



CAS STNext® Coffee Lecture

LEVERAGE PATENT FAMILY DATA IN CAS STNEXT

Jim Brown, FIZ Karlsruhe

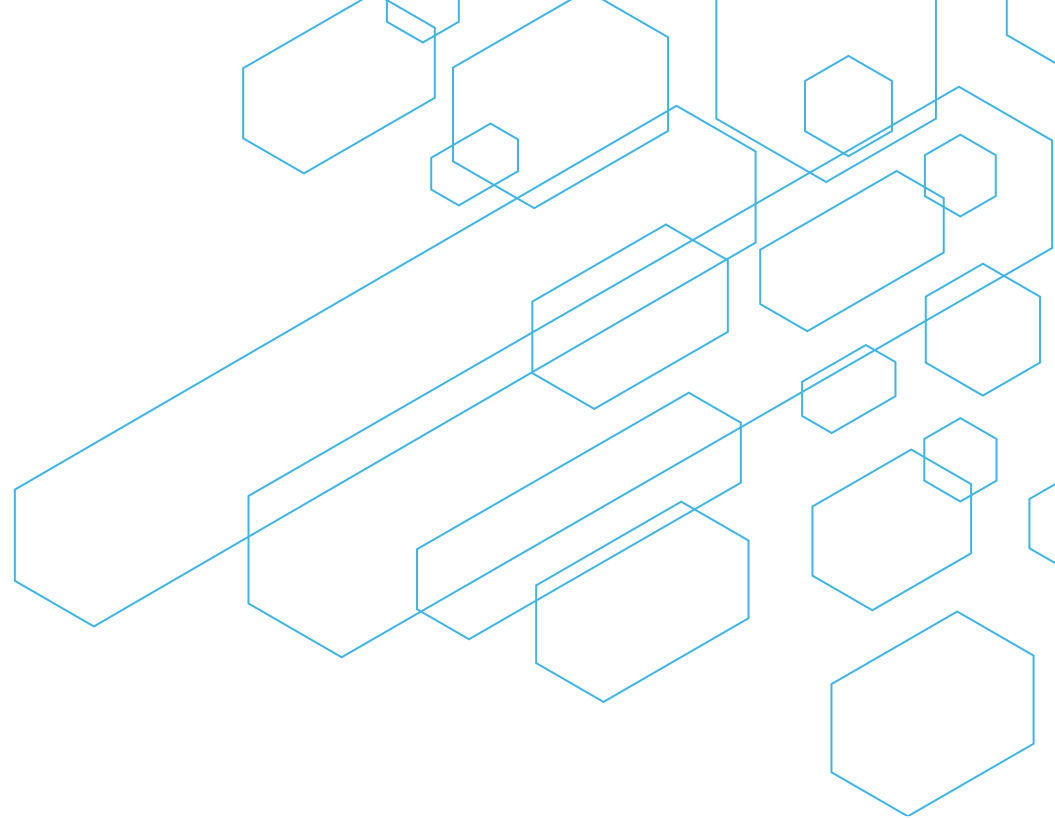
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 **FIZ Karlsruhe**
Leibniz Institute for Information Infrastructure

CAS 
A division of the
American Chemical Society

Agenda

- Patent family databases
 - (H/Z)CAplus
 - Derwent World Patents Index
 - INPAFAMDB
- Patent family discussion
- STNext Patent Family Manager



Patent Family databases

– CAplus

- Database containing patent family records and non-patent literature records
- Value-add indexing
- Duplication of some patent family records
 - Multiple basics

– Derwent World Patents Index

- Database containing patent family records
- Value-add indexing

– INPAFAMDB

- Database containing patent family records

Patent family discussion

- ‘Patent family’ is not a legal construct!
- A patent family is whatever the database producer says it is
- Starts with priority info, but ...
- Non-convention equivalents

Patent family discussion – database variations

- A patent family is whatever the database producer says it is
- Document coverage
- Patenting authority coverage
 - Various patent authorities
 - Start dates, timeliness
- Non-convention equivalents

Some patent family 'definitions'

- Simple patent family - Definition from the EPO means that all family members must have exactly the same set of active priorities
- Broad or extended patent family documents directly or indirectly linked via priority information
- Non-convention equivalents – does not share priority information, but database producer 'decides' it belongs with a patent family

CAplus patent family record for US 20200071306

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2024 ACS on STN
PI

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2020044266	A1	20200305	WO 2019-IB57259	20190828
CA 3110601	A1	20200305	CA 2019-3110601	20190828
CA 3110601	C	20230905		
US 20200071306	A1	20200305	US 2019-16553818	20190828
US 11254660	B2	20220222		
BO 12814	A	20200521	BO 2019-145	20190828
TW I718644	B	20210211	TW 2019-130771	20190828
AU 2019329884	A1	20210311	AU 2019-329884	20190828
AU 2019329884	B2	20220127		
KR 2021053929	A	20210512	KR 2021-7009415	20190828
KR 2614808	B1	20231219		
CR 20210110	A	20210513	CR 2021-110	20190828
BR 112021003039	A2	20210518	BR 2021-112021003039	20190828
CN 112955147	A	20210611	CN 2019-80071389	20190828
EP 3843740	A1	20210707	EP 2019-783644	20190828
JP 2021535126	T	20211216	JP 2021-510174	20190828
JP 7161605	B2	20221026		
RU 2776369	C1	20220719	RU 2021-104813	20190828
MX 2021002428	A	20230102	MX 2021-2428	20190828
AR 116046	A1	20210325	AR 2019-102476	20190830
PY 2019072032	A	20210603	PY 2019-72032	20190830
VE 2019000529	A	20220217	VE 2019-529	20190902
ZA 2021001090	A	20220629	ZA 2021-1090	20210217
CO 2021002230	A2	20210308	CO 2021-2230	20210223
CL 2021000491	A1	20210820	CL 2021-491	20210226
US 20220023299	A1	20220127	US 2021-17498256	20211011

Unique to CAplus

In INPAFAMDB but not in DWPI

In DWPI but not in INPAFAMDB

DWPI patent family record for US 20200071306

```
L2 ANSWER 1 OF 1 WPINDEX COPYRIGHT 2024 CLARIVATE on STN
PI US 20200071306 A1 20200305 (2020028)* EN 65[24]
WO 2020044266 A1 20200305 (2020030) EN
AU 2019329884 A1 20210311 (2021022) EN
CA 3110601 A1 20200305 (2021024) EN
AR 116046 A1 20210325 (2021035) ES
KR 2021053929 A 20210512 (2021040) KO
BR 112021003039 A2 20210518 (2021047) EN
TW 2020026292 A 20200716 (2021049) ZH
CN 112955147 A 20210611 (2021052) ZH
EP 3843740 A1 20210707 (2021056) EN
TW I718644 B 20210211 (2021058) ZH
SG 11202101503 A1 20210330 (2021061) EN
JP 2021535126 T 20211216 (2021102) JA 94
AU 2019329884 B2 20220127 (2022009) EN
PH 12021550339 A1 20211004 (2022016)# EN
US 11254660 B2 20220222 (2022017) EN
RU 2776369 C1 20220719 (2022059) RU
ZA 2021001090 A 20220629 (2022061) EN
JP 7161605 B2 20221026 (2022088) JA
HK 40055015 A0 20220304 (2023003) EN
MX 398705 B 20230102 (2023021) ES
MX 2021002428 A1 20230102 (2023039) ES
IL 281093 A 20210429 (2023070) EN
CA 3110601 C 20230905 (2023075) EN
KR 2614808 B1 20231219 (2023104) KO
UZ 20210107 B 20220831 (2024040) UZ
ID 2021006913 A1 20210816 (2024047) ID
```

Unique to DWPI

In INPAFAMDB but not CAplus

INPAFAMDB patent family record for US 20200071306

L3	ANSWER 1 OF 1	INPAFAMDB	COPYRIGHT 2024 EPO/FIZ KA on STN
PI	AR 116046	A1	20210325
	AU 2019329884	A1	20210311
	AU 2019329884	B2	20220127
	BR 112021003039	A2	20210518
	CA 3110601	A1	20200305
	CA 3110601	C	20230905
	CL 2021000491	A1	20210820
	CN 112955147	A	20210611
	CO 2021002230	A2	20210308
	CR 2021000110	A	20210513
	DO 2021000036	A	20210415
	EA 2021090367	A1	20210621
	EC 2021012501	A	20210331
	EP 3843740	A1	20210707
	IL 281093	A	20210429
	JP 2021535126	A	20211216
	JP 7161605B	B2	20221026
	KR 2021053929	A	20210512
	KR 2614808	B1	20231219
	MA 53496	A	20211208
	MX 2021002428	A	20230102
	PH 12021550339	A1	20211004
	SG 11202101503	A	20210330
	TW 2020026292	A	20200716
	TW I718644	B	20210211
	US 20220023299	A1	20220127
	US 20200071306	A1	20200305
	US 11254660	B2	20220222
	UY 38351	A	20200331
	WO 2020044266	A1	20200305
	ZA 2021001090	B	20220629

Unique to INPAFAMDB

In CAPlus but not DWPI

In DWPI but not CAPlus

Note

- US20220023299 is in DWPI but it stands alone; it is not part of ‘the other’ patent family

```
=> S US20220023299/PN

L1          1 US20220023299/PN

=> D BIB

L1  ANSWER 1 OF 1  WPINDEX COPYRIGHT 2024  CLARIVATE on STN
AN  2022-17304X [2022024]  WPINDEX Full-text
CR  2020-23879A
TI  Reducing e.g. point in severity of nonalcoholic fatty liver disease
    comprises administering ethoxypyridin-oxypyridin-tetrahydrofuran-
    pyrimidine-carboxamide, in combination with
    isopropyl-oxo-tetrahydrospiroindazole-piperidine-carbonyl-methoxypyridin-
    benzoic acid
DC  B02; B03; B07
IN  ESLER W P; ROSS T T
PA  (PFIZ-C) PFIZER INC
CYC 1
PI  US 20220023299  A1 20220127 (2022024)* EN
ADT  US 20220023299  A1  US 2021-498256  20211011;  US 20220023299  A1  Cont of
     US 2019-553818  20190828
PRAI US 2021-498256  20211011
     US 2019-553818  20190828
```

Derwent considers this document to NOT be part of the patent family for US 20200071306 because it has unique priority information.

FSEARCH on CAS STNext

- Uses an L number containing patent numbers
- Selects patent numbers, application numbers, and priority numbers and searches them in that database
- Works iteratively until two consecutive iterations give the same number of answers
- Performs FSORT to group records together

FSEARCH example in DWPI

```
=> S US20200071306/PN

L1          1 US20200071306/PN

=> FSEARCH L1

*** ITERATION 1 ***

SET SMARTSELECT ON
SET COMMAND COMPLETED

SET HIGHLIGHTING OFF
SET COMMAND COMPLETED

SET AUDIT OFF
SET COMMAND COMPLETED

SEL L1 1- PN,APPS
L2          SEL L1 1- PN APPS :      47 TERMS

SEA L2
L3          2 L2
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*** ITERATION 2 ***

SEL L3 1- PN,APPS
L2          SEL L1 1- PN APPS :      49 TERMS

SEA L2
L3          2 L2

FSORT L3
L4          2 FSO L3

          1 Multi-record Family      Answers 1-2
          0 Individual Records
          0 Non-patent Records
```

FSEARCH example in DWPI

```
L4 ANSWER 1 OF 2 WPINDEX COPYRIGHT 2024 CLARIVATE on STN FAMILY 1
PI US 20220023299 A1 20220127 (2022024)* EN

L4 ANSWER 2 OF 2 WPINDEX COPYRIGHT 2024 CLARIVATE on STN FAMILY 1
PI US 20200071306 A1 20200305 (2020028)* EN 65[24]
WO 2020044266 A1 20200305 (2020030) EN
RW: EA OA BW GH GM KE LR LS MW MZ NA RW SD SL ST SZ TZ UG ZM ZW AL AT
    BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LT LU LV MC
    MK MT NL NO PL PT RO RS SE SI SK SM TR
W: AE AG AL AM AO AT AU AZ BA BB BG BH BN BR BW BY BZ CA CH CL CN CO
    CR CU CZ DE DJ DK DM DO DZ EC EE EG ES FI GB GD GE GH GM GT HN HR
    HU ID IL IN IR IS JO JP KE KG KH KN KP KR KW KZ LA LC LK LR LS LU
    LY MA MD ME MG MK MN MW MX MY MZ NA NG NI NO NZ OM PA PE PG PH PL
    PT QA RO RS RU RW SA SC SD SE SG SK SL SM ST SV SY TH TJ TM TN TR
    TT TZ UA UG US UZ VC VN ZA ZM ZW
AU 2019329884 A1 20210311 (2021022) EN
CA 3110601 A1 20200305 (2021024) EN
AR 116046 A1 20210325 (2021035) ES
KR 2021053929 A 20210512 (2021040) KO
BR 112021003039 A2 20210518 (2021047) EN
TW 2020026292 A 20200716 (2021049) ZH
CN 112955147 A 20210611 (2021052) ZH
EP 3843740 A1 20210707 (2021056) EN
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT
    LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR BA ME KH MA MD TN
TW I718644 B 20210211 (2021058) ZH
SG 11202101503 A1 20210330 (2021061) EN
JP 2021535126 T 20211216 (2021102) JA 94
AU 2019329884 B2 20220127 (2022009) EN
PH 12021550339 A1 20211004 (2022016)# EN
US 11254660 B2 20220222 (2022017) EN
RU 2776369 C1 20220719 (2022059) RU
ZA 2021001090 A 20220629 (2022061) EN
JP 7161605 B2 20221026 (2022088) JA
HK 40055015 A0 20220304 (2023003) EN
MX 398705 B 20230102 (2023021) ES
MX 2021002428 A1 20230102 (2023039) ES
IL 281093 A 20210429 (2023070) EN
CA 3110601 C 20230905 (2023075) EN
KR 2614808 B1 20231219 (2023104) KO
UZ 20210107 B 20220831 (2024040) UZ
ID 2021006913 A1 20210816 (2024047) ID
```

Considerations

- If you only need to see an ‘invention’ once, TRANSFER PNs from first database to second database, NOT out set
- May lose unique patent numbers with this approach
- Capture every possible document in a ‘patent family’, it is best to check all three databases
- DUP IDE to merge sets together
- Use Patent Family Manager to family sort records

Finding unique inventions

=> FILE HCAPLUS

=> S PFIZER/PA AND 2024/PY.B

7224 PFIZER/PA

1549805 2024/PY.B

L1 67 PFIZER/PA AND 2024/PY.B

=> FILE WPIN

=> S PFIZER/PA AND 2024/PY.B

7845 PFIZER/PA

2385811 2024/PY.B

L2 74 PFIZER/PA AND 2024/PY.B

=> TRA L1 PN 1-

L3 TRANSFER L1 1- PN : 93 TERMS

L4 63 L3

L5 QUE TERMS FROM L3 WITH NO HITS: 16 TERMS

=> S L2 NOT L4

L6 12 L2 NOT L4

DUP IDE, Patent Family Manager

=> FILE INPAFAMDB

=> S PFIZER/PA AND 2024/PY.B

9871 PFIZER/PA
2444778 2024/PY.B
(2024/PY.B)

L7 61 PFIZER/PA AND 2024/PY.B

=> SET DUPORDER FILE

SET COMMAND COMPLETED

=> DUP IDE L2 L1 L7

L8 202 DUP IDE L2 L1 L7 (INCLUDES 62 SETS OF DUPLICATES)
ANSWERS '1-74' FROM FILE WPINDEX
ANSWERS '75-141' FROM FILE HCAPLUS
ANSWERS '142-202' FROM FILE INPAFAMDB

History Project CAS Lexicon Databas

Session

2024/PY.B

Entered WPINDEX 11:02:25 ON 03 AUG 2024

L2 74 S PFIZER/PA AND 2024/PY.B

Entered HCAPLUS 11:02:36 ON 03 AUG 2024

L3 TRA L1 1- PN : 93 TERMS

Entered WPINDEX 11:02:38 ON 03 AUG 2024

L4 63 SEA L3

L5 QUE TERMS FROM L3 WITH NO HITS: 16 TERMS

L6 12 S L2 NOT L4

Entered INPAFAMDB 11:03:08 ON 03 AUG 2024

L7 61 S PFIZER/PA AND 2024/PY.B

Entered Multiple files 11:04:12 ON 03 AUG 2024

L8 202 DUP IDE L2 L1 L7 (INCLUDES 62 SETS OF DUPLICATES)

Create an Alert

Patent Family Manager

STNext Patent Family Manager

Patent Family Manager

- Extract the first member basics from each patent family *(limit 5000 answers)*
- Include Non-patent Answers
- Remove twin multiple basics from patent families in CA/CAPlus *(limit 5000 answers with Chemical Indexing Equivalent tag)*
- Custom Display Format *(limit 5000 answers)*

Patent Family Manager

- Extract the first member basics from each patent family *(limit 5000 answers)*
- Remove twin multiple basics from patent families in CA/CAPlus *(limit 5000 answers with Chemical Indexing Equivalent tag)*
- Custom Display Format *(limit 5000 answers)*

First Member of Each Family

Ex: bib abs

Additional Member of Each Family

Ex: ti an

STNext is unable to provide cost estimates for this action.

 Continue without an estimate

STNext Patent Family Manager

Patent Family Manager ✕

Extract the first member basics from each patent family *(limit 5000 answers)*

Remove twin multiple basics from patent families in CA/CAPlus *(limit 5000 answers with Chemical Indexing Equivalent tag)*

Custom Display Format *(limit 5000 answers)*

First Member of Each Family

Ex: bib abs

Additional Member of Each Family

Ex: ti an

STNext is unable to provide cost estimates for this action.

Continue without an estimate

STNext Patent Family Manager

64 Multi-record Families	Answers 1-188
Family 1	Answers 1-3
Family 2	Answers 4-6
Family 3	Answers 7-13
Family 4	Answers 14-16
Family 5	Answers 17-19
Family 6	Answers 20-22
Family 7	Answers 23-25
Family 8	Answers 26-28
Family 9	Answers 29-31
Family 10	Answers 32-34
Family 11	Answers 35-37
Family 12	Answers 38-40
Family 13	Answers 41-43
Family 14	Answers 44-46
Family 15	Answers 47-49
Family 16	Answers 50-52
Family 60	Answers 179-180
Family 61	Answers 181-182
Family 62	Answers 183-184
Family 63	Answers 185-186
Family 64	Answers 187-188
14 Individual Records	Answers 189-202
0 Non-patent Records	

STNext Patent Family Manager – STN Family 1

L9 ANSWER 1 OF 202 WPINDEX COPYRIGHT 2024 CLARIVATE on STN FAMILY 1
AN 2024-724415 [2024060] WPINDEX [Full-text](#)
TI Treating or preventing Type 1 diabetes by administering Janus protein tyrosine kinase (JAK) 1 inhibitor or JAK3/tyrosine-protein kinase inhibitor
DC B02; B04
IN BANFIELD C; GALE J; VINCENT M S
PA (PFIZ-C) **PFIZER INC**
CYC 139
PI **WO 2024150110** **A1 20240718 (2024060)* EN 49[12]**
ADT **WO 2024150110** A1 **WO 2024-IB50163** 20240108
PRAI **US 2023-479496P** 20230111
AB WO 2024150110 A1 UPAB 20240729
NOVELTY - Method for the treatment or prevention of Type 1 diabetes, involves administering Janus protein tyrosine kinase 1 (JAK1) or JAK3/tyrosine-protein kinase (TEC) inhibitor to a patient or subject.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) a method of determining whether a patient or subject is a candidate for a treatment or receives ongoing treatment, comprising determining, via a test or screen, whether the patient or subject has hemoglobin A1C (HbA1C) levels within the currently recommended American Diabetes Association age-specific target range in the absence of clinically significant or severe hypoglycemia or diabetic ketoacidosis; and
(2) a method of treating and/or preventing Type 1 diabetes, comprising administering abrocitinib and an additional therapy to a subject.

L9 ANSWER 2 OF 202 HCAPLUS COPYRIGHT 2024 ACS on STN FAMILY 1
PI
PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2024150110 **A1** **20240718** **WO 2024-IB50163** **20240108**
L9 ANSWER 3 OF 202 INPAFAMDB COPYRIGHT 2024 EPO/FIZ KA on STN FAMILY
DUPLICATE 1
PI **WO 2024150110** A1 20240718

STNext Patent Family Manager – Individual record

L9 ANSWER 200 OF 202 HCAPLUS COPYRIGHT 2024 ACS on STN

AN 2024:610519 HCAPLUS Full-text

TI Glp-1 receptor agonists

IN Aspnes, Gary Erik; Futatsugi, Kentaro; Edmonds, David James; Huard, Kim; Curto, Jhon M.; Griffith, David A.; Bagley, Scott W.; Flanagan, Mark E.; Limberakis, Chris

PA **Pfizer** Inc., Honduras

SO Patent Document

CODEN: XXXXAM

DT Patent

LA Spanish

FAN.CNT 1

PI

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HN 2020001768	A	20240227	HN 2020-1768	20201211

PRAI HN 2020-1768 20201211

AB Provided herein are 6-carboxylic acids of benzimidazoles and 4-aza-, 5-aza- and 7aza-benzimidazoles as GLP-1R agonists, processes for making such compounds, and methods comprising administering such compounds to a mammal in need thereof. .

As of August 3 2024, this document does not appear in DWPI or INPA.

Summary

- STNext has multiple patent family databases, each with their own definition of what a patent family is
- Check multiple databases for comprehensiveness
- Use STNext Patent Family Manager to manage multiple database searches to pull related documents together

Between problems
and progress
are connections
that matter



CONTACT

CAS

help@cas.org
cas.org

EMEA Help

EMEAhelp@cas.org
stn-international.de