



Quality Insights

Patentcloud Quality Insights Annotation Report

Celgene Corporation v. Sandoz Inc.

DNJ-3-18-cv-11026

Focus on: U.S. Pat. No. 6,962,940

Filing date: Jun. 26, 2018

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Map claims to specification and file wrapper

Map claims to specification - '940

Which claim terms are or are not in the specification?

Claim Analysis > Claim# 1

Find relevant specification content as intrinsic evidence for claim term interpretation

22 Terms Identified in This Claim [Click to Select Terms](#)

Select Text

Highlight text from within the claim with your cursor and click on the tooltip "Select Terms" to find references in the Specification.

Claim# 1

A method of **treating diseases or disorders ameliorated by the inhibition of PDE4** in a **patient** which comprises **administering** to a **patient** in need of such **treatment a therapeutically effective amount of** **pure (+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonyl-ethyl]-4-acetylaminisoindolin-1(3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate** thereof.

Claim Analysis finds these terms in the spec:
**"3-dione", "pharmaceutically acceptable prodrug", "polymorph",
 "salt", "solvate",** as well as other terms that are highlighted in red.

Map claims to specification - '940

Which claim terms are or are not in the specification?

Claim Analysis > Claim# 1
Find relevant specification content as intrinsic evidence for claim term interpretation

22 Terms Identified in This Claim [Click to Select Terms](#)

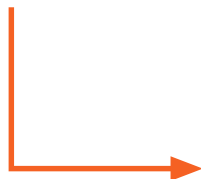
Select Text	Claim# 1
Highlight text from within the claim with your cursor and click on the tooltip "Select Terms" to find references in the Specification.	A method of treating diseases or disorders ameliorated by the inhibition of PDE4 in a patient which comprises administering to a patient in need of such treatment a therapeutically effective amount of Select Terms pure (+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonyl-4-acetylaminoindoline-1,3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate thereof.

Review the selected claim element and see how it is defined in the patent specification and related figures.

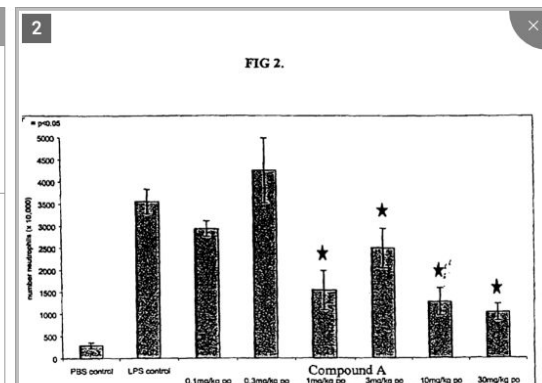
Selected elements of '940 Claim 1

Selected elements of Claim '1 in Spec

Figures of '940



Select Text	Content
<p>3-dione, or a pharmaceutically acceptable prodrug</p> <p>The selected clause includes the following keywords:</p> <ul style="list-style-type: none"> acceptable (3) pharmaceutically (3) prodrug (2) 3-dione (3) 	<p>[0016] The invention further encompasses pharmaceutical compositions and single unit dosage forms comprising an enantiomer of 2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonyl-4-acetylaminoindoline-1,3-dione] and pharmaceutically acceptable polymorphs, prodrugs, salts, hydrates, clathrates, and solvates thereof.</p> <p>[0010] This invention relates to methods of treating diseases and disorders utilizing an enantiomer of a substituted phenethylsulfone compound and pharmaceutically acceptable salts, hydrates, solvates, clathrates, prodrugs and polymorphs thereof and methods for reducing the level of cytokines and their precursors in mammals. The invention also relates to pharmaceutical compositions comprising an enantiomer of 2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonyl-4-</p>



Map claims to specification and Complaint - '940

Does the allegedly infringing product element fall within or outside the patent's scope?

Select Text

3-dione or a pharmaceutically acceptable product

The selected clause includes the following keywords:

acceptable (3)

pharmaceutically (3)

product (2)

3-dione (3)

Content

[0016] The invention further encompasses pharmaceutical compositions and single unit dosage forms comprising an enantiomer of 2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione and pharmaceutically acceptable polymorphs, products, salts, hydrates, clathrates, and solvates thereof.

[0010] This invention relates to methods of treating diseases and disorders utilizing an enantiomer of a substituted phenethylsulfone compound and pharmaceutically acceptable salts, hydrates, solvates, clathrates, products and polymorphs thereof and methods for reducing the level of cytokines and their precursors in mammals. The invention also relates to pharmaceutical compositions comprising an enantiomer of 2-[1-(3-ethoxy-

2

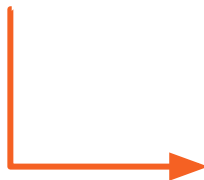
FIG. 2

Compound	Relative Potency (vs. 100 μg)
1	~3800
2	~3000
3	~4500
4	~1800*
5	~2500*
6	~1200*

With the claim scope interpretation from **Claim Analysis**, verify your findings against the complaint.

Answer the question:

Does the alleged Invention element fall within or outside the patent's scope?



56. The '940 Patent includes claims that recite methods of administering (+)-2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione.

57. On information and belief, Sandoz's Infringing ANDA Products contain (+)-2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione.

Map claims to the file wrapper - '940

Which claim terms are in the file wrapper(i.e. examiner's opinion) ?

Disclosure Rate by Prior Art

Claims	Disclosure by Single Reference		Disclosure by Multiple References	
	Prosecution History	Post-Grant	Prosecution History	Post-Grant
<input checked="" type="checkbox"/> #1	50%	0%	50%	0%
<input checked="" type="checkbox"/> #12	50%	0%	50%	0%
<input type="checkbox"/> #21	0%	0%	0%	0%

Claim# 1

A method of treating diseases or disorders ameliorated by the inhibition of PDE4 in a patient which comprises administering to a patient in need of such treatment a therapeutically effective amount of stereomerically pure (+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate thereof.

[Confirm](#)

From **Claim Insights**, review how the asserted claims were disclosed by the prior art found by the examiner during prosecution and post-grant proceedings.

A higher percentage means more claim elements were disclosed by the prior art.

Claim Insights Summary Table > Claim Table (Claim# 1) | Select A Claim 1 12 **switch between claims**

How is each claim element disclosed by cited prior art? Click numbers to find detailed comparison.

i The percentage "%" indicates how many keywords in an element being disclosed by a specific references. [Click](#) to find comprehensive explanation of calculation.

All **Prosecution history** **Post-Grant** Responded prior arts only

Claims	Prior Art Ref. (z)
#1.01 A (57%)	US6020358
	50%

Disclosure Rate by Prior Art

Map claims terms to the file wrapper - '940

Why was this patent granted? Which claims were amended and how did the scope change?

Claim Insights Summary Table > Claim Table (Claim# 1) > Select A Claim 1 12

How is each claim element disclosed by cited prior art? Click numbers to find detailed comparison.

The percentage % indicates how many keywords in an element being disclosed by a specific references. [Click to find comprehensive explanation of calculation.](#)

All Prosecution history Post-Grant Responded prior arts only

Claims	Prior Art Ref. (z)
#1.01 (A) (57%)	US6020358 50%

Claim Insights Summary Table > Claim Table (Claim# 1) > Claim Element Page (Claim# 1.01) > US6020358 > Select A Claim 1 12

Side-by-side comparison; Claim terms not found may imply the reasons for patentability.

1.01 Find 1 Result(s) **Rejection from Examiner** Filter Clear All

Prior Art Ref. [A] [US6020358]

20041229-CTNE Prosecution History 35 U.S.C. § double patenting

Rejection

the disclosure of muller et al that teach a method of inhibiting pde lv which comprises administering an effective amount of a compound according to a claim 1 (wherein y is c = o, r', r2, r3 are hydrogen, r4 is -nr3r', r5 and r* are alkoxy of 1 to 4 carbon, r7 is alkyl, r' is hydrogen, r9 is 4ior ' and r' is alkyl), which would easily place applicants invention in possession of the public at the time of applicants invention was filed.

therefore, in the instant case, one skilled in the art would be motivated to choose to treat diseases or disorders using the same mechanism of inhibition of pde4, with a similar stereomerically pure(+)-2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoinsole-1,3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate thereof.

moreover, any other differences are but obvious technical modifications, which would be apparent to one skilled in the chemical art that can use similar methods of treating diseases ameliorated by the inhibition of an enzyme including pde4, unless unobvious or unexpected results can be shown.

Remarks 20050407-REM

earlier patent in comparison to the claims at hand. here, the '358 patent generally encompasses the use of a genus of compounds, while the claims at hand mute the use of a specific isomer of a single racemate. indeed, claim 18 of the '358 patent recites a method of inhibiting pde lv which comprises administering an effective amount of a compound according to claim 1 having the formula:Inch;~ wherein r'-r7 are various substituents. in contrast, the claims of the present invention encompass methods of treating diseases or disorders using a therapeutically effective amount of stereomerically pure(+)-2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoinsole-1,3-dione, a single isomer of a generic compound among the plethora of compounds encompassed by the formula above. indeed, the genus of compounds recited by claim 1 in the '358 patent encompasses a large number of compounds. the examiner has not established that the '358 patent provides one of ordinary skill in the art with any suggestion or motivation to single out the specific racemate to which the claimed isomer belongs, much less the specific stereoisomer recited by the claims.2 it is well established that a specific chemical compound is patentably distinct from a genus that encompasses such a compound. see, e.g., in re baird, 16 f.3d 380, 383(fed.cir.1994) (the fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious). similarly, the use of a specific isomer can be patentably distinct from its racemate.

Terms not in the file wrapper

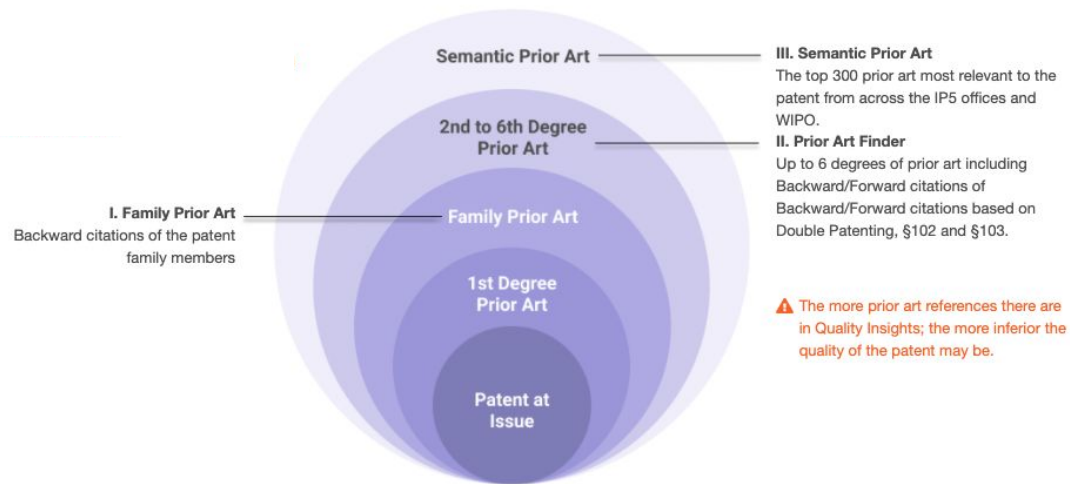
acceptable patient polymorph prodrug salt solvate treatment

Remark from Applicant

📌 All of the limitations of this asserted claim element in '940 were 50% known by (US6020358).

Answer the questions:
Why was this patent granted?

How does Quality Insights generate prior art?



Prior Art Finder

Prior Art Finder for '940

Review cited and citing patents of '940 from the first to the sixth degree

Filter by:

- Applicability
- Legal Basis (§102 or §103)
- Patent Office
- Legal Status

1st Degree Art
12

2nd Degree Art
28

N Degree Art
92

N Degree Art
Extend forward/backward citations from the Second Degree Art

[Discover prior art's similarity with claim chart format in seconds !](#)

KEEP Mode

Ranked By : Legal Basis (§102 first) |

US6962940B2

- 1st Degree (12)
- 2nd Degree (20)
- 3rd Degree (20)
- 4th Degree (20)
- 5th Degree (20)
- 6th Degree

6th Degree List

7	US20060160854A1	Ⓢ	Methods for the treatment of cachexia	PGPub - Granted	2005-11-17	2006-07-20	CELGENE CORP	(Pre-AIA) § 102(e)(1)
8	US7115557B2	Ⓢ	Use of certain drugs for treating nerve root ...	Lapsed	2002-08-22	2006-10-03	SCIATICON AB	(Pre-AIA) § 102(e)(2)
9	US20050131024A1	Ⓢ	Substituted 2-(2,6-dioxopiperidin-3-yl)-pht...	PGPub - Granted	2005-01-14	2005-06-16	MULLER GEORGE W	+2 (Pre-AIA) § 102(e)(1)
10	US6555374B1	Ⓢ	Multiple mesodermal lineage differentiatio...	Expired	2000-08-14	2003-04-29	ARTECEL SCIENCES INC	(Pre-AIA) § 102(e)(2)
11	US6709860B1	Ⓢ	Animal model	Lapsed	2000-06-06	2004-03-23	BIOVITRUM AB	(Pre-AIA) § 102(e)(2)
12	EP1077254A2	Ⓢ	Multiple mesodermal lineage differentiatio...	Abandoned Appl.	2000-08-21	2001-02-21	ZEN-BIO INC	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b)

Up to 6th Degree
Prior Art List

Family Prior Art

Family Prior Art of '940

Review prior art cited by and cited against the family counterparts when available

Simple Family

82

Backward Citation: Patent

111

Backward Citation: Non-Patent Literature

140

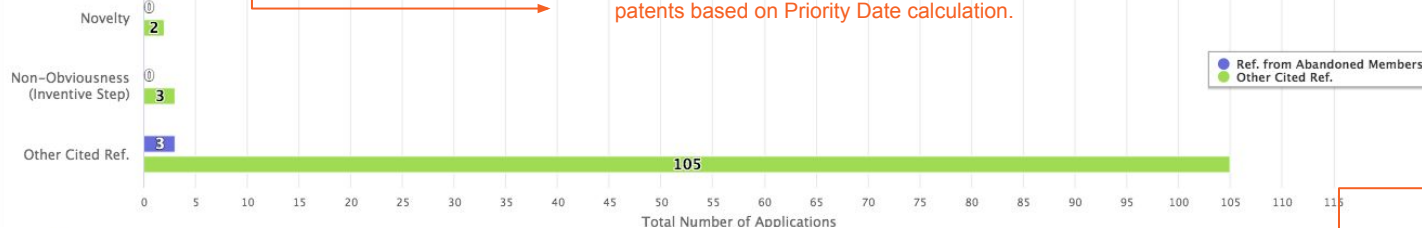
Backward Citation: Patent

Click on Cited Patents for Potential Prior Art

Categorized to indicate relevance; You can start from applicable references cited as novelty prior art

All References (111) **Applicable Only (92)**

Choose Applicable Only to find Applicable patents based on Priority Date calculation.



Prior Art List

KEEP Mode

Ranked By: Appl. Date |

<input type="checkbox"/>		#	Patent No.	Title	Legal Status	Appl. Date	Pub./Issue Date	Assignee (Std)	Applicability
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	EP0238044A2	Alkyl-substituted phenylcarbamate derivati...	PGPub - Granted	1987-03-17	1987-09-23	DAICEL CORP	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b)
<input type="checkbox"/>	<input type="checkbox"/>	2	US4885301A	Purinone derivatives which have bronchodil...	Lapsed	1988-01-27	1989-12-05	SMITH KLINE & FRENCH LA...	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)

Semantic Prior Art

Semantic Prior Art of '940

Review potential prior art ranked by concept similarity

Across IP5 and WIPO thanks to Patentcloud's proprietary algorithm

Semantic Prior Art

Most Relevant IP5 & WO 300 prior art references based on **Semantic Similarity** among the first claims and abstracts. [Change Scope](#) Select claim text or enter the desired text/keywords

Discover prior art's similarity with claim chart format in seconds! **Prior art references found (within the designated scope) that are deemed as having high semantic similarity will be starred with a ★**

KEEP Mode 3 are of high semantic similarity Ranked By : Relevance |

<input type="checkbox"/>	<input type="checkbox"/>	Ranking	Patent No.	<input type="checkbox"/>	★ Title	Legal Status ?	Appl. Date	Pub./Issue Date	Assignee (Std)	Applicability
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	US6020358A	<input checked="" type="checkbox"/>	★ Substituted phenethylsulfones and method ...	Expired	1998-10-30	2000-02-01	CELGENE CORP	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2	US6011050A	<input checked="" type="checkbox"/>	★ Substituted phenethylsulfones and method ...	Expired	1999-06-29	2000-01-04	CELGENE CORP	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3	WO2000/025777A1	<input checked="" type="checkbox"/>	★ SUBSTITUTED PHENETHYLSULFONES AN...	PCT End - NP	1999-10-19	2000-05-11	CELGENE CORP	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4	WO2001/034606A1	<input checked="" type="checkbox"/>	★ PHARMACEUTICALLY ACTIVE ISOINDOLIN...	PCT End - NP	2000-11-09	2001-05-17	CELGENE CORP	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	WO2001/047915A1	<input checked="" type="checkbox"/>	★ CYCLIC AMP-SPECIFIC PHOSPHODIESTER...	PCT End - NP	2000-12-15	2001-07-05	ICOS CORP	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(1)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	US6162830A	<input checked="" type="checkbox"/>	★ Benzenesulfonamide inhibitors of PDE-IV a...	Abandoned	2000-02-07	2000-12-19	WARNER-LAMBERT CO	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)

Semantic Prior Art of '940

Review potential prior art ranked by concept similarity

US6962940B2 [↗](#)

(+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione: methods of using and compositions thereof

Overview History Claim Analysis Claim Insights Family Prior Art Prior Art Finder **Semantic Prior Art** File Wrapper Search

[About Semantic Prior Art](#)

Semantic Prior Art

Most Relevant IP5 & WO 300 prior art references based on [Semantic Similarity](#) within the scope below. [Reset to Default](#)

Enter text to start searching for semantic prior art (English only)

+ Add text from claims

Submit

[Discover prior art's similarity with claim chart format in s](#)

Add text from claims ✕

Select A Claim 1 2 3 4 5 6 7 8 9 10 Next 10

A method of treating diseases or disorders ameliorated by the inhibition of PDE4 in a patient which comprises administering to a patient in need of such treatment a therapeutically effective amount of stereomerically pure (+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate thereof.

Add



adding text from claims to find more related Prior Art

Comparison tools

Prior Art Comparison (claim chart format)

What does this prior art say about the critical elements?

Disclosure Rate of Prior Art

1.01
Find 52 Result(s) | Disclosure Rate 50%
✎ ☰ ☰

Claim Element	US6020358A Content
<p>#1.01 A method of treating diseases or disorders ameliorated by the inhibition of PDE4 in a patient which comprises administering to a patient in need of such treatment a therapeutically effective amount of stereomerically pure (+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisindoline-1,3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate thereof.</p> <p>Keyword List 🔍</p> <ul style="list-style-type: none"> 3-dione (8) FW PA treatment (7) FW PA administering (5) FW PA 	<p>Specification</p> <p>[52] The compositions preferably are formulated in unit dosage form, meaning physically discrete units suitable as a unitary dosage, or a predetermined fraction of a unitary dose to be administered in a single or multiple dosage regimen to human subjects and other mammals, each unit containing a predetermined quantity of active material calculated to produce the desired therapeutic effect in association with a suitable pharmaceutical excipient. The compositions can be formulated so as to provide an immediate, sustained or delayed release of active ingredient after administration to the patient by employing procedures well known in the art.</p> <p>[62] 2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]isindoline-1,3-dione</p> <p>[64] 2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-5-nitro - isindoline-1, 3-dione</p> <p>[65] A stirred mixture of 1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethylamine (1.0 g, 3.7 mmol) and 4-nitrophthalic anhydride (706 mg, 3.66 mmol) was heated to melt for 6 min. The mixture was allowed to cool to room temperature. Chromatography of the resulting oil gave 2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-5-nitro - isindoline -1,3-dione as a solid (1.42 g, 87 % yield) : mp, 255.0 - 256.0 degree . C ; .sup.1 H NMR (CDCl.sub.3) ; delta . 1.47 (t, J=7 Hz, 3H, CH.sub.3) , 2.91 (s, 3H, CH.sub.3) , 3.71 (dd, J=4.2, 14.3 Hz, 1H, CHH) , 3.85 (2, 3H, CH.sub.3) , 4.10 (q, J=7 Hz, 2H, CH.sub.2) , 4.59 (dd, J=11.1, 14.1, Hz, 1H, CHH) , 5.94 (dd, J=4.1, 10.9 Hz, 1H, NCH) , 6.82 - 6.86 (m, 2H, Ar) , 7.09 - 7.14 (m, 2H, Ar) , 8.01 - 8.04 (m, 1H, Ar) , 8.56 - 8.65 (m, 1H, Ar) . .sup.13 C NMR (CDCl.sub.3) .delta . 14.67, 41.61 , 49.16, 53.99, 55.96, 64.54, 111.48, 112.39, 118.98, 120.48, 124.79, 128.73, 129.39, 133.06, 136.03, 148.71, 149.92, 151.79, 165.56, 165.74; Anal Calcd for C.sub.20 H.sub.20 N O.sub.8 S : C, 53.57; H, 4.50; N, 6.23 . Found : C, 53.59; H, 4.58; N, 5.88 .</p> <p>[66] 2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-5-aminoisindoline-1, 3-dione</p> <p>[67] A mixture of 2-[1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-5-nitro - isindoline -1,3-dione (600 mg, 1.33 mmol) and Pd / C (100 mg, 10 %) in ethyl acetate (40</p>

✎ Answer the question:
What does this prior art say about the Claim elements: "3-dione" ?

Discover prior art similarity with keywords (includes keyword stemming) mapped to the selected prior art reference Abstract, Claims, and Specification.

Prior Art Comparison (sample output)

Easily generate a table like below

	Claim	Claim-Term Interpretation	Semantic Prior Art - '358	3rd Degree Citation Prior Art - B
1	<p>A method of treating diseases or disorders ameliorated by the inhibition of PDE4 in a patient which comprises administering to a patient in need of such treatment a therapeutically effective amount of stereomerically pure (+)-2-[1-(3-Ethoxy-4-methoxyphenyl)-2-methylsulfonylethyl]-4-acetylaminoisoindoline-1,3-dione, or a pharmaceutically acceptable prodrug, polymorph, salt, or solvate thereof.</p>	Refer to Claim Analysis results	50%

System-identified keywords and key phrases
(highlighting of other keywords is available)

Results from claim to specification
and file wrapper mapping

Results from prior art comparison by
claim element

Prior Art downloads

Prior Art downloads

Select all

Export

Export

#	Patent No.	Title
<input checked="" type="checkbox"/>	1 CN1247662A	Dual use spea
<input checked="" type="checkbox"/>	2 EP0998105B1	Mobile teleph
<input checked="" type="checkbox"/>	3 JPH09-036932A	EXTERNAL R
<input checked="" type="checkbox"/>	4 JPH11-055358A	MOBILE RAD
<input checked="" type="checkbox"/>	5 US5317622	Ringling circuit for use in a telephone set f...



Download patent data in Excel or PDF format for Family Prior Art, Second Degree Prior Art, and/or Semantic Prior Art.

Prosecution and PTAB History

Key Events

Key Events - '940

1 Prosecution & 0 Post-Grant

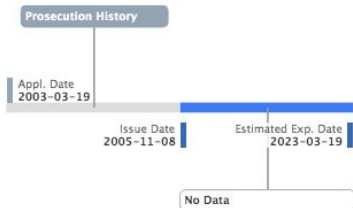
Event History 1	Family Status 82 Applications	Prior Art Status 484 Applications / 140 NPL References
--	--	--

of Family Counterparts and Legal Status

of Highly Relevant Prior Art References

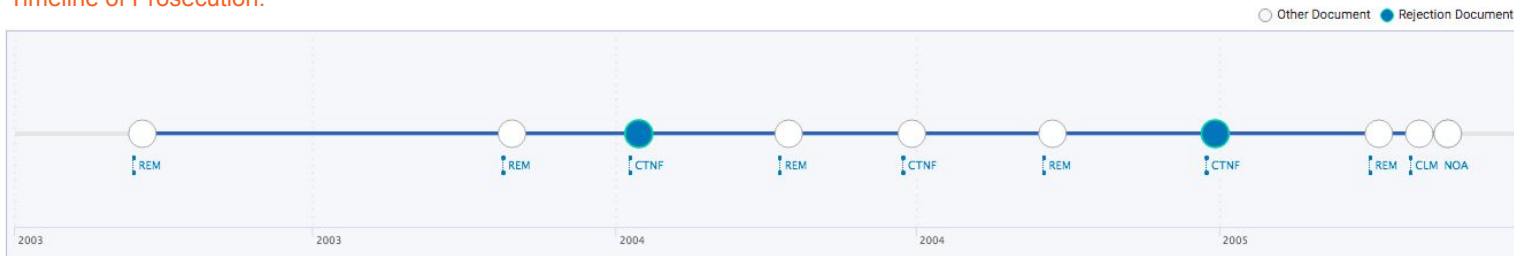
Event History | 1 Prosecution History / 0 Post-Grant

Validity challenges to a patent in its prosecution history and post-grant events



Legend	
Document Code	Document Description
CTNF	Non-final rejection
CLM	Claims
REM	Remarks

Timeline of Prosecution:



Key Events - '940

Prosecution History

10/392195 Prior Art Ref. | 0 Ref.

Check prior art cited and the legal basis of these challenges

Double Patenting | 1 Ref.

[US6020358](#)

§ 102 | 0 Ref.

§ 103 | 0 Ref.

Summary of 10/392195 History | 11 Event(s)

Clickable events for original OAs and their OCR version when available.

Direct links to Grounds,

Claims Highlighted and Prior Art Details

Data Last Updated on: 2021-01-28

Descriptions (Code)	Date	Prior Art Ref.
Notice of Allowance (NOA)	2005-05-19	
Notice of Allowance (NOA)	2005-05-19	
Claims (CLM)	2005-05-02	
Applicant Arguments/Remarks Made in an Amendment (REM) Claims (CLM)	2005-04-07	
Non-Final Rejection (CTNF)	2004-12-29	Grounds 2 ^
Legal Basis	Claims	Prior Art Ref.
double patenting	claim 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,25,26,27,28,29,30,31,32,33,34,56,58,59,60,61,62,63,64,65	US6020358
35 U.S.C. § 112	claim 19,25,26,27,28,29,30,31,32,33,34,56	
Applicant Arguments/Remarks Made in an Amendment (REM)	2004-09-21	

Prosecution and PTAB History Search

Patent File Wrapper Search

Directly discover details in the prosecution history and post-grant proceeding across all documents via a keyword search.

Cross-Document Search

[① About File Wrapper Search](#)

Enter keyword to find documents including specific legal basis or specific claim terms



Rejections, Remarks, and Notice of Allowance in Prosecution History | 13 Records

<input type="checkbox"/> Descriptions (Code)	Party	Date
<input type="checkbox"/> Notice of Allowance (NOA)	USPTO	2015-09-24
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-06-19
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2015-03-19
<input type="checkbox"/> Request for Continued Examination (RCEX)	Applicant	2015-03-03
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-03-03
<input type="checkbox"/> Final Rejection (CTFR)	USPTO	2014-11-03
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-10-15
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2014-07-15
<input type="checkbox"/> Request for Continued Examination (RCEX)	Applicant	2014-06-26
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-06-26
<input type="checkbox"/> Final Rejection (CTFR)	USPTO	2014-02-26
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<input type="checkbox"/> Notice of Allowance (NOA)	USPTO	2015-09-24
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-06-19
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2015-03-19
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Keywords (2)

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sensor (33) Clear All

flexible substrate (1) ▼

US9226311B2 - CTNF (2015-03-19)

13/284,674 6 / 18 90% + - ↻ ↗

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Art Unit: 2867

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the touch panel taught by Grant by adding drive or sense electrodes made of flexible conductive material as taught by Hotelling since the sensor traces provide level shifting from a low voltage level to a higher voltage level, thus providing a better signal-to-noise ratio for improved noise reduction purposes while the drive traces provide shielding for the sense traces.

Neither Grant nor Hotelling specifically teach wherein the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection.

However, Gray does teach wherein the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection (Fig. 2; [0063]: **A number of conductors forming rows and columns of a conductive pattern (e.g., indium tin oxide (ITO)) may be deposited on a substrate composed of polyester or other material on one or more layers of the touchscreen... the row and column oriented conductors may be disposed on the same layer...**; See also Miller US 5,089,672; Col. 2, lines 11-16; Col. 5, lines 1-20; Col. 5, lines 61-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Grant and Hotelling by including the conductive lines (rows and columns) taught by Gray for the purpose of "providing paths for signals traveling through the touchscreen" (See Gray; Abstract).

103) as being unpatentable over Grant et al. US 2008/0303792 A1 (previously cited and
*** PAGE 5 ***

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hereinafter Grant) in View of Hotelling et al. US 2008/0158183 A1 (previously cited and hereinafter Hotelling), in further View of Gray et al. US 2010/00451614 (previously cited and hereinafter Gray) and in further View of Frey et al. US 2009/0219257 (Newly cited and hereinafter Frey).

Regarding claim 1, Grant does teach an apparatus (Abstract) comprising:
a substantially flexible substrate (Abstract: flexible touch sensitive surface); and
a touch [0004], [0005], [0006], [0006], [0022], [0023], [0027], and [0071], e.g., flexible surface, flexible circuit, and capacitive touch [0004] which must be conductive to receive user input) disposed on the substantially flexible substrate (see at least Figs. 1A-C; [0009-0011]), configured to bend with the substantially flexible substrate (Figs. 1A-1C, 3 and the corresponding descriptions; [0003]).

Grant does not specifically teach the touch [0004] comprising drive or sense electrodes made of flexible conductive material.

However, Hotelling does teach a touch [0004] (Fig. 2a, 5 and the corresponding descriptions, and the Summary of the Invention, i.e., a touch [0004] comprises of row and column traces made of copper) comprising drive or sense electrodes (see at least Figs. 1 and 2a; [0008; 0030-0033]; claim 9; sense traces formed on a first side of a dielectric substrate; and drive traces formed on a second side of the substrate) made of flexible conductive material ([0008]; traces made of copper or other highly conductive metals running along the edge of the substrate).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the touch panel taught by Grant by adding drive or sense electrodes made of flexible conductive material as taught by Hotelling since the [0004] traces provide level shifting from a low voltage level to a higher voltage level, thus providing a better signal-to-noise ratio for improved noise reduction purposes while the drive traces provide shielding for the sense traces.

Neither Grant nor Hotelling specifically teach wherein the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection.

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