 OF 20  USPATFULL
TI     Substituted spiro compounds for the treatment of inflammation

L53  ANSWER 9 OF 20  USPATFULL
TI     Diphenyl stilbenes as prodrugs to COX-2 inhibitors

L53  ANSWER 10 OF 20  USPATFULL
TI     Treatment of inflammation and inflammation-related disorders with a
       combination of a cyclooxygenase-2 inhibitor and a leukotriene A.sub.4
       hydrolase inhibitor

=> SAVE TEMP L53 VIOXXUSPAT/A
ANSWER SET L53 HAS BEEN SAVED AS 'VIOXXUSPAT/A'
```

Retrieve Counterpart Records

In many cases we wish to find counterpart records. That is retrieving the CAplus records that correspond to the DWPI records, and vice versa.

Two approaches are available for this:

- TRANSFER command - use the PN and APPS from one file as search terms in the target file

- FSEARCH - in a multifile environment, this effectively conducts a simultaneous TRANSFER. For large answer sets this approach may become unwieldy.

D HIS:

```
=> D HIS

     FILE 'REGISTRY, MARPAT, MARPATPREV, HCAPLUS' ENTERED AT 11:47:36 ON 29
     APR 2000
L1             STRUCTURE UPLOADED
L2          10 FILE REGISTRY
L3           1 FILE MARPAT
L4         137 FILE REGISTRY
L5          20 FILE MARPAT
L6           0 FILE MARPATPREV
L7          86 FILE HCAPLUS
L8          91 DUP REM L6 L5 L7 (15 DUPLICATES REMOVED)
L9          47 FILE HCAPLUS
L10         20 FILE HCAPLUS
L11          0 FILE HCAPLUS
L12         20 FILE MARPAT
L13          0 FILE MARPATPREV
L14         52 DUP REM L13 L12 L9 (15 DUPLICATES REMOVED)

     FILE 'WPIDS' ENTERED AT 11:49:02 ON 29 APR 2000
L15          5 S L1 SSS FULL
               SEL L15 SDON SDRN
L16          8 S L15/DCR
L17          8 S E1-E5/DCN
L18          0 S L17 NOT L16
L19       1287 S (F112(P)K442)/MO,M2,M3
     •
     •   (The remainder of the fragment code search)
     •
L42        121 SEA L41 OR (M902/M2,M3(P)(L38 OR (L30(P)(L34 OR L37))))
L43        279 S L39 OR L42 OR (L30(P)(L35 OR L37))
L44        184 SEA L43(NOTP)(H2 OR H7 OR H9 OR J0 OR J9 OR K9 OR "L2")/M2,M3
L45        181 SEA L44(NOTP)("L4" OR "L8")/M2,M3
L46         21 S L45 AND ?FURAN?
L47          6 S 9719-32802/DCN OR 9712-35402/DCN OR 9702-30201/DCN OR 9631-38
L48         31 S L16 OR L46 OR L47
L49        158 S L45 NOT L48

     FILE 'IFICDB' ENTERED AT 11:56:47 ON 29 A
L50       1324 S (33845(L)34623(L)34701(L)(30971 OR 30972 OR 30973 OR 30974)(L
L51         69 S L50 (L     22/FG
L52        223 S L50 AND FURAN? NOT L51
```

The less precise answer sets, L49 and L52 may be evaluated separately.

```
     FILE 'USPATFULL' ENTERED AT 11:59:16 ON 29 APR 2000
L53          20 S L4
```

TRANSFER CASLINK records (L14) to WPIDS:

```
=> FILE WPIDS

=> TRA L14 PN,APPS
L54          TRANSFER L14 1- PN APPS :     523 TERMS
SEARCH OF L54 IS APPROXIMATELY 88% COMPLETE
L55          76 L54

=> S L48 OR L55
L56          91 L48 OR L55
```

TRANSFER WPIDS records (L48) to HCAplus:

```
=> FILE HCAPLUS

=> TRA L48 PN,APPS
L57          TRANSFER L48 1- PN APPS :     404 TERMS
L58          55 L57

=> S L9 OR L58
L59          84 L9 OR L58
```

Optionally this may be repeated for other databases.

Step 6: Merge Answer Sets

Having retrieved records from 4 files using various structure search queries, do we have multiple records describing the same publication and/or invention?

Most likely!!

Several options are available for handling these records:

- DUPLICATE REMOVE and DISPLAY

- DUPLICATE IDENTIFY (Merge), FSORT and DISPLAY

Of these two options the second gives more options and may be most cost effective.

- DUP REM only evaluates the "basic" patent publication
- DUP IDE effectively merges answer sets from multiple files
- FSORT groups these records by ALL patent numbers and applications numbers, not just the basic, WITHOUT removing any.
- DISPLAY, after the FSORT, may include all records for each invention or selected records. Effectively controlled with the PFAM display option.

D HIS to recall L-numbers to "merge"

```
=> D HIS

     (FILE 'REGISTRY, MARPAT, MARPATPREV, HCAPLUS' ENTERED AT 11:46:35 ON 29
     APR 2000)
               DEL HIS

     FILE 'REGISTRY, MARPAT, MARPATPREV, HCAPLUS' ENTERED AT 11:47:36 ON 29
     APR 2000
L1             STRUCTURE UPLOADED
L2            10 FILE REGISTRY
L3             1 FILE MARPAT
L4           137 FILE REGISTRY
L5            20 FILE MARPAT
L6             0 FILE MARPATPREV
L7            86 FILE HCAPLUS
L8            91 DUP REM L6 L5 L7 (15 DUPLICATES REMOVED)
L9            47 FILE HCAPLUS
L10           20 FILE HCAPLUS
L11            0 FILE HCAPLUS
L12           20 FILE MARPAT
L13            0 FILE MARPATPREV
L14           52 DUP REM L13 L12 L9 (15 DUPLICATES REMOVED)

     FILE 'WPIDS' ENTERED AT 11:49:02 ON 29 APR 2000
L15            5 S L1 SSS FULL
               SEL L15 SDCN SDRN
L16            8 S L15/DCR
L17            8 S E1-E5/DCN
L18            0 S L17 NOT L16
L19         1287 S (F112(P)K442)/MO,M2,M3
     .
     .
     .
L42          121 SEA L41 OR (M902/M2,M3(P)(L38 OR (L30(P)(L34 OR L37))))
L43          279 S L39 OR L42 OR (L30(P)(L35 OR L37))
L44          184 SEA L43(NOTP)(H2 OR H7 OR H9 OR J0 OR J9 OR K9 OR "L2")/M2,M3
L45          181 SEA L44(NOTP)("L4" OR "L8")/M2,M3
L46           21 S L45 AND ?FURAN?
L47            6 S 9719-32802/DCN OR 9712-35402/DCN OR 9702-30201/DCN OR 9631-38
L48           31 S L16 OR L46 OR L47
L49          158 S L45 NOT L48

     FILE 'IFICDB' ENTERED AT 11:56:47 ON 29 APR 2000
```

```
L50        1324 S  (33845(L)34623(L)34701(L) (30971 OR 30972 OR 30973 OR 30974) (L
L51          69 S L50 (L) 34622/FG
L52         223 S L50 AND FURAN? NOT L51

     FILE 'USPATFULL' ENTERED AT 11:59:16 ON 29 APR 2000
L53          20 S L4

     FILE 'WPIDS' ENTERED AT 12:03:36 ON 29 APR 2000

     FILE 'HCAPLUS, MARPAT' ENTERED AT 12:03:58 ON 29 APR 2000
L54             TRA L14 1- PN APPS :      523 TERMS

     FILE 'WPIDS' ENTERED AT 12:04:15 ON 29 APR 2000
L55          76 SEA L54

     FILE 'HCAPLUS' ENTERED AT 12:04:50 ON 29 APR 2000

     FILE 'WPIDS' ENTERED AT 12:08:16 ON 29 APR 2000
L56          91 S L48 OR L55

     FILE 'HCAPLUS' ENTERED AT 12:08:56 ON 29 APR 2000

     FILE 'WPIDS' ENTERED AT 12:09:08 ON 29 APR 2000
L57             TRA L48 1- PN APPS :      404 TERMS

     FILE 'HCAPLUS' ENTERED AT 12:09:14 ON 29 APR 2000
L58          55 SEA L57
L59          84 S L9 OR L58
```

Merge the L-numbers with DUP IDE:

```
=> SET DUPORDER FILE

=> DUP IDE L12 L59 L56 L51 L53

FILE 'MARPAT' ENTERED AT 12:11:31 ON 29 APR 2000

FILE 'HCAPLUS' ENTERED AT 12:11:31 ON 29 APR 2000

FILE 'WPIDS' ENTERED AT 12:11:31 ON 29 APR 2000

FILE 'IFICDB' ENTERED AT 12:11:31 ON 29 APR 2000

FILE 'USPATFULL' ENTERED AT 12:11:31 ON 29 APR 2000

PROCESSING COMPLETED FOR L12
PROCESSING COMPLETED FOR L59
PROCESSING COMPLETED FOR L56
PROCESSING COMPLETED FOR L51
PROCESSING COMPLETED FOR L53
L60         284 DUP IDE L12 L59 L56 L51 L53 (INCLUDES 62 SETS OF DUPLICATES)
                ANSWERS '1-20' FROM FILE MARPAT
                ANSWERS '21-104' FROM FILE HCAPLUS
                ANSWERS '105-195' FROM FILE WPIDS
                ANSWERS '196-264' FROM FILE IFICDB
                ANSWERS '265-284' FROM FILE USPATFULL
```

With SET DUPORDER FILE records may be displayed at this point using formats unique to each file, since the records numbers are given for each file's answers.

Step 7: Group by Invention (FSORT)

From a multifile search it may be preferable to group the records by invention instead of by file, or by time. This may facilitate displaying selected records from each file for selected inventions.

File Synergy

Two records are considered to be describing the same invention if they have a common patent publication of filing application number.

FSORT is a no-cost STN feature.

FSORT:

```
=> FSORT L60

SET SMARTSELECT ON
SET COMMAND COMPLETED

SET HIGHLIGHTING OFF
SET COMMAND COMPLETED

SEL L60 1- PN,APPS
SELECT IS APPROXIMATELY 68% COMPLETE
L61         SEL L60 1- PN APPS :    1480 TERMS


'L61' DELETED
L61         284 FSO L60

             64 Multi-record Families   Answers 1-229
                  Family 1              Answers 1-16
                  Family 2              Answers 17-19
                  Family 3              Answers 20-21
                  Family 4              Answers 22-23
                  Family 5              Answers 24-25
                  Family 6              Answers 26-32
```

(continued on next page)

Family 7	Answers 33–55
Family 8	Answers 56–58
Family 9	Answers 59–62
Family 10	Answers 63–65
Family 11	Answers 66–68
Family 12	Answers 69–71
Family 13	Answers 72–75
Family 14	Answers 76–80
Family 15	Answers 81–84
Family 16	Answers 85–89
Family 17	Answers 90–92
Family 18	Answers 93–94
Family 19	Answers 95–96
Family 20	Answers 97–98
Family 21	Answers 99–100
Family 22	Answers 101–102
Family 23	Answers 103–104
Family 24	Answers 105–107
Family 25	Answers 108–109
Family 26	Answers 110–111
Family 27	Answers 112–114
Family 28	Answers 115–116
Family 29	Answers 117–121
Family 30	Answers 122–123
Family 31	Answers 124–125
Family 32	Answers 126–127
Family 33	Answers 128–130
Family 34	Answers 131–133
Family 35	Answers 134–147
Family 36	Answers 148–149
Family 37	Answers 150–152
Family 38	Answers 153–155
Family 39	Answers 156–158
Family 40	Answers 159–161
Family 41	Answers 162–163
Family 42	Answers 164–165
Family 43	Answers 166–168
Family 44	Answers 169–171
Family 45	Answers 172–176
Family 46	Answers 177–178
Family 47	Answers 179–182

(continued on next page)

```
                Family 48              Answers 183-187
                Family 49              Answers 188-190
                Family 50              Answers 191-196
                Family 51              Answers 197-198
                Family 52              Answers 199-201
                Family 53              Answers 202-203
                Family 54              Answers 204-205
                Family 55              Answers 206-208
                Family 56              Answers 209-212
                Family 57              Answers 213-214
                Family 58              Answers 215-216
                Family 59              Answers 217-218
                Family 60              Answers 219-221
                Family 61              Answers 222-223
                Family 62              Answers 224-225
                Family 63              Answers 226-227
                Family 64              Answers 228-229
            55 Individual Records      Answers 230-284
             0 Non-patent Records

SET SMARTSELECT OFF
SET COMMAND COMPLETED

SET HIGHLIGHTING DEF
SET COMMAND COMPLETED
```

Note that we have 284 records from multiple files, however only 119 inventions families; 64 have more than one record and 55 have a single record in the answer set.

Step 8: DISPLAY Records

For each invention one, or more, records may be displayed. This is easily controlled using the PFAM display option, along with any desired display format.

For ease of use, it is recommended to enter the complete DISPLAY PFAM command. The system will prompt for additional information.

Options may include (expert command mode is also given):

- One record for all inventions
  => D L# PFAM=1- 1 TI

- All records for selected inventions
  => D L# PFAM=n-m,x-y 1- IBIB ABS FQHIT

- All records from a selected file (only available at the expert mode command line)
  => D L# PFAM=1- 1- FROM HCAPLUS

Since records are being displayed from multiple files, it may be advantageous to set a default display format for each file and not include a display format in the DISPLAY command.

- HELP SET DFORMAT
- HELP SET FORMAT

PFAM display - one record per invention in TI format:

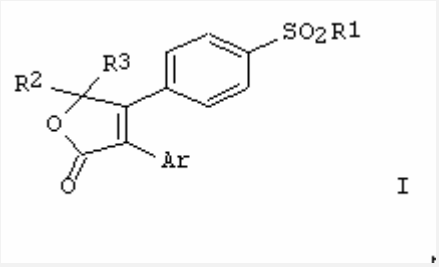
```
=> DISPLAY L61 PFAM
ENTER PATENT FAMILY NUMBER OR RANGE (1):1-
ENTER ANSWER NUMBER OR RANGE (1):1
ENTER DISPLAY FORMAT (FILEDEFAULT):TI

L61  ANSWER 1 OF 284  MARPAT  COPYRIGHT 2000 ACS       DUPLICATE 1
TI   Multibinding inhibitors of cyclooxygenase-2

L61  ANSWER 17 OF 284  MARPAT  COPYRIGHT 2000 ACS      DUPLICATE 2
TI   Preparation of diaryl-5-alkyl-5-methyl-2(5H)-furanones as selective
     cyclooxygenase-2 inhibitors

L61  ANSWER 20 OF 284  MARPAT  COPYRIGHT 2000 ACS      DUPLICATE 3
TI   Process of making 3-aryloxy-4-arylfuran-2-ones useful as inhibitors of
     COX-2
     •
     •
     •
```

PFAM display - all records for invention 2 in a mixed format:

```
=> DISPLAY L61 PFAM
ENTER PATENT FAMILY NUMBER OR RANGE (1):2
ENTER ANSWER NUMBER OR RANGE (1):1-
ENTER DISPLAY FORMAT (FILEDEFAULT):IBIB ABS FQHIT FHITSTR
YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):Y

L61  ANSWER 17 OF 284  MARPAT  COPYRIGHT 2000 ACS      DUPLICATE 2
ACCESSION NUMBER:        130:338014  MARPAT
TITLE:                   Preparation of diaryl-5-alkyl-5-methyl-2(5H)-furanones
                         as selective cyclooxygenase-2 inhibitors
INVENTOR(S):             Wang, Zhaoyin; Leger, Serge; Grimm, Erich
PATENT ASSIGNEE(S):      Merck Frosst Canada & Co., Can.
SOURCE:                  PCT Int. Appl., 58 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9923087	A1	19990514	WO 1998-CA998	19981027
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9896180	A1	19990524	AU 1998-96180	19981027
PRIORITY APPLN. INFO.:			US 1997-64409	19971030
			GB 1998-6430	19980325
			WO 1998-CA998	19981027

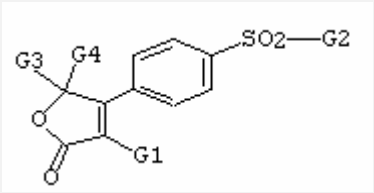
GI



I

AB The title compds. [I; Ar = (un)substituted Ph, pyridyl; R1 = NH2, Me; R2 = (un)substituted alkyl, cycloalkyl; R3 = (un)substituted alkyl, cycloalkyl; with the proviso that R2 and R3 are not the same] such as (5R)-3-(3,4-difluorophenyl)-5-ethyl-5-methyl-4-[4-(methylsulfonyl)phenyl]-2,5-dihydro-2-furanone, useful for treating COX-2 mediated diseases, were prepd. E.g., a 5-step synthesis of I [Ar = Ph; R1 = R3 = Me; R2 = Et] which showed IC50 of < 0.37 .mu.M against COX-2 (HWB), is given.

MSTR 1

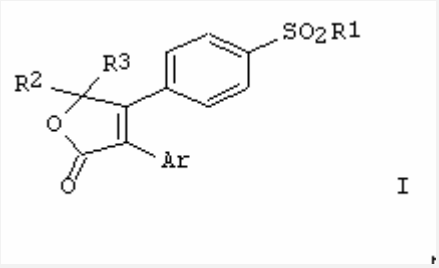


G1 = Ph (SO (1-2) G5)
G2 = Me
DER: or pharmaceutically acceptable salts
MPL: claim 1
NIE: G3 not = G4

L61 ANSWER 18 OF 284 HCAPLUS COPYRIGHT 2000 ACS FAMILY 2
ACCESSION NUMBER: 1999:311195 HCAPLUS
DOCUMENT NUMBER: 130:338014
TITLE: Preparation of diaryl-5-alkyl-5-methyl-2(5H)-furanones as selective cyclooxygenase-2 inhibitors
INVENTOR(S): Wang, Zhaoyin; Leger, Serge; Grimm, Erich
PATENT ASSIGNEE(S): Merck Frosst Canada & Co., Can.
SOURCE: PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9923087	A1	19990514	WO 1998-CA998	19981027 <—
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9896180	A1	19990524	AU 1998-96180	19981027 <—
PRIORITY APPLN. INFO.:			US 1997-64409	19971030 <—
			GB 1998-6430	19980325 <—
			WO 1998-CA998	19981027 <—

OTHER SOURCE(S): MARPAT 130:338014
GI



I

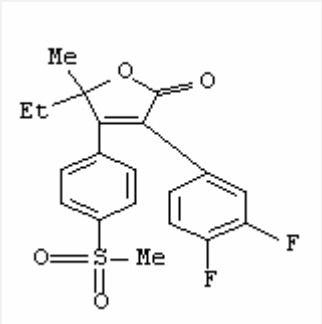
AB The title compds. [I; Ar = (un)substituted Ph, pyridyl; R1 = NH2, Me; R2 = (un)substituted alkyl, cycloalkyl; R3 = (un)substituted alkyl, cycloalkyl; with the proviso that R2 and R3 are not the same] such as (5R)-3-(3,4-difluorophenyl)-5-ethyl-5-methyl-4-[4-(methylsulfonyl)phenyl]-2,5-dihydro-2-furanone, useful for treating COX-2 mediated diseases, were prepd. E.g., a 5-step synthesis of I [Ar = Ph; R1 = R3 = Me; R2 = Et]

which showed IC50 of < 0.37 .mu.M against COX-2 (HWB), is given.

IT 223663-01-2P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of diaryl-5-alkyl-5-methyl-2(5H)-furanones as selective cyclooxygenase-2 inhibitors)

RN 223663-01-2 HCAPLUS

CN 2(5H)-Furanone, 3-(3,4-difluorophenyl)-5-ethyl-5-methyl-4-[4-(methylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



L61 ANSWER 19 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY2

ACCESSION NUMBER: 1999-326967 [27] WPIDS

DOC. NO. CPI: C1999-096725

TITLE: New furanone derivatives useful as selective cyclooxygenase -2 inhibitors.

DERWENT CLASS: B03

INVENTOR(S): GRIMM, E; LEGER, S; WANG, Z

PATENT ASSIGNEE(S): (MERI) MERCK FROSST CANADA INC

COUNTRY COUNT: 82

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9923087	A1	19990514 (199927)*		EN	58 <—
AU 9896180	A	19990524 (199940)			<—

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

W: AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GD GE HR HU ID IL IS JP KG KR KZ LC LK LR LT LV MD MG MK MN MX NO NZ PL RO RU SG SI SK SL TJ TM TR TT UA US UZ VN YU

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE	
WO 9923087	A1	WO 1998-CA998	19981027	<—
AU 9896180	A	AU 1998-96180	19981027	<—

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9896180	A	Based on	WO 9923087

PRIORITY APPLN. INFO: GB 1998-6430 19980325; US 1997-64409 19971030

AN 1999-326967 [27] WPIDS

AB WO 9923087 A UPAB: 19990714

NOVELTY - Diaryl-5-alkyl-5-methyl-2(5H) substituted furanone derivatives (I) useful as selective cyclooxygenase -2 are new.

DETAILED DESCRIPTION - Diaryl-5-alkyl-5-methyl-2(5H)-furanones (I) and their pharmaceutically acceptable salts are new:

Ar = phenyl or pyridyl optionally mono or disubstituted with halo;

R1 = NH2 or CH3;

R2 = 3-6C cycloalkyl or 1-6C alkyl optionally substituted with 3-6C cycloalkyl;

R3 = 3-6C cycloalkyl or 1-6C alkyl optionally substituted with 1-3 F; and where R2 is not the same as R3 on a given molecule

An INDEPENDENT CLAIM is included for compositions comprising therapeutically effective amounts of (I) with pharmaceutically acceptable carriers.

ACTIVITY - Anti-inflammatory; antipyretic; analgesic; anticancer; prostanoid induced smooth muscle contraction inhibitor.

MECHANISM OF ACTION - Selective cyclooxygenase-2 inhibitor.

A human whole blood assay was used to measure the selectivity of (5S)-3-(3,4-difluorophenyl)-5-ethyl-5-methyl-4-(4-(methylsulfonyl)phenyl)-2,5-dihydro-2-furanone (X) in inhibiting cyclooxygenase -2 activity by measuring the amount of thromboxane B2 produced following blood clotting (an index of cyclooxygenase -1 activity) and the amount of prostaglandin E2 released following the induction of cyclooxygenase -2 using lipopolysaccharide. (X) produced 46.4 micro mol of thromboxane B2 and 0.53 micro mol of prostaglandin E2.

USE - (I) can be used for the relief of pain, fever and inflammation in conditions such as rheumatic fever, viral infections (e.g. cold and influenza), back or neck pain, dysmenorrhea, headache, toothache, sprains and strains, myositis, neuralgia, synovitis, arthritis, osteoarthritis, gout, ankylosing spondylitis, bursitis, burns and other injuries.

(I) also inhibits tumor and metastatic growth in the treatment of cancer, and can be used to treat or prevent diabetic retinopathy and tumor

angiogenesis.

The compounds can also be used to prevent smooth muscle contractions caused by the synthesis of prostaglandins (e.g. premature labour, asthma and eosinophil related conditions), and for the treatment of osteoporosis, glaucoma and Alzheimer's disease. (I) can be used as an alternative to non-steroidal anti-inflammatory drugs in contra-indicated patients (e.g. those with a history of gastrointestinal lesions, kidney diseases or coagulation disorders, and those undergoing surgery).

ADVANTAGE - (I) have reduced gastrointestinal toxicity, renal side-effects, effects on bleeding times and induced asthma attacks in aspirin-sensitive patients compared with non-selective cyclooxygenase inhibitors. (I) have a shorter half life than comparable selective cyclooxygenase-2 inhibitors. (X) was found to have a half life in male Sprague-Dawley rats of 4.8 hours compared with that of more than 24 hours for 3-(4-fluorophenyl)-5,5-dimethyl-4-(4-(methylsulfonyl)phenyl)-2,5-dihydro-2-furanone (example 12 from WO9500501).

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PFAM display - all records from WPIDS for invention 1 in TI format:

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=> D L61  PFAM=1  1-  TI  FROM WPIDS

YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):Y

L61  ANSWER 2 OF 284  WPIDS COPYRIGHT 2000  DERWENT INFORMATION LTD  FAMILY1
TI   New multibinding compounds which are inhibitors or cyclooxygenase-2 and
     libraries of such compounds.

L61  ANSWER 3 OF 284  WPIDS COPYRIGHT 2000  DERWENT INFORMATION LTD  FAMILY1
TI   Multibinding topoisomerase inhibitor compounds.

L61  ANSWER 4 OF 284  WPIDS COPYRIGHT 2000  DERWENT INFORMATION LTD  FAMILY1
TI   New multibinding compounds with enhanced biological and/or therapeutic
     effect (e.g. increased specificity, potency, efficacy and duration of
     action), useful as antibacterial agents and in animal feed to improve
     growth of livestock.

L61  ANSWER 5 OF 284  WPIDS COPYRIGHT 2000  DERWENT INFORMATION LTD  FAMILY1
TI   New multibinding compounds, used to treat bacterial diseases in mammals
     e.g. those caused by Gram-positive and -negative bacteria such as S.
     aureus, E. coli and P. aeruginosa.
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L61 ANSWER 6 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Multibinding compounds with increased biological or therapeutic effect e.g. increased affinity, target selectivity and specificity, potency and efficacy, decreased toxicity, reduced side-effects, etc..

L61 ANSWER 7 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Antiviral compounds and pharmaceutically acceptable salts, have enhanced biological and/or therapeutic effects, avoid side-effects and incorporation into cellular DNA, and have improved selectivity.

L61 ANSWER 8 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI New multibinding compounds comprise ligands capable of binding to an enzyme, enzyme substrate or enzyme cofactor, useful for treating e.g. pathogenic bacterial diseases, psoriasis and multiple sclerosis.

L61 ANSWER 9 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI New multibinding compounds bind to phosphodiesterase V enzyme useful for treating e.g. erectile dysfunction.

L61 ANSWER 10 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Combinatorial synthesis of multimeric compounds for treating disease conditions.

L61 ANSWER 11 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Multibinding HMG-CoA reductase inhibitors.

L61 ANSWER 12 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Multibinding compounds useful as inhibitors of nitric oxide synthases for treating e.g. chronic inflammation, arthritis and sepsis.

L61 ANSWER 13 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI New multibinding compounds comprising 2-10 ligands covalently attached to one or more linkers, the ligands comprising inhibitors of H+/K+-ATPase.

L61 ANSWER 14 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI New multibinding macrolide antibiotic compounds and libraries of compounds.

L61 ANSWER 15 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Multibinding compounds which inhibit microsomal triglyceride transferase protein and libraries of such compounds.

L61 ANSWER 16 OF 284 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD FAMILY1
TI Paper tray for ink jet printer.