

12th November, 2020

The Controller of Patents
The Patent Office
CP 2, CP Block,
Sector V, Bidhannagar
Kolkata, West Bengal 700091
India

Re: REPRESENTATION U/S 25(1) OF THE PATENTS ACT – BY GANESH
ACHARYA AGAINST INDIAN PATENT APPLICATION NO.
602/KOLNP/2013 dated 07/09/2011
APPLICANT: ANACOR PHARMACEUTICALS INC.

Dear Sir,

We submit herewith a Representation under Section 25(1) of the Patents Act, 2005 along with Form 7A.

The Controller is requested to take the documents on record and proceed further in the matter and keep the Petitioner advised of each and every step taken in the matter.

We crave the leave of the Controller to submit additional documents or evidence or if necessary to support any of the averments in the representation as may be necessitated in the proceeding.

Lastly, we request the Controller to grant an opportunity of being heard before the above representation is finally decided.

Thanking you,



RAJESHWARI H.
AGENT FOR OPPONENT
RAJESHWARI AND ASSOCIATES

Encl:

- Form 7;
- Opposition; and
- List of documents

C.C.: DP Ahuja & Co.
Email: patents@dpahuja.com;

**BEFORE THE CONTROLLER OF PATENTS, THE PATENT OFFICE
BRANCH KOLKATA**

**IN THE MATTER of Section 25(1) of The Patents Act; 1970, as amended
up to The Patents (Amendment) Act, 2005**

AND

**IN THE MATTER of The Patents Rules, 2003 as amended by the Patents
(Amendment) Rules, 2016**

AND

**IN THE MATTER OF Indian Patent Application No. 602/KOLNP/2013
FILED BY ANACOR PHARMACEUTICALS INC.**

.....APPLICANT

AND

**IN THE MATTER OF REPRESENTATION BYWAY OF NOTICE OF
OPPOSITION UNDER SECTION 25(1) OF PATENTS ACT, 1970 FILED BY
GANESH ACHARYA**

.....OPPONENT

PRE-GRANT OPPOSITION BY GANESH ACHARYA

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6.	D3: Copy of WO2007146965 published on 12 th December, 2007	896-1073
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Dated this 12th day of November, 2020



RAJESHWARI H. IN/PA – 358
AGENT FOR THE OPPONENT
OF RAJESHWARI AND ASSOCIATES

To
The Controller of Patents
The Patent Office
Kolkata

FORM 7A
THE PATENTS ACT,
1970 (39 OF 1970)
AND
THE PATENTS RULES, 2003
REPRESENTATION FOR OPPOSITION TO GRANT OF PATENT
[See Rule 55]

I, **GANESH ACHARYA**, an Individual residing at, Flat No. 101, Mahakavi Bamamdada Karkad Palace, Belawali, Badlapur East, District-Thane, Maharashtra-421503, India, hereby give representation by way of opposition to the grant of patent in respect of application No: **602/KOLNP/2013** dated **07/09/2011** made by **ANACOR PHARMACEUTICALS INC**, on the grounds:

- i) **Section 25(1)(g)** -the complete specification does not sufficiently and clearly describe the invention.
- ii) **Section 25(1)(e)**- the invention lacks inventive step.
- iii) **Section 25(1)(f)** - the subject of application is not an invention within the meaning of this Act, under section 3(d) and 3(e) of the Indian Patent Act.
- iv) **Section 25(1)(h)**-the Applicant did not disclose information required by Section 8.

(Detailed grounds are set out in the Opposition as attached)

My address for service in India is:

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Mobile No: 9910206718

Dated this 12th day of November, 2020



RAJESHWARI H. IN/PA – 358
AGENT FOR THE OPPONENT
OF RAJESHWARI AND ASSOCIATES

To
The Controller of Patents
The Patent Office
Kolkata

**BEFORE THE CONTROLLER OF PATENTS PATENT OFFICE
BRANCH KOLKATA**

IN THE MATTER of Section 25(1) of The Patents Act; 1970, as amended up to The Patents (Amendment) Act, 2005

AND

IN THE MATTER of The Patents Rules, 2003 as amended by the Patents (Amendment) Rules, 2016

AND

IN THE MATTER OF Indian Patent Application No. 602/KOLNP/2013 FILED BY ANACOR PHARMACEUTICALS INC.

.....APPLICANT

AND

IN THE MATTER OF REPRESENTATION BYWAY OF NOTICE OF OPPOSITION UNDER SECTION 25(1) OF PATENTS ACT, 1970 FILED BY GANESH ACHARYA

.....OPPONENT

REPRESENTATION BY WAY OF OPPOSITION U/S 25(1)

1. The Opponent is a resident of India and is a person living with HIV, who has twice survived Tuberculosis (TB) ailment. Having survived the TB ailment and being aware of the issues faced by the TB patients, the Opponent started working on the access to treatment and medicines for persons living with TB. Towards, this end he works with civil society organisations across India on advocacy to ensure access to medicines relating to TB in particular by overcoming intellectual property barriers to access to medicines. He also engages with several persons living with TB, including drug-resistant TB (DR-TB) who faces challenges in accessing new DR-TB drugs and

Government mandated nutritional support. The Opponent has also worked with National and International organisations on issues of TB in India.

2. The Opponent is a PLHIV (People Living with HIV) network working extensively in the area of access to medicines. The Opponent's work includes but is not limited to service delivery, treatment literacy and community empowerment. The main focus and emphasis is advocating for access to medicines as they believe every individual should get treatment and no one should suffer and die due to lack of medicines. Of main concern to the Opponent, is the impact of product patent protection on access to effective and affordable tuberculosis medicines for people not just in India but across the developing world.
3. Cognisant of public health concerns, Parliament introduced certain provisions, while passing the Patents (Amendments) Act, 2005 to amend the Patents Act, 1970 (hereinafter referred to as the "Patents Act"), to ensure that patents are granted only for genuine inventions – which can either be product or processes only (refer definition of invention in S.2(1)(j) that states that 'invention means a new product or process...' and when read in conjunction with S.3(i), bring a complete bar to patenting of any method of treatment). The statute thus, does not allow patenting of medical use and also seeks to prevent "ever-greening", i.e. creation or extension of monopolies through patent terms by obtaining patents for minor or routine modifications.
4. The Opponents firmly believe that a proper application of the patentability standards set out in Section 3 as well as those embodied in Section 2(1)(j) and Section 2(1)(j)(a) of the Patents Act, in a manner that fully carries out the objectives of the Amending Act, will result in the rejection of the present application in its entirety. The Opponents, therefore, humbly request the Hon'ble Patent Controller to scrutinise the present application with

appropriate care, as its decision will determine whether millions of people will have access to affordable life-saving treatment.

5. As per Section 25(1), a pre-grant opposition can be instituted by any person as long as an Application is still under prosecution. The present Application has not matured into a patent as of the date of filing of this pre-grant representation. Hence, the present pre-grant opposition being filed by PLHIV is validly filed and is not time barred. A copy of the complete specification with claims (as currently amended with 21 claims) and downloaded from IPASS is attached as **Annexure 1**.

GENERAL BACKGROUND ON TUBERCULOSIS AND MULTI-DRUG RESISTANT TUBERCULOSIS TREATMENT

6. The bacterium *Mycobacterium Tuberculosis* (MTB) causes Tuberculosis (TB). This is an infectious disease. Tuberculosis generally affects the lungs, but can also affect other parts of the body. When infections do not show symptoms, it is termed as latent tuberculosis. The Government of India has a Tuberculosis division at the Central Government level and for the year 2019, India had a total 24.04 lakhs notified cases of tuberculosis. The WHO estimates that India has an estimated incidence of 26.9 lakh cases in 2019. WHO's 'Global tuberculosis report 2019' available at the WHO site¹ gives detailed data and estimates on Tuberculosis patient numbers, prevalence etc. As of 2018, one quarter of the world's population is thought to have latent infection with TB and within this population, India accounts for slightly more than 25% of the total number of infected populace.
7. TB is the leading killer of People Living with HIV (PLHIV) with one-third of HIV related deaths occurring due to TB co-infection in 2015. The risk of

¹WHO report is available at:

<<https://apps.who.int/iris/bitstream/handle/10665/329368/9789241565714-eng.pdf?ua=1>>

developing TB is estimated to be between 26 and 31 times greater in PLHIV than among those without HIV infection. TB and HIV co-infection leads to synergy of the disease with rapid progression of TB and re-activation of latent TB risk being 12 and 20 times greater in PLHIV. Similarly, TB also accelerates the disease progression of HIV.

8. As Tuberculosis is a disease emanating from a bacterium, the treatment regime comprises administering anti-bacterial medicines, over a period of time. . If patients are found to have developed resistance to existing treatment regime, the case is termed as multi-drug resistant tuberculosis (MDR-TB) and extensively drug resistant tuberculosis (XDR-TB). The resistance can either be primary i.e. resistance developed before the initiation of treatment or secondary resistance developed after the initiation of anti-tuberculosis treatment in patients. Active tuberculosis (i.e. Patients with active symptoms), requires several drugs (involving multiple antibiotics) to be co-administered in a regime for a period of minimum 6 months or more.

9. The most common medications used to treat tuberculosis include²:

- a. Isoniazid
- b. Rifampin (Rifadin, Rimactane)
- c. Ethambutol (Myambutol)
- d. Pyrazinamide

Some drugs may be used as add-on therapy to the current drug-resistant combination treatment, including:

- e. Bedaquiline
- f. Linezolid
- g. Pretomanid

²<https://www.mayoclinic.org/diseases-conditions/tuberculosis/diagnosis-treatment/drc-20351256>

10. In 2018, the Indian Ministry of Health released the “Report of the First National Anti-Tuberculosis Drug Resistance Survey” which indicated an almost 22% resistance to fluoroquinolones in India. Therefore, there is an urgent and pressing need to ensure better availability of newer drugs (including GSK 3036656), which has been claimed in the Present Application. It is submitted that the honorable Patent Controller should scrutinise the Present Application with strict scrutiny as its decision will affect the availability of affordable access to lifesaving treatment to MDR-TB patients not only in India but across the world.

THE OPPONENT RELIES ON THE FOLLOWING DOCUMENTS TO SUPPORT THE GROUNDS OF OPPOSITION

S.No.	PARTICULARS OF THE DOCUMENT	DOCUMENT IDENTIFIER
1.	Currently pending claims of the impugned application (602/KOLNP/2013)	Annexure-1
2.	WO2008157726 published on 24 th December, 2008.	D1
3.	WO2009111676 published on 11 th September, 2009.	D2
4.	WO2007146965 published on 12 th December, 2007	D3
5.	WO2010080558 published on 15 th July, 2010	D4
6.	Order dated 21.02.2020 in the matter of patent application 478/MUMNP/2015	Annexure -2
7.	Order dated 05.10.2012 in patent application 314/MUM/2008.	Annexure -3
8.	Order dated 09.10.2012 in the matter of patent application 3725/CHENP/2006	Annexure-4

PRESENT APPLICATION

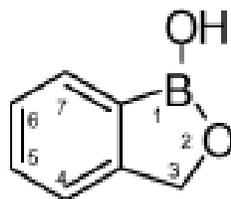
11. The Opponent has reviewed the file available at the IPASS system of the Indian Patent Office in respect of 602/KOLNP/2013 and notes that this Indian application filed at the Patent Office, New Delhi. According to the information available therein, following are the relevant details:

APPLICATION NUMBER	602/KOLNP/2013
PRIORITY DATE	07/Sep/2010
DATE OF FILING	05/Mar/2013
REQUEST FOR EXAMINATION DATE	04/Sep/2014
PUBLICATION DATE (U/S 11A)	05/July/2013
FIRST EXAMINATION REPORT DATE	10/Jan/2018
REPLY TO FER DATE	02/July/2018
APPLICANT NAME	ANACOR PHARMACEUTICALS INC.
TITLE OF INVENTION	BORON-CONTAINING SMALL MOLECULES
PCT INTERNATIONAL PUBLICATION NUMBER	WO2012033858
PCT INTERNATIONAL FILING DATE	07/Sep/2011
PCT INTERNATIONAL APPLICATION NUMBER	PCT/US2011/050728

PRESENT SPECIFICATION

12. The present Specification runs into approx. into 120+ pages. The Specification states that ‘*boron containing molecules ... have been used as anti-microbials.*’ It starts by stating that:

{[0003] Boron-containing molecules, such as 1-hydroxy-1,3-dihydro-benzo[c][1,2]oxaborole (also sometimes known as 1-hydroxy-benzo[c][1,2]oxaborole or oxaboroles or cyclic boronic esters), useful as antimicrobials have been described previously, such as in U.S. Pat. Apps. 12/142,692; 11/505,591 and 11/357,687. Generally speaking, a 1-hydroxy-1,3-dihydro-benzo[c][1,2]oxaborole has the following structure and substituent numbering system:



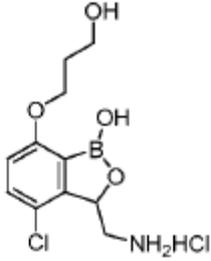
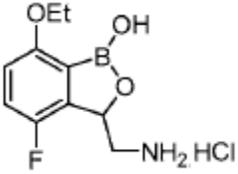
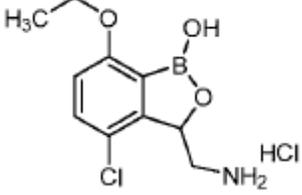
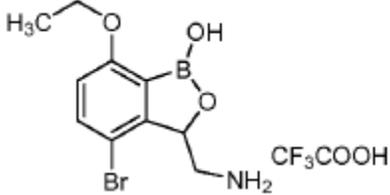
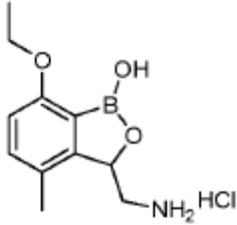
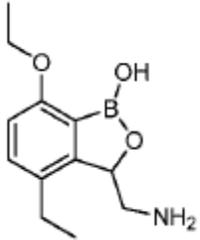
Surprisingly, it has now been discovered that certain classes of 1-hydroxy-1,3-dihydro-benzo[c][1,2]oxaboroles are effective antibacterials’

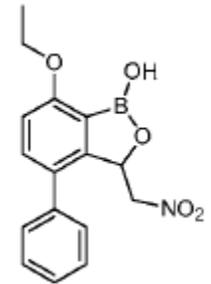
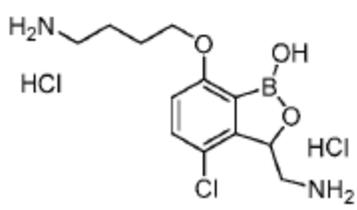
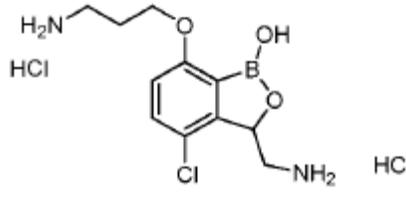
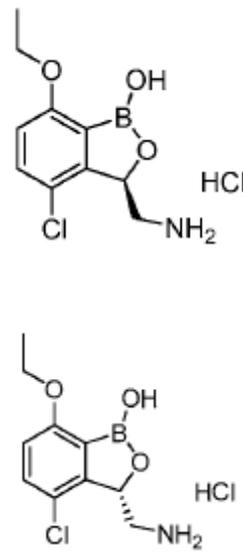
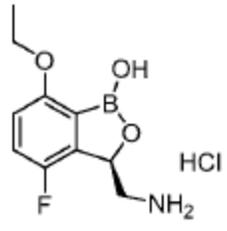
13. Applicant’s above prior art references are for below documents:

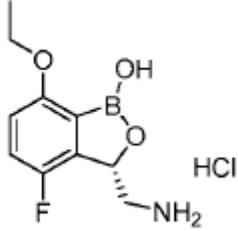
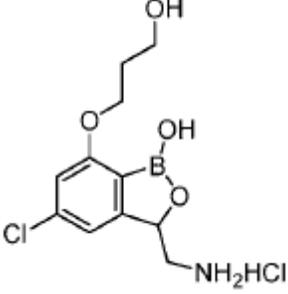
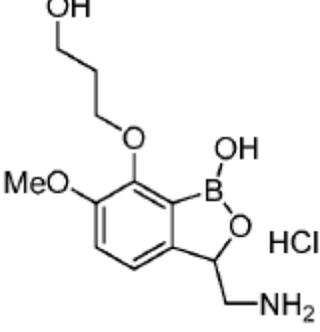
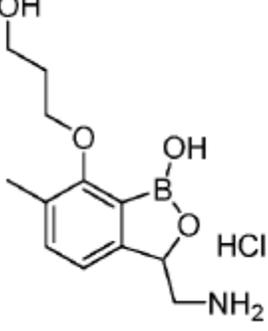
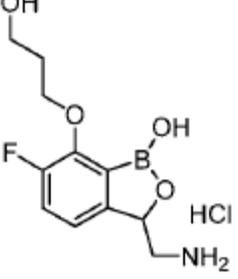
- 12/142,692 → WO2008157726 // US7816344 {from Anacor itself};
- 11/505,591 → WO2007078340 // US7767657 {from Anacor itself} and
- 11/357,687 → WO2006089067 // US7582621 {from Anacor itself}.

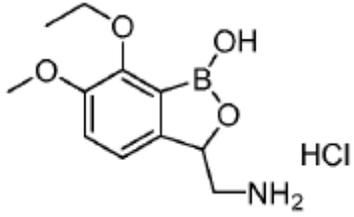
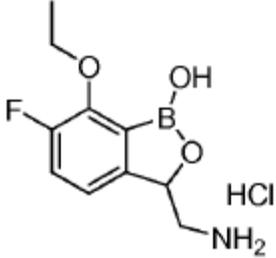
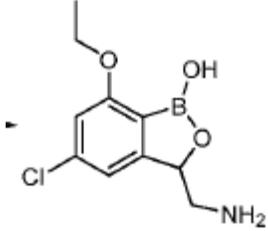
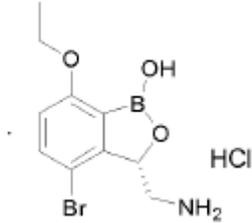
14. The Specification starts discussing embodiments from para 187, generally. Example 1 enables 22 compounds (A through V) starting from para 242 through to para 346.

Compound	Structure	Paras
Compound A 3-Aminomethyl-4-fluoro-7-(3-hydroxy-propoxy)-3H-benzofc[1,2]oxaborol- 1-ol;		242-248

bistrifluoroacetic salt		
Compound B 3-(Aminomethyl)-4-chloro-7-(3-hydroxypropoxy) benzo[c][1,2]oxaborol-1(3H)-ol hydrochloride		249-254
Compound C 3-Aminomethyl-7-ethoxy-4-fluoro-3H-benzofcJf1,2J-oxaborol-1-ol; hydrochloride		255-262
Compound D 3-(Aminomethyl)-4-chloro-7-ethoxybenzofcJ[1,2]oxaborol-1(3H)-ol hydrochloride		263-270
Compound E 3-(Aminomethyl)-4-bromo-7-ethoxybenzofcJf1,2Joxaborol-1(3H)-ol 2,2,2-trifluoroacetate salt		271-274
Compound F 3-(Aminomethyl)-7-ethoxy-4-methylbenzofcJf1,2Joxaborol-1(3H)-ol hydrochloride salt		275-276
Compound G 3-(Aminomethyl)-7-ethoxy-4-ethylbenzofcJf1,2Joxaborol-1(3H)-ol		277-279

<p>Compound H</p> <p>3-(Aminomethyl)-7-ethoxy-4-phenylbenzoic acid, [1,2]oxaborol-1(3H)-ol</p>		280-281
<p>Compound I</p> <p>7-(4-Aminobutoxy)-3-(aminomethyl)-4-chlorobenzofcJf, [1,2]oxaborol-1(3H)-oldihydrochloride</p>		282-289
<p>Compound J</p> <p>3-(Aminomethyl)-7-(3-aminopropoxy)-4-chlorobenzoic acid, [1,2]oxaborol-1(3H)-ol</p>		290-296
<p>Compound K</p> <p>(R)-3-(Aminomethyl)-4-chloro-7-ethoxybenzo[c][1,2]oxaborol-1(3H)-ol Hydrochloride</p> <p>Compound L</p> <p>(S)-3-(Aminomethyl)-4-chloro-7-ethoxybenzo[c][1,2]oxaborol-1(3H)-ol hydrochloride</p>		297-299
<p>Compound M</p> <p>(R)-3-(Aminomethyl)-4-fluoro-7-ethoxybenzo[c][1,2]oxaborol-1(3H)-ol hydrochloride</p>		300-304

<p>Compound N (S)-3-(Aminomethyl)-4-fluoro - 7-ethoxybenzofcl 1,21oxaborol-1 (3H)-ol hydrochloride</p>		
<p>Compound O 3-Aminomethyl-5-chloro-7-(3-hydroxy-propoxy)-3H-benzo[c][1,2]oxaborol-1-ol Hydrochloride</p>		305-311
<p>Compound P 3-Aminomethyl-7-(3-hydroxy-propoxy)-6-methoxy-3H-benzo[c][1,2]oxaborol-1-ol; Hydrochloride</p>		312-315
<p>Compound Q 3-Aminomethyl-7-(3-hydroxy-propoxy)-6-methyl-3Hbenzofc][1,2]oxaborol-1-ol Hydrochloride</p>		316-322
<p>Compound R 3-Aminomethyl-6-fluoro-7-(3-hydroxy-propoxy)-3H-benzo[c][1,2]oxaborol-1-ol; hydrochloride salt</p>		323-328

<p>Compound S</p> <p>3-Aminomethyl-7-ethoxy-6-methoxy-3H-benzofcJfl,2Joxaborol-1-ol; hydrochloride Salt</p>		329-332
<p>Compound T</p> <p>3-Aminomethyl- 7-ethoxy-6-fluoro-3H-benzo[c][1,2]oxaborol-1-ol; hydrochloride salt</p>		333-338
<p>Compound U</p> <p>3-(Aminomethyl)-5-chloro- 7-ethoxybenzo[c][1,2]oxaborol-1(3H)-ol</p>		339-343
<p>Compound V</p> <p>(S)-3-(aminomethyl)-4-bromo-7-ethoxybenzofcJfl,2Joxaborol-1(3H)-ol Hydrochloride</p>		344-346

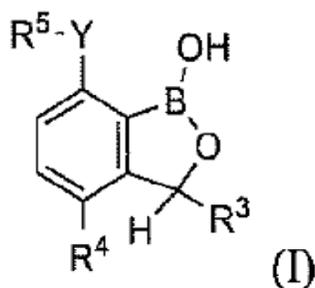
15. Example 2 of the Specification discusses LeuRSIC50 Testing while example 3 gives antibacterial MIC testing data. Example 4 gives MicroplateAlamar Blue Assay (MABA) data while Example 4 gives low-oxygen recovery assay (LORA) data. Figure 1 covers data for examples 2-5. Examples 6 and 7 cover data for different in-vivo efficacy experiments.

PRESENT CLAIMS:

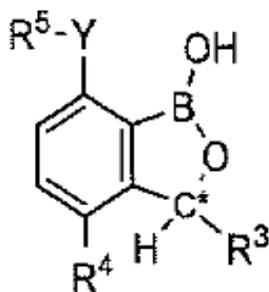
16. The Specification originally had 20 claims. Applicant amended the claims to a set of 21 claims in response to the First Examination Report (FER and

Amendment discussed, later). The current 21 claims are divided amongst following groups:

- i) Current claim 1 covers the following Markushstructure with substituents of R³, R⁴, Y and R⁵

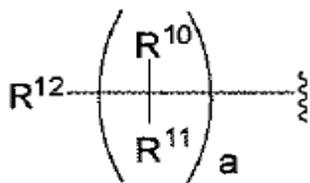


- ii) Claims 2 and 3 are dependent on claim 1 having a compound structure which is having a stereocenter of (R) or (S) configuration.



- iii) Claim 4 is dependent on claim 2 and narrows the stereocenter to its (S) configuration.
- iv) Claims 5, 6, 7, 8, 9 and 10 are dependent on claim 1 and narrow down the substituents to R³ as -CH₂NH₂, R⁴ as Cl or Br, Y as O, R⁵ is methyl, ethyl, propyl etc.
- v) Claim 10 is a dependent claim that covers a specific molecule by virtue of specific substitutions.
- vi) Claim 11 is an independent claim for composition comprising the compound of claim 4.
- vii) Claim 12 is dependent on claim 1 covering a pharmaceutical formulation comprising a compound of claim 1, a salt thereof, and an excipient.
- viii) Claim 13 is dependent on claim 1, wherein R⁴ is bromine.

- ix) Claim 14 is dependent on claim 1, wherein R⁴ is selected from methyl, ethyl, propyl, isopropyl etc.
- x) Claim 15 is dependent on claim 1, wherein R⁴ is methyl
- xi) Claim 16 is dependent on claim 1, wherein R⁴ is selected from methoxy, ethoxy, propoxy, isopropoxy, butoxyetc.
- xii) Claim 17 is dependent on claim 1, wherein R⁴ is methoxy or ethoxy.
- xiii) Claim 18 is dependent on claim 1 wherein it is a salt or hydrate or solvate with R³ is -CH₂NH₂, R⁴ is chlorine and Y is O.
- xiv) Claim 19 is dependent on claim 1 wherein it is a salt or hydrate or solvate with R³ is -CH₂NH₂, R⁴ is bromine and Y is O.
- xv) Claim 20 is dependent on claim 1 wherein it is a salt or hydrate or solvate with R³ is -CH₂NH₂, R⁴ is methyl and Y is O.
- xvi) Claim 21 covers a Markush of the compound of preceding claims wherein R⁵ is



EXAMINATION REPORT(S) & APPLICANT RESPONSE:

17. The Patent Office issued the First Examination Report (FER) in Jan 2018 on the original claims with the following objections:
- Lack of inventive step for claims 1-13;
 - Lack of industrial applicability for claims 14-19;
 - S.3(d) & S3(i) objections for all 19 claims;
 - Not supported by description: claims 1-14;
 - Inappropriate claim scope: Claim 12 and
 - Use claim not allowed: claim 20.

The Inventive step objection was based on Applicant's earlier filing (WO2008157726, referred hereinafter as **D1**). Note: D1 has been filed in India as 4472/KOLNP/2009, patented as IN291753 granted on 16/Jan/2018.

18. The Applicant filed a response to the FER in July 2018 and deleted old claims 12, 14-20 and added claims 13-21, bringing the amended claims to 21 claims. While responding to the FER, the Applicant initially referred to general data present in Figure 1 of the Specification and then specifically sought to present data on 'unexpected advantageous characteristics' for compound B and compound J of the 602 Specification versus representative compound(s) from D1.

19. The Applicant goes on to state that Compound B is 518 times more selective than A46 and goes on to make this sweeping statement:

'This amazing increase in selectivity for M. tuberculosis possessed by the compounds of the claimed invention is unexpected. There is no teaching in the art that replacing a hydrogen with claimed moieties will have this effect.'

20. The Applicant next discussed Compound J in comparison with a different representative compound (A36) from D1 and gives data comparing these 2 compounds. It then on page 8, incorrectly, makes a statement about Compound B (when in fact it should be compound J) in comparison to Compound A36:

'A36 possesses a much lower SI for M. tuberculosis over K.pneumoniae ATCC 13833 than for compound B of the claimed invention. In fact, compound B of the claimed invention is $1,084/15.96 = 67.9$ times more selective than A36 for M. tuberculosis over K.pneumoniae ATCC 13833.'

Note: Selectivity index of compound J (and not B) is 1084. Selectivity index of compound B is 2560. This part of the reply is discussing compound J with A36 and hence the value 1084 comes from compound J, not B.

Accordingly, Applicant's above text should actually be read as: *'A36 possesses a much lower SI for M. tuberculosis over K.pneumoniae ATCC 13833 than for compound J of the claimed invention. In fact, compound J of the claimed invention is $1,084/15.96 = 67.9$ times more selective than A36 for M. tuberculosis over K.pneumoniae ATCC 13833'.*

21. Applicant then seeks to give the following conclusion for Compound B, Compound J when compared with A46 and A36 of prior art:

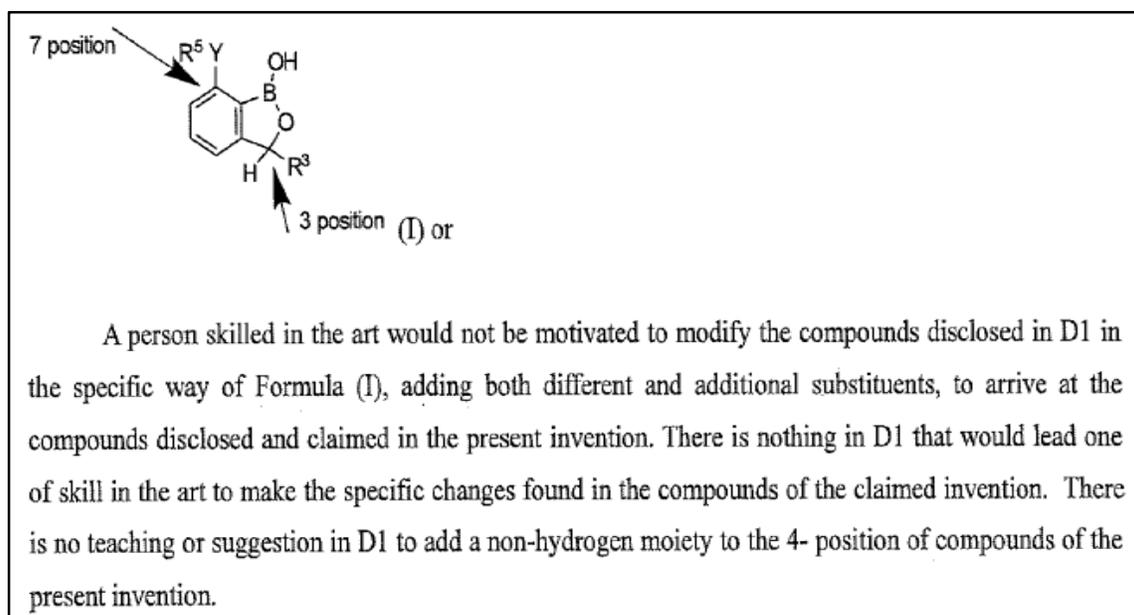
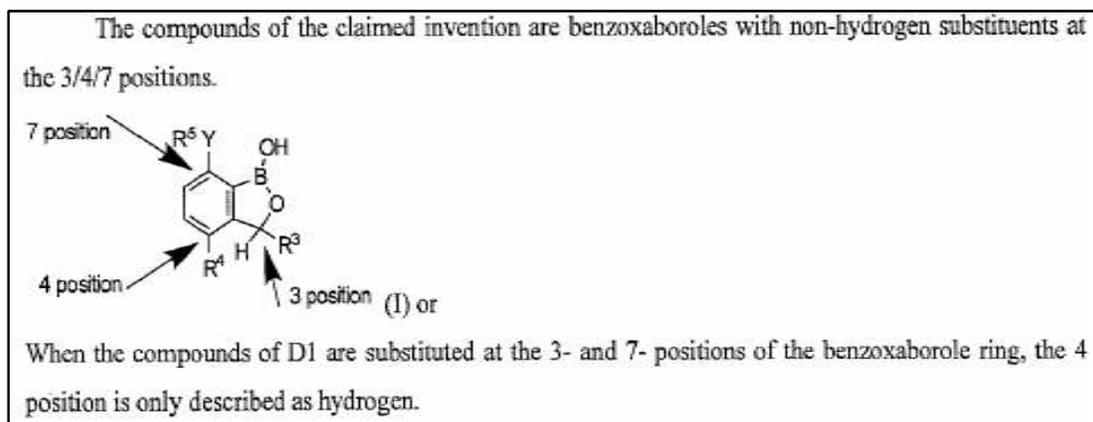
'In summary, the compounds of the invention possess selectivity for M. tuberculosis over other bacterial strains. The compounds of the present invention have SI values for M. tuberculosis that are much higher than compounds from cited art. Applicants have shown that selectivity for M. tuberculosis can increase from between 67 fold to 2,073 fold with the changes claimed in the present invention. There is no teaching in the art that these changes would increase the selectivity for M. tuberculosis in this way.'

22. The Specification enables 22 compounds while the claims (Markush of claim 1 and later claims) cover millions of compounds. The Applicant does not give any rationale on why/ how these compound(s) B / J are representative of the millions of compounds covered in present claim 1. The Opponent submits that while the Applicant seeks to bring in later technical data for Compound B and Compound J, it has not stated the basis for selecting compound(s) B/ J as the representative / lead compound(s) [to the exclusion of other compounds from A through V] for comparing with compound A46 or A36 of **D1**. Nor is any reason given on why the comparator example from **D1** is shifted from A46 to A36.

23. Likewise, Opponent submits that Applicant does not co-relate compound(s) B/ J with the preferred embodiments in the dependent claims- effectively meaning that no clear reason is given at all on why discussion on compound(s) B/ J has been made in the Response to FER to discuss the patentability of the claims.

24. Thereafter, Applicant goes to discuss structural differences between D1 and compounds of the present invention in its response to the FER.

Specifically, the Applicant states:



25. The Applicant next discusses ‘*sufficiency of disclosure and claim scope*’ for claim amendments for claims 1-14 but there is no specific discussion on basis for new claims 13-21- i.e. where are these claims enabled in terms of the compounds for the Specification or how do they co-relate to old claim set. Even in the sections after this discussion, there is no specific discussion for new claims 13-21.

26. A hearing notice along with additional examination comments for the 21 new claims was issued in Dec 2019 for a hearing to be held in Jan 2020. Specifically, the Controller maintained the following objections:

'Invention u/s 2(1)(j)

1. The subject matter of revised claims of present application do not involve because of the following reasons. The reply to FER filed by the applicant agent is considered but the same is not convincing because of the following reason. In reply statement applicant stated that The compounds of the present invention possess selectivity for the bacteria that cause tuberculosis. An antibacterial possesses selectivity if this antibacterial is able to kill one strain of bacteria, such as M. tuberculosis, without killing other bacteria. An example of selectivity is when an antibacterial has a low MIC against one strain of bacteria and a high MIC against many other strains of bacteria. Selectivity is a good characteristic because it reduces the potential both for cross-reactivity with other medications as well as the development of drug resistance with other bacteria. Further Applicants provide data where compound B of the invention showing selectivity toward the bacteria causing tuberculosis, M tuberculosis, versus other bacteria. Further applicant compared compound B of the invention with compound A46 of D1. As mentioned in FER the compounds of D1 are differing with present compound in that it does not contain present substituent R4. The substituent R4 as defined in the claims may be selected from halogen, unsubstituted alkyl, unsubstitutedalkoxy, and unsubstitutedphenyl. The exemplified compounds have R4 as phenyl, halogen, methyl and methoxy. Moreover, compound B of present application differ from compound A46 of D1 by having a chloro group at the position of R4. Therefore, based on above, it is concluded that if such a small structural change result in such kind of selectivity, then it would be impossible to predict the activity or selectivity of the other compounds which are falling within the scope of present claims, and has not been prepared and tested. Therefore based on above, inventive step cannot be acknowledged.

Non-Patentability u/s 3

1. The subject matter of present revised claims 1-21 falls within the scope of section 3(d) of the Act, because as mentioned above the compound of the present claims are different from D1 with respect to substituents R4 only, which is halogen, methyl and methoxy, whereas in D1 it is "Hydrogen". Since the compound of the present application and D1 are structurally very close to each other and therefore present claimed compounds is considered mere derivative of a known compounds without any enhancement (except the tested compound) in therapeutic efficacy with respect to D1(the closest known compound).

Scope

1. The subject matter of present newly introduced claim 21 is beyond the scope of as originally filed claims. Present amended claim 21 defines the various possibility of substituents R5 according to present general formula, however, the said generalformula and its various possibility are not supported by the as originally set of claims, therefore said claims are not allowable u/s 59(1) of the Act.

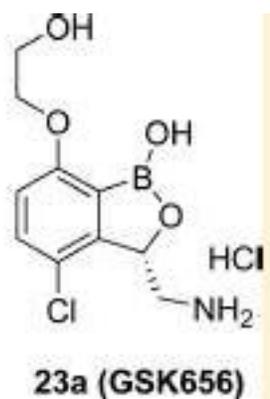
Sufficiency of Disclosure u/s 10 (4)

1. The subject matter of claim 11 is beyond the scope of the present application because said claims discloses a composition comprises; i) first stereoisomer of the compound of claim 2; ii) at least one additional stereoisomer of the first stereoisomer; wherein the first stereoisomer is present in an enantiomeric excess of at least 80% relative to said at least one additionalstereoisomer. However, present description fails to disclose any such specific formulation wherein one stereoisomer is present in an enantiomeric excess relative to other or any effect thereof. Therefore claims are not supported by the description (or examples) and thus fall within the scope of section 10(4) of the Act.'

27. Applicant sought an adjournment for this Jan 2020 hearing. The hearing was adjourned to end Jan 2020. Applicant again sought an adjournment for this second hearing. A third hearing notice was issued in May 2020 for a hearing date of 20/May/2020. Applicant requested an adjournment, in view of the Covid pandemic(dated 18/May/2020). Applicant does not seem to have filed any substantive response to the objections raised in the Dec 2019 Hearing Notice, till date. The present representation is filed on the basis of the Specification and the 21 claims from July 2018.

GSK656/ GSK3036656 / GSK070

28. The present Opponent is particularly interested in the following compound:



29. The Applicant has designated the above compound as GSK070/ GSK656/ GSK 3036656 (each term used interchangeably, hereafter) in its public literature. The molecule is a novel protein synthesis target for treating tuberculosis.

SUMMARY OF GROUNDS CONSIDERED FOR OPPOSITION

30. The Opponent bring this representation under the following grounds, each of which are without prejudice to one another and stand on an independent footing:

- i) The Opponent also bring this Opposition under **Section 25(1)(g)** - That the complete specification does not sufficiently and clearly describe the invention.
- ii) Claims lack inventive step, and therefore fail under Sections 2(1)(j) and 2(1)(ja) of the Patents Act. Therefore, the Opponent bring this opposition under **Section 25(1)(e)**-that the invention so far as claimed in any claim of the complete specification is obvious and clearly does not involve any inventive step, having regard to the matter published before the priority date in India or elsewhere in any document.
- iii) Claims do not satisfy the test of Section 3(d) of the Patents Act as the subject matter does not exhibit enhancement of the known efficacy of known substance. Therefore, the Opponent bring this opposition under **Section 25(1)(f)** -that the subject of any claim of the complete specification is not an invention within the meaning of this Act.
- iv) Claims do not satisfy the test of Section 3(e) of the Patents Act as the subject matter does not exhibit any synergistic effect. Therefore, the Opponent bring this opposition under **Section 25(1)(f)** -that the subject of any claim of the complete specification is not an invention within the meaning of this Act.
- v) That the Applicant did not disclose information required by Section 8. Therefore, the Opponent bring this Opposition under **Section 25(1)(h)**.

DETAILED GROUNDS

I. THAT CLAIMS OF THE PRESENT APPLICATION MUST BE REJECTED AS THE COMPLETE SPECIFICATION DOES NOT SUFFICIENTLY AND CLEARLY DESCRIBE THE INVENTION

31. Arguments for Section 25(1)(g) have to be understood in the context of Section 10(4) which states:

*'(4)Every complete specification shall—
(a) fully and particularly describe the invention and its operation or use and the method by which it is to be performed;
(b) disclose the best method of performing the invention which is known to the applicant and for which he is entitled to claim protection; and
(c) end with a claim or claims defining the scope of the invention for which protection is claimed;'*

32. The Opponent agrees with and repeats Controller's specific objection u/s 10 in the FER that the Applicant uses non-limiting terms like "alkyl" or "aminoalkyl" or "heteroalkyl group" and "alkoxy" in the claims- which are open ended term and speculative in nature, they include a great variety of structural possibilities not yet explored by the applicant, the effect of which cannot be foreseen having regard to the problem underlying the present invention. The 22 examples represent a very narrow illustration of the claimed scope. Controller had rightly noted in the FER that based on the 22 limited illustration of the examples [wherein; R3 = -CH₂-NH₂, CH₂-NO₂ and tert-butylmethylcarbamate, -C₆H₄F and C₆H₄COOH; R4 = phenyl, halogen, methyl and methoxy; R5 = predominantly ethyl] that all embodiments, especially remote ones embraced by the claimed scope, exhibit the same pharmacological effect(s) and as such solve the problem underlying the present application. Though the Applicant narrowed down the scope of revised claims post the FER, the present amended version of claims still is open-ended and speculative compared to the scope of disclosure.
33. The Controller's continued objection to amended claim 11 is also repeated here as being beyond the scope of the present Specification because this claim seeks to cover a composition comprising i) first stereoisomer of the compound of claim 2 and ii) at least one additional stereoisomer of the first stereoisomer; wherein the first stereoisomer is present in an enantiomeric excess of at least 80% relative to said at least one additional stereoisomer.

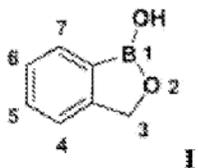
Applicant's response or original Specification - both are completely non-responsive to this objection. Present Specification completely fails to disclose any such specific formulation / discussion wherein one stereoisomer is present in an enantiomeric excess relative to other or any effect thereof. Therefore amended claim 11 is not supported by the description (or examples) and thus runs afoul of section 10(4) of the Act.

34. The Opponent states that Applicant had been working on benzoxaborole compounds for many years prior to filing the '602 application. Though the Specification discusses specific compounds (disclosed in the examples section) and has many more molecules covered by use of 'Markush format', the Specification does not disclose GSK656 at any point. This fact will be explained in more detail in the forthcoming paragraphs. On the other hand, present claims (1/ 2/6/ 10/12/ 18 and 21), in their most liberal but legally untenable reading, cover the compound designated as GSK 3036656.
35. The Opponent submits that to the extent the present Specification (and claims) seeks to cover GSK656, the Specification does not sufficiently and clearly describe the invention viz. GSK656 i.e. there is no 'disclosure' of GSK656 in present Specification. The Specification does not have any discussion or technical data specifically on GSK656 or disclose a composition of any compound, at all.
36. A patent specification has to particularly describe the invention and enable the claims. This disclosure requires disclosing the actual invention that the Applicant possessed, to a person skilled in the art, in return for a time bound monopoly. This 'enabling disclosure' is a fundamental principle for the *quid-pro-quo* that the Applicant/ Inventor contracts with the sovereign for securing his patent. The description and examples within the Specification have to give that enabling 'knowledge'/ disclosure to a person skilled in the art. A patent can only be granted for what an Applicant actually invented and disclosed in his Specification. It necessarily follows

that the Applicant must possess the ‘invention’ to disclose, on the date of filing. A patent cannot be granted for something that the Applicant did not possess or ‘fully and particularly describe’ i.e. ‘*Enabling disclosure*’ on the date of filing in such Specification.

37. Present claim 1 (Markush) potentially covers millions of compounds. From these millions, 22 are exemplified in the Specification. The claim scope seeks a monopoly on millions of compounds that are only theoretically covered in the Markush structure and its attendant substitutions in the claims without sufficiently describing anything beyond 22 compounds nor any actual composition covering any specific compound. Anacor did not possess and disclose GSK656 in 602 (in reality, Anacor invented and disclosed GSK656 much later) as of the priority date or the complete filing date of the 602 – viz. Sep 2010 or Sep 2011 and hence cannot be awarded a monopoly covering GSK656, from the 602 filing.
38. The Opponent makes the above submission in view of Applicant’s multiple later statements characterizing the WO’858 (i.e. present ‘602 Specification’) categorically stating that present ‘602 did not cover compounds with halogen substitution on the benzoxaborole ring. To support this submission, Opponent submits the following.
39. The first critical document is Anacor’s later patent publication (**WO2015021396**, with a **priority date of 09/Aug/2013**) that carries the following statements:

[0011] The present invention relates to tricyclic benzoxaborole compounds that show unexpected selectivity for inhibiting replication of *Mycobacterium tuberculosis* (*M. tuberculosis*) versus inhibition (toxicity) of human cells compared to other benzoxaborole compounds, and exhibit sub-micromolar MIC values against mycobacterium species, particularly *Mycobacterium tuberculosis* and *Mycobacterium tuberculosis* complex (MTC), *Mycobacterium avium* and *Mycobacterium avium* complex (MAC) and *Mycobacterium avium intracellulare* complex (MAIC). Generally speaking, a benzoxaborole has the following structure and substituent numbering system:



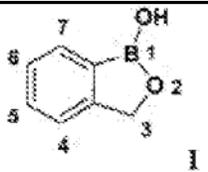
[0012] Certain benzoxaboroles which are substituted at position 7 form a tricyclic benzoxaborole compound. When the resulting tricyclic benzoxaborole is additionally substituted with a halogen substituent at position 4 and an aminomethyl substituent at position 3, such compounds are surprisingly selective towards and effective against mycobacteria including *M. tuberculosis*. The selectivity observed is assessed by comparing MIC values for such compounds relative to inhibition (toxicity) of these compounds to human cells, compared to other benzoxaborole compounds.

40. Thus, the focus in **WO2015021396** is on tricyclic benzoxaborole compounds that have a halogen substitution at position 4 and an aminomethyl substitution at position 3 which show surprising activity. Importantly in the context of present 602 Application, Applicant's following statement at para 14 of WO'396 is critical:

compounds with halogen substitution on the benzoxaborole ring. WO2012033858 discloses benzoxaborole compounds with activity against *Mycobacterium tuberculosis*, including certain benzoxaborole compounds (see e.g. Examples 1.A through 1.V), but again, no tricyclic benzoxaborole compounds are disclosed with halogen substitution on the benzoxaborole ring.

41. This non-coverage of GSK656 in present '602 is further cemented by Applicant's later specific filing covering GSK656. Anacor + Glaxo's 2016 WO patent publication (**WO2016128949** with a priority date of 12/Feb/2015) carries the following statements:

[0010] The present invention relates to substituted benzoxaboroles and certain benzoxaborole compounds that show unexpected selectivity for inhibiting replication of *Mycobacterium tuberculosis* (*M. tuberculosis*) versus inhibition (toxicity) of human cells compared to other benzoxaborole compounds, and exhibit sub-micromolar MIC values against mycobacterium species, particularly *Mycobacterium tuberculosis* and *Mycobacterium tuberculosis* complex (MTC), *Mycobacterium avium* and *Mycobacterium avium* complex (MAC) and *Mycobacterium avium intracellulare* complex (MAIC). Generally speaking, a benzoxaborole has the following structure and substituent numbering system:



[0011] Boron-containing molecules such as benzoxaboroles that are useful as antimicrobials have been described previously, see e.g. “Benzoxaboroles – Old compounds with new applications” Adamczyk-Woźniak, A. et al., *Journal of Organometallic Chemistry* Volume 694, Issue 22, 15 October 2009, Pages 3533–3541, and U.S. Pat. Pubs. US20060234981, US20070155699, WO2012033858, and US2013165411.

[0012] Certain benzoxaboroles which are substituted at position 7 may form a benzoxaborole compound (see US20090227541, US2013165411 and WO/KR2015/016558) and may also exist as an equilibrium mixture of a tricyclic form and an open form. When the resulting 7-substituted benzoxaborole is additionally substituted with a halogen substituent at position 4 and an aminomethyl substituent at position 3, such compounds are surprisingly selective towards and effective against mycobacteria including *M. tuberculosis*. The selectivity observed is assessed by comparing MIC values for such compounds relative to inhibition (toxicity) of these compounds to human cells, compared to other benzoxaborole compounds.

42. So, as per the Applicant himself, the invented compounds in 2016 which also are 7-substituted benzoxaborole compounds having a halogen substituent at position 4 and an aminomethyl substituent at position 3, and surprising activity is only there after noted. Importantly, in context of present 602 Specification, the following statement at para. 14 is critical:

with halogen substitution on the benzoxaborole ring. WO2012033858 discloses benzoxaborole compounds with activity against *Mycobacterium tuberculosis*, including certain benzoxaborole compounds (see e.g. Examples 1.A through 1.V), but again, no benzoxaborole compounds are disclosed with halogen substitution on the benzoxaborole ring.

43. So, while on one hand, Anacor filed the present ‘602 Specification in 2011 covering millions of compounds, it specifically acknowledged in these 2 later filings 3+ years later that the ‘602 does not disclose benzoxaborole compounds with halogen at P4 and aminomethyl at P3 substitution (which would be necessary for GSK656) on the benzoxaborole ring. With these

statements of Applicant in its own WO filings, GSK656 is categorically excluded from '602 disclosure.

44. A later publication (J Med Chem 2017 Oct 12;60(19):8011-8026) which has 6 inventors of present '602 Application as co-authors³, has the following statement (Abstract section):

'... number of MtbLeuRS inhibitors were identified that demonstrated good antitubercular activity with high selectivity over human mitochondrial and cytoplasmic LeuRS. Further evaluation of these MtbLeuRS inhibitors by in vivo pharmacokinetics (PK) and murine tuberculosis (TB) efficacy models led to the discovery of GSK3036656 (abbreviated as GSK656). ... This compound has been progressed to clinical development for the treatment of tuberculosis.'

45. This 2017 publication goes on to give the following statement and reference (last paragraph of introduction segment and its connected footnote):

'Further PK evaluation and efficacy studies of these MtbLeuRS inhibitors led to the identification of a first-in-class boron-containing antitubercular agent 23a (GSK656),²⁴ which had a much better safety profile than 3a and 4a.'

Footnote 24:

*'(24) (a) Alley, M. R. K.; Hernandez, V.; Plattner, J. J.; Li, X.; Barros-Aguirre, D.; Giordano, I. Tricyclic benzoxaborole compounds and uses thereof. **WO 2015/021396** A9, February 12, 2015.
(b) Alley, M. R. K.; Barros-Aguirre, D.; Giordano, I.; Hernandez, V.; Li, X.; Plattner, J. J. Benzoxaborole compounds and uses thereof. **WO 2016/128949** A1, August 18, 2016.'*

³ Authors of the 2017 paper are:

Xianfeng Li, Vincent Hernandez, Fernando L. Rock, Wai Choi, Yvonne S. L. Mak, Manisha Mohan, Weimin Mao, Yasheen Zhou, Eric E. Easom, Jacob J. Plattner, Wuxin Zou, Esther Perez-Herran, Ilaria Giordano, Alfonso Mendoza-Losana, Carlos Alemparte, Joaquín Rullas, Inigo Angulo-Barturen, Sabrina Crouch, Fatima Ortega, David Barros, and M. R. K. Alley

46. Thus in this publication, the inventors admit that GSK656 is disclosed only much later i.e. in the WO'396 and WO'949 publications. Consequently, GSK656 is not disclosed or covered in present '602 (i.e. WO'858) Specification. This 2017 publication is the 3rd document which supports the statement that '602 did not disclose GSK656. Importantly, these are inventors / authors who are named in the 602 Specification and they still do not cite their own filing- present 602 (WO'858) as disclosing GSK656.
47. Taking a step outside of patent publications, the Opponent submits that all the specific discussions for GSK656/ GSK070 come out much later i.e. around 2015. For instance, Anacor reported, for the first time, the following on GSK070 at the **EMBO Conference Tuberculosis** in September 2016:
- 'Conclusions: GSK070, selected as preclinical candidate, is a new antitubercular agent that targets MtbLeuRS, a novel protein synthesis target for tuberculosis.'*
48. The first clinical trial reference for this molecule is from 2017⁴. A later publication⁵ discussing this 2017 clinical trial states:
- 'Clinical trial simulations were performed to guide dose escalation during the FTIH study and to predict the GSK3036656 dose range that produces the highest possible early bactericidal activity (EBA0-14) in the prospective phase II trial, with consideration of the predefined exposure limit. GSK3036656 was well tolerated after single and multiple doses, with no reports of serious adverse events. (This study has been registered at ClinicalTrials.gov under identifier NCT03075410.)'*
49. The Applicant drafted a broad Specification (present 602) in 2010/2011 and sought to cover millions of compounds. As of the filing date, Applicant did

⁴<https://clinicaltrials.gov/ct2/show/NCT03075410>

⁵Antimicrob Agents Chemother - 2019 Jul 25;63(8):e00240-19

not know about or actually make/ possess GSK656. Applicant's multiple later filings – patent and non-patent (noted above) confirm the Applicant's own understanding of what the present 602 Specification covered and importantly what was excluded therefrom.

50. The Opponent submits that the UK case-law on 'sufficiency' (*Regeneron v. Kymab*, [2020] UKSC 27) specifically states at para 2:

'... in order to patent an inventive product, the patentee must be able to demonstrate (if challenged) that a skilled person can make the product by the use of the teaching disclosed in the patent coupled with the common general knowledge which is already available at the time of the priority date, without having to undertake an undue experimental burden or apply any inventiveness of their own. This requirement is labeled sufficiency. It is said that the invention must be enabled by the teaching in the patent.'

The *Regeneron* Court also enunciated below principle:

*'iii) Patentees are free to choose how widely to frame the range of products for which they claim protection. But **they need to ensure that they make no broader claim than is enabled by their disclosure.***

51. The Opponent states that the Present 602 Application does not sufficiently and clearly describe the invention claimed to the extent that such claimed invention seeks to cover GSK656. The 602 Applicant cannot secure a patent on present 602 Specification for something that Anacor did not possess or disclose (i.e. enable by Anacor's disclosure), on the filing date in the 602 Specification. Applicant, from his own later patent specifications demonstrated that it invented, disclosed and covered GSK 656 much later-as visible in later specific patent filings. These later filings from Anacor itself are uncontroverted proof that GSK656 was invented much later and not covered in '602.

52. Present claim 1 (Markush) potentially covers millions of compounds. From these millions, 22 are exemplified in the Specification. The claim scope seeks a monopoly on millions of compounds that are only theoretically covered in the Markush structure and its attendant substitutions in the claims without sufficiently describing anything beyond 22 compounds. However, within the 21 new claims, GSK656 and a composition containing a compound is apparently claimed within the following claims: 1/ 2/ 6/ 10/18 and 21.
53. For ‘enabling disclosure’, Cornish states⁶ that *‘it is the details provided in the patent to allow a person to develop the invention from the knowledge disclosed without applying any further inventiveness’*. In this particular instance, 602 does not disclose GSK656 and in fact, Applicant himself found further inventiveness much later for GSK656 for which he filed the afore-mentioned 2 later patent applications. The principle for scope of enablement is also found in other non-Indian cases:

‘the scope of enablement must be commensurate with the scope of protection sought’⁷

&

Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable⁸

&

The public’s end of the bargain struck by the patent system is a full enabling disclosure of the claimed technology⁹

54. Patent specification drafting cannot be an attempt at writing imaginative expanses – by covering things not enabled but only imagined (and clearly invented much later).

⁶*Intellectual property: Patents, Copyright, Trademarks and Allied Rights*, Cornish (5thEdn, pg 225)

⁷ *In re Moore*, 439 F.2d 1232 (C.C.P.A. 1971)

⁸*Plant Genetics*, 175 F. Supp. 2d 246 (D. Conn. 2001)

⁹ *Chiron Corp, CAFC* [03-1158, -1159]

In *Novartis*¹⁰, our Supreme Court stated:

'139. The dichotomy that is sought to be drawn between coverage or claim on the one hand and disclosure or enablement or teaching in a patent on the other hand, seems to strike at the very root of the rationale of the law of patent. Under the scheme of patent, a monopoly is granted to a private individual in exchange of the invention being made public so that, at the end of the patent term, the invention may belong to the people at large who may be benefited by it. To say that the coverage in a patent might go much beyond the disclosure thus seem to negate the fundamental rule underlying the grant of patents.

...

156. However, before leaving Hogan and proceeding further, we would like to say that in this country the law of patent, after the introduction of product patent for all kinds of substances in the patent regime, is in its infancy. We certainly do not wish the law of patent in this country to develop on lines where there may be a vast gap between the coverage and the disclosure under the patent; where the scope of the patent is determined not on the intrinsic worth of the invention but by the artful drafting of its claims by skillful lawyers, and where patents are traded as a commodity not for production and marketing of the patented products but to search for someone who may be sued for infringement of the patent.'

55. Similar position is noted in earlier cases from other jurisdictions. The US Supreme Court has stated¹¹:

But a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.

Likewise:

The goal is to get the right balance, and the written description doctrine does

¹⁰ *Novartis Ag v. Union of India* <<https://indiankanoon.org/doc/165776436/>>

¹¹ *BRENNER, COMMISSIONER OF PATENTS v. MANSON*. 383 U.S. 519 at pg 536

so by giving the incentive to actual invention and not “attempt[s] to preempt the future before it has arrived.”¹²

56. So, in a nutshell,
- a. The Applicant drafted present ‘602 patent Specification in 2011 that covered millions of compounds but did not disclose GSK656- as Anacor did not possess GSK656 at that time;
 - b. The ‘602 Specification has no enablement for any composition, much less enablement for a composition containing GSK656.
 - c. Applicant’s at least 3 later documents (2 patent specifications and 1 journal article) clearly state that ‘602 cannot cover GSK656;
 - d. Applicant’s later patent filing specifically disclosed and claimed GSK656 – which means Anacor believed that GSK656 deserved a specific patent filing which it filed only much later;
 - e. Like patents, even non patent data and clinical trial data for GSK656 confirm that GSK656 was invented much later;
 - f. Applicant also recognised that it cannot directly discuss GSK656 with the Controller as being covered in present Specification and hence in its response to FER and SER, it has not made any direct mention to GSK656/ data for the same;
 - g. There was no legal or scientific reason that these three documents should have included statements that excluded GSK656 from the scope of 602 - in fact, had Anacor’s ‘602 Specification really disclosed GSK656, then each of these 3 documents would have referred back to ‘602.
57. Accordingly, the Opponent submits that based on Controller’s continued objection for claim 11 and as the Specification does not disclose GSK656, nor does it give any data for the same, thus to the extent that claims (1/ 2/6/ 10/18 and 21) seek to cover GSK656 or a composition covering GSK656 (or any compound of 602) as the invention, the Specification does

¹²Fiers, 984 F. 2d at 117

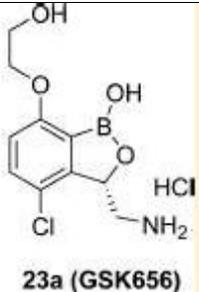
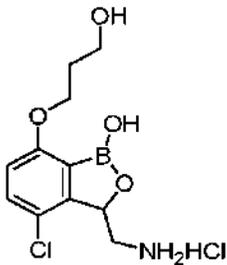
not clearly and sufficiently describe such invention and hence these claims cannot be granted in present form. Patentability of the claims may be examined by the Controller, if the Applicant specifically excludes GSK656 from the claim scope and satisfies Controller on pending objections.

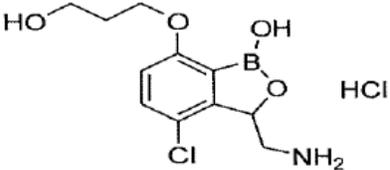
II. CLAIMS OF THE PRESENT APPLICATION ARE CHALLENGED UNDER SECTION 25(1)(e) OF THE PATENTS ACT, ON GROUND OF LACKING INVENTIVE STEP AS DEFINED UNDER SECTIONS 2(1)(ja) OF THE PATENTS ACT

58. Section 2(1)(j), requires that an invention be either a new product or process involving an inventive step and capable of industrial application. ‘Inventive step’ is further defined in Section 2(1)(ja) as ‘a feature of an invention that involves technical step as compared to existing knowledge ..’.
59. The Opponent argues application of Section 25(1)(e) in two frameworks.
- a) That Section 25(1)(e) applies since Anacor’s as the 602 Specification fails on disclosing ‘technical advance as compared to existing knowledge’- which is a requirement of Section 2(1)(ja)- that forms foundation for a rejection under Section 25(1)(e); and
 - b) The more commonly argued format for seeking a rejection under Section 25(1)(e) - i.e. showing that the ‘602 Specification lacks an inventive step over the prior art (technical assessment of obviousness).
60. Before moving on to technical assessment of obviousness for claims of present 602 Specification vis-à-vis prior art, the Opponent submits that present claims are not allowable u/s 25(1)(e) since 602 Specification fails on disclosing ‘technical advance as compared to existing knowledge’. 602 Specification does not disclose GSK656 and it is only the much later WO documents that actually disclose GSK656. The ‘technical advance’ is GSK656 (i.e. drug in trials currently) and for which Applicant is seeking the monopoly. As of the filing date of present ‘602 Specification, as much as it

pertains to GSK656, the Applicant had not actually made the ‘technical advance’ of making GSK656 (much less disclosed) over actual knowledge of the year 2011. The ‘technical advance’ came in later for which the Applicant filed later patent specification(s).

61. Since no ‘technical advance’ came in from the ‘602 Specification, there is no ‘inventive step’ disclosed in that Specification. Since the ‘602 Specification does not contain ‘inventive step’ pertaining to GSK656, thus to the extent that claims (1/ 2/ 3/ 4/ 6/ 10/ 18 and 21) seek to cover GSK656 or a composition covering GSK656 as the invention, the Specification lacks an ‘inventive step’ and hence these claims cannot be granted in present form.
62. Before comparing the minimal difference that is there between compounds claimed in ‘602 versus the prior art, the Opponent humbly submits to the Controller that the closest the present 602 Specification actually comes to anything similar to the structure of GSK656 is compound B (mentioned in the table earlier and in Applicant’s response to FER). However, compound B is not the same as GSK656. The key difference is the presence of hydroxyethoxy in GSK-656 versus hydroxypropoxy in the 602 application at the 7th position.

GSK656	Closest disclosure in ‘602 Spec (Compound B)
 <p data-bbox="451 1667 618 1696">23a (GSK656)</p> <p data-bbox="250 1772 789 1864">(S)-3-(Aminomethyl)-4-chloro-7-(2-hydroxyethoxy)benzo[c]-</p>	 <p data-bbox="873 1772 1341 1864">3-Aminomethyl-4-chloro-7-(3-hydroxy-propoxy)-3H-</p>

<p>[1,2]oxaborol-1(3H)-ol hydrochloride</p>	<p>benzo[c][1,2]oxaborol-1-ol hydrogen chloride</p> <p>This compound is same as compound B in the response to FER.</p> 
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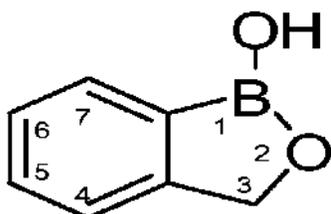
63. Accordingly, *arguendo*, if the Applicant argues that *GSK656* is only a minor variation from disclosed Compound B and compound B is sufficient for enablement threshold- even though these 2 are not the same – but compound B’s disclosure should be considered sufficient for Applicant as passing the enablement threshold (discussed in earlier segment), then the Opponent submits that *this ‘minor variation’ position as being enabling should also be considered by the learned Controller when assessing Opponent’s submissions for obviousness*. What is sufficient for enablement threshold as per Applicant should also be kept as the standard for assessing inventive step assessment for the threshold of ‘person skilled in the art’.
64. Opponent next explains the present ground within the realm of present 602 claims being obvious over prior art and starts by completely supporting and repeating the obviousness rejection by the hon’ble Controller. Opponent agrees with Controller’s continued objection that amended claims do not pass the burden of Section 2(1)(j) in view of **D1**. The Controller noted that Applicant seeks to reply (and in its amended claims) that the compounds of the amended claims possess selectivity for the bacteria that cause tuberculosis. Selectivity for an antibacterial means that such antibacterial is

able to kill one strain of bacteria, such as *M. tuberculosis*, without killing other bacteria. Controller further noted that Applicants provided selectivity data for compound B showing selectivity toward the bacteria causing tuberculosis (*M. tuberculosis*) versus other bacteria and compared this compound B with compound A46 of **D1**.

65. Opponent submits that Applicant (Anacor) has been working on benzoxaborole compounds prior to present '602 filing for many years and has been filing patents in India. The Opponent submits that as of the priority date of the claims of the Present Application, the following was well known in the art:
- Benzoxaborole derivatives for treating bacterial infections
 - Suggestion / motivation for substituting a halogen atom on the benzene ring attached to oxaboroles
66. The Opponent relies on Anacor's own publication: WO2008157726A1 (hereinafter, "WO'726", annexed herewith as Exhibit – **D1**) having a publication date of 24/Dec/2008 and titled, 'Boron Containing Small Molecules' to explain that 'Benzoxaborole derivatives have been investigated for treating bacterial infections '. The key focus will be compounds A46 and A49 from D1.
67. The Controller continues to maintain his objections on non-patentability of present 602 over **D1** in his First Examination Report as well as the later Hearing Notice. The Controller has noted that the only difference between present claimed compounds and D1 is the substituent at R4 position. The Controller has specifically noted that compound B of 602 Application differs from compound A46 of **D1** only by virtue of having a chloro group at the position of R4. Controller believes that if such a small structural change result in such kind of selectivity (as claimed by Applicant in its response to FER), then it would be impossible to predict the activity or selectivity of the

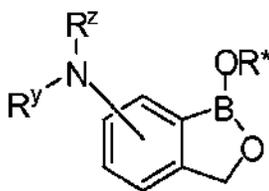
large number of compounds which are falling within the scope of present claims. Accordingly, Controller has stated that inventive step cannot be acknowledged.

68. Anacor is the Assignee for both D1 and present 620. Both **D1** and the present 602 application focus on broad spectrum antimicrobials useful in combating micro-organisms specifically multidrug resistance exhibiting microorganisms. The claims of '602 compounds have same markush structure with overlapping structural similarities exhibiting similar properties to be used for treatment of bacterial infections including Mycobacterium Tuberculosis. **D1** discloses the various substitutions that can be made at selected positions.
69. **D1** discloses oxaboroles compounds for treating bacterial infections (including M. Tuberculosis – refer para 222), pharmaceutical compositions containing the same as well as oxaboroles compounds to be used in combination with other therapeutically effective agents.

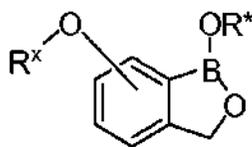


(refer para 3 of D1)

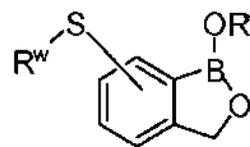
and specifically discloses compounds represented by general formula (refer internal page no.20, para no. 67):



(Iaa),

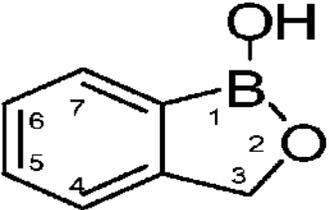
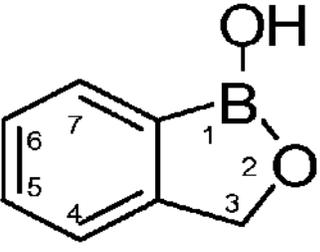
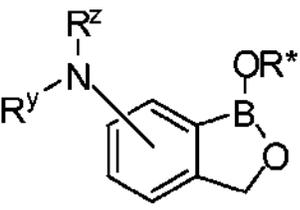
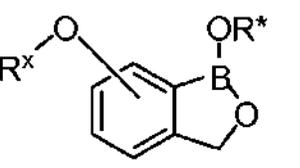
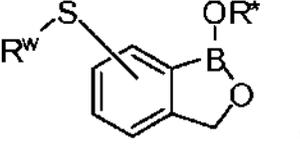
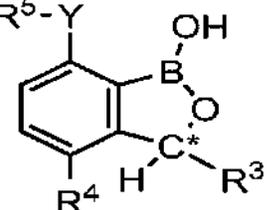
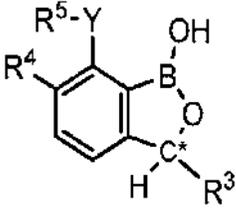
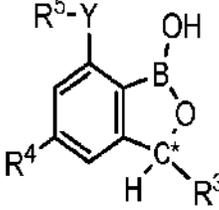


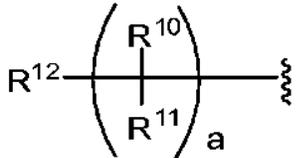
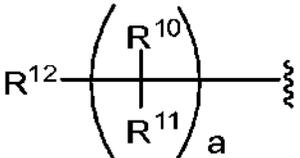
(Iab),



(Iac),

70. The similarities between **D1** and 602 are illustrated in the below table. When the disclosure made in the D1 is compared with '602 claims it is evident starting with the markush structure to the 602 claimed compounds with substitutions at position 3, 4, and 7 is disclosed in the D1 document.

WO2008157726A1 (D1)	602/KOLNP/2013	Obviousness input
 <p>Refer internal page no.1</p>	 <p>Refer internal page no.1</p>	<p>Markush structure is same. Both patents cover compounds derived from oxaborole derivatives.</p>
<p>Refer internal page number 20</p>  <p>(Iaa)</p>  <p>(Iab)</p>  <p>(Iac)</p>	<p>Refer internal page no.16 and 17</p>   	<p>The substitutions to be made in markush structure to derive compounds with antibacterial properties at position 3, 4 and 7 is same as in the claimed compound.</p>

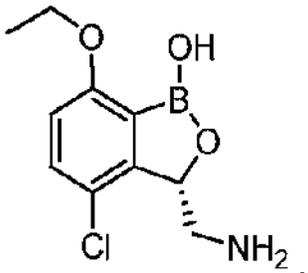
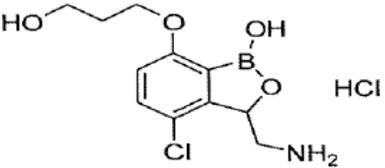
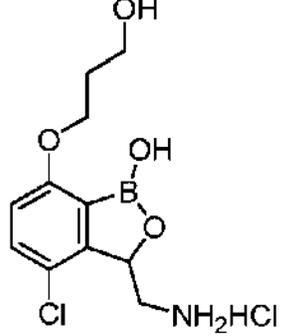
<p>R5 is</p>  <p>wherein the index a is a member selected from 1 to 10.</p> <p>Each R10 and each R11 is selected from H, substituted or unsubstituted alkyl, OH and NH2; R12 is a member selected from H, R7, halogen, cyano, amidino, OR7, NR R8, SR7, -N(R)S(O)2R8, -C(O)R7, -C(O)OR7, -C(O)NR8.</p> <p>Each R7 and each R8 is independently selected from H, substituted or unsubstituted alkyl, substituted or unsubstituted heteroalk</p>	<p>R5 is</p>  <p>wherein a is 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10,</p> <p>each R10 and each R11 is independently selected from the group consisting of H, substituted or unsubstituted alkyl, OH and NH2; R12 is selected from the group consisting of H, R7, halogen, cyano, amidino, OR7, NR R8, SR7, -N(R)S(O)2R8, -C(O)R7, -C(O)OR7, -C(O)NRR8 wherein</p> <p>each R7 and each R8 is independently selected from the group consisting of H, substituted or unsubstituted alkyl,</p>	<p>The substitutions to be made in markush structure at position 7 to derive antibacterial compounds is similar to the claimed compound. D1 discloses same set of substituents at position R5, refer internal page no.13, para no.[0079] and claim 17 which is same as the one claimed (Claim 21) in the '602.</p>
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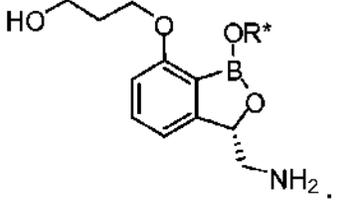
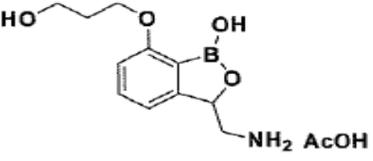
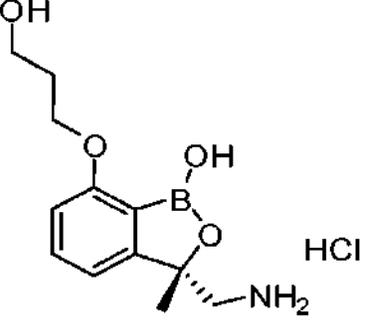
<p>yl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted aryl, and substituted or unsubstituted heteroaryl.</p> <p>In an exemplary embodiment, the index a is an integer selected from 1 to 8.</p> <p>In an exemplary embodiment, the index a is an integer selected from 2 to 4.</p> <p>In an exemplary embodiment each R10 and each R11 is a member selected from H, substituted or unsubstituted alkyl, OH, and NH₂.</p> <p>In an exemplary embodiment each R10</p>	<p>substituted or unsubstituted heteroalkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted aryl, and substituted or unsubstituted heteroaryl.</p> <p>In an exemplary embodiment, Y, R4, R3, R10, R11, and R12 are as described herein, and a is 1, 2, 3, 4, or 5.</p> <p>In an exemplary embodiment, Y, R4, R3, R10, R11, and R12 are as described herein, and a is 2, 3, or 4.</p> <p>In an exemplary embodiment, Y, R4, R3, R10, R11, and R12 are as described herein, and a is 3.</p> <p>In an exemplary</p>	
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<p>and each R1 1 is a member selected from H, substituted or unsubstituted alkyl, OH and NH2.</p> <p>In an exemplary embodiment each R10 and each R11 is a member selected from hydroxyl alkyl and NH2.</p> <p>In an exemplary embodiment each R10 and each R1 1 is from H. In an exemplary embodiment, R12 is a member selected from H, cyano, amidino, -N(R7)S(O)2R8, OR7, NR7R8, -C(O)OR7, C(O)NR7R8 and each</p> <p>In an exemplary embodiment R1 2 is selected from the group consisting of H, OH, NH2, methyl, ethyl, -NHS(O) 2CH3, cyano, -NHC(O)CH 3, -NHC(O)NHCH 2CH3, -C(O)NH 2, -C(O)OH, 4-</p>	<p>embodiment, Y, R4, R3, a, and R12 are as described herein, and each R10 and each R1 1 is independently selected from the group consisting of H, substituted or unsubstituted alkyl, OH, and NH2. In an exemplary embodiment, Y, R4, R3, a, and R12 are as described herein, and each R10 and each R1 1 is H. In an exemplary embodiment, Y, R4, R3, R10 , R1 1, and a are as described herein, and R1 2 is selected from the group consisting of H, OH, NH2, methyl, ethyl, -NHS(O) 2CH3, cyano, -NHC(O)CH 3, -NHC(O)NHCH 2CH3, -C(O)NH 2, -C(O)OH, 4-(methoxy)phenyl, benzyl, benzoxy, -NHC(O)OCH 2Ph, -</p>	
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<p>(methoxy)phenyl, benzyl, benzoxy, -NHC(O)OCH 2Ph, -C(O)NHCH 2CH2OH and -C(NH2)(NH). Refer internal page no. 24</p>	<p>C(O)NHCH 2CH2OH and -C(NH2)(NH). Refer internal page no.18</p>	
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71. As we delve deeper into compounds actually disclosed in **D1**, we see compounds bearing close structural similarity to 602:

<p align="center">Important/ representative compounds of 602 (Applicant does not exemplify GSK656):</p>		
<p>Page no. 21, para no 88</p> 	<p>Compound B (page no. 71, para no 0253)</p> 	<p>Compound J</p> 

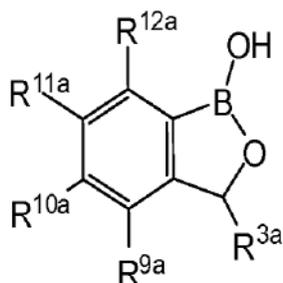
<p align="center">Important/ representative compounds of D1:</p>		
<p>Internal page 128 (para 378) as well (compound A49, pg. 223):</p>  <p>In this compound, R* is</p>	<p>Applicant has submitted comparative data against A46 of D1, in its response to FER. A46 structure:</p> 	<p>Page no.234. (compound A62)</p> 

H		
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72. While **D1** admittedly does not include a halogen substitution at position 4 (Chlorine), it is imperative to note the possibility of a substitution at position 4 is disclosed in **D1** with a NH₂. The substitutions made at positions 3, 6 and 7 in 602 are same as disclosed in **D1**. Specifically, **D1** mentions the substitutions- both mono-substituted and di-substituted - that can be made at position 3, 6 or 7. The substituents that can be placed on different positions around the core are also discussed in detail in the specification (refer internal page no.20, at para no. [0067]). Further compounds with halogen substituents (including chlorine) on the phenyl ring (refer internal page no.99, para 0265 table) are also mentioned in the specification. Thereby, **D1** discloses the same markush structure and covers the possibility of substitutions in the selected positions with a non-hydrogen moiety in the oxaborolemarkush structure to reach antibacterial compounds for use in M. Tuberculosis.
73. Applicant in their July 2018 response to the FER includes data comparing compound B of '602 application with that of A46 compound in D1 and compound J with that of A36 compound of D1. They claim replacement of hydrogen with the claimed moieties leads to increased SI (Selective Index) towards mycobacterium tuberculosis which is an unexpected effect and is not disclosed or taught by the D1 document. However, Applicant fails to mention at which position of the markush the replacement of hydrogen is made, to reach the higher SI when compared to prior art.
74. The Applicant, while citing the structural differences between '602 and **D1** makes a statement that when benzoxaborole is substituted at the 3- and 7- positions in the benzoxaborole ring, the 4 position is only described as hydrogen in **D1**. However, that is not completely correct. Possibility of a substitution at position 4 is clearly disclosed in **D1** and the same is also

evident with the mention of NH₂ substitution at position 4 of the benzoxaborole, refer **D1** at page no.21, para no.68.

75. Anacor's multiple publications over the years are relevant. **WO2009111676** (hereinafter, 'WO'676' and annexed herewith as **-D2**) published on 11/Sep/2009. **D2** was filed in India as 3433/KOLNP/2010 and is now abandoned.
76. **D2** discloses multiple embodiments that can be derived from the markush structure, including the substitutions in the markush structure of the benzoxaborole compound and the substituents in the markush structure seen at position 3, 4, 5, 6 and 7, refer to figure 2A at internal page no.12/141. The substituents disclosed in the markush include is similar to the substitutions made in the '602 application.

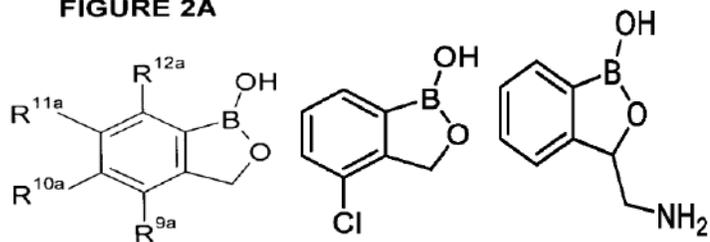


77. Applicant assertion in their response to FER for 602, state the substitution at position 4 in the boronoxaborolemarkush structure with a non-hydrogen moiety is not taught stands refuted, as the disclosure made in the **D2** document mentions about chlorine substitution at position 4 in the markush structure. The **D2** document apart from discussing in detail the synthesis of benzoxaborole derivatives, also discloses the probable substitutions that can be made in the markushstructure core which includes positions 3, 4 and 7 which is same as in the '602 application.
78. The disclosures made in the **D1** and **D2** document when read together would make the claims of '602 obvious. So a POSITA exploring the

possibility of discovering benzoxaboroles derivatives with effective anti-bacterial activity would be motivated to follow the same mode of experimentation and choose the same set of substitutions in the markush structure to discover compounds from same chemical genus (related compounds). Hence a POSITA working on developing benzoxaborole derivatives for use as effective anti-bacterial agents on reading **D1** and **D2** would combine the teachings and know about synthesis of benzoxaborole derivatives, the monosubstitutions and disubstitutions to be made at key positions in the markush structure and identify important factors to make relevant substitutions at position 4 and 7 in the '602 application. A POSITA would be motivated to look at the use of known benzoxaborole derivatives and make desired structural modifications by adopting the teachings in the prior art to discover compounds with anti-bacterial activity.

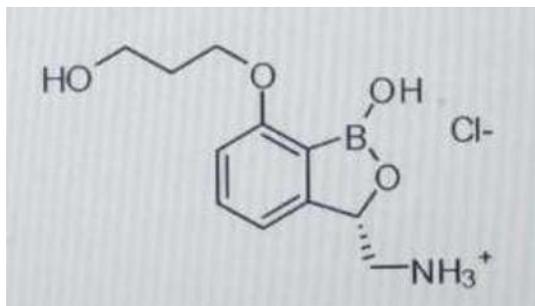
79. Another patent publication from Anacor itself: **WO2007146965** (hereinafter, 'WO'965' and annexed herewith as **-D3**) published on 12/Dec/2007, titled, 'Compounds for treatment of Periodontal Disease'. WO'965 has also been filed in India as 10234/DELNP/2008 and presently stands abandoned.
80. **D3** discloses antibacterial compounds having a boron containing structure, refer internal page no.6, formula I. The disclosed formula I is similar to the markush of '602 application. The use of benzoxaboroles compounds possessing anti-bacterial activity and the key substitutions to be made at position 3, 4 and 7 are discussed in the D3 document. In particular, D3 discloses exemplary compounds with chlorine in position 4 and alkoxy substitution at position 3 in the markush structure as seen in the '602 application, refer Figure 2A at page no.3/20, compound no. 16.

FIGURE 2A



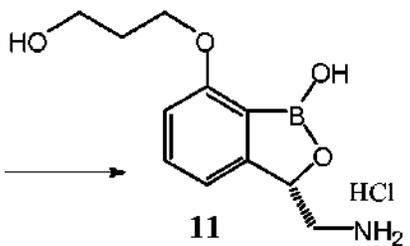
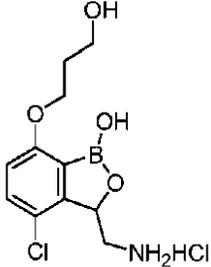
Chlorine at position 4 Amino at position 3

81. **D3** also teaches compositions comprising the compounds with pharmaceutically acceptable excipients and use in combination with other active agents. The disclosure made in the **D3** document when read in conjunction with **D1** and **D2** teaches the benzoxaborole derivatives having substitutions either with hydrogen and non-hydrogen moiety such as halogen (chlorine) at position 4 possessing antibacterial activity, these disclosures render the claims of '602 covering the benzoxaborole markush structure, substitutions at position 4 and their derivatives obvious.
82. Opponent has focused on D1's compound 49 as key part of the analysis because Applicant Anacor itself felt that this compound was worth developing further and it continued to file more patent application(s) that develop A49 from D1 into polymorphic forms. Refer Anacor's publication **WO2010080558** (hereinafter, 'WO'558' and annexed herewith as Exhibit – **D4**) published on 15/July/2010 – which is before the earliest priority of 602. **D4** was filed in India as 2126/KOLNP/2011 and has been formally abandoned by Applicant in 2017.
83. **D4** discloses polymorphic forms of compounds of following structure:



84. **D4** discloses the crystalline polymorph of hydrochloride salt of (S)-3-Aminomethyl-7-(3-Hydroxy-Propoxy)-3H-Benzo[C][1,2] with substitution at position 3 and 7 of the markush compound. This compound (noted in previous paragraph) is same as compound A49 of **D1**. Compounds of **D4**, including above compound, possess anti-bacterial activity as they have the ability to inhibit leucyltRNAsynthetase of the microorganisms.
85. The substitution in **D4** at position 3 and 7 are same as claimed in the present '602 application. A comparison of the present 602 application and D1/ D4 make the claimed invention of 602 obvious.

86.

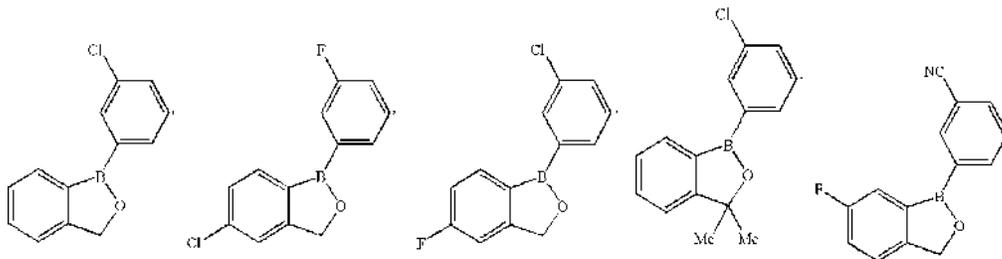
WO'558 D4	Present Application
Refer internal page no. 30 in the specification  <p style="text-align: center;">11</p> (S)-3-aminomethyl-7-(3-hydroxypropoxy)-3H-benzo[c][1,2]oxaborol-1-ol hydrochloride salt	Refer page no. 71, para no.[0253] 

Suggestion / Motivation for substituting a halogen atom on the benzene ring

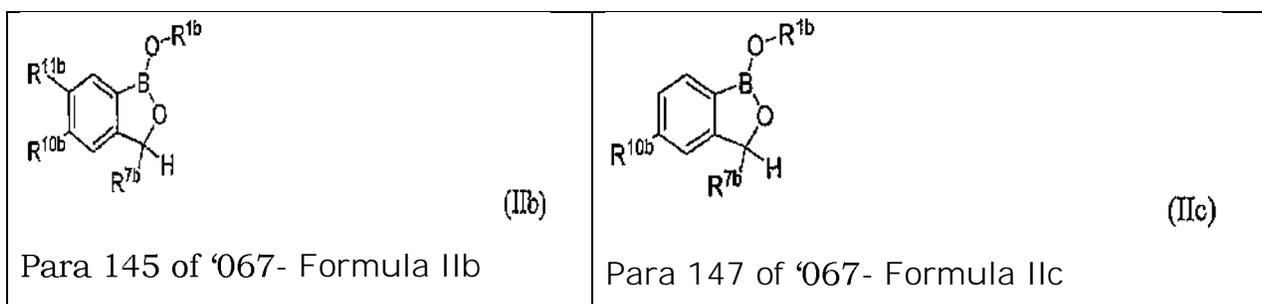
87. Additional evidence on halogen substitution on the benzoxaborole ring is found in Anacor's old documents: WO2005013892 pertains to compositions and methods of use of borole derivatives, including benzoxaboroles therapeutic agents for treatment of diseases caused by M. Tuberculosis.

Specific compounds that have been disclosed by the '892 specification have following features:

- i) A halogen/ Hydrogen substituent on the benzene ring attached to oxaboroles at 5th or 6th position of the benzo[c][1,2]oxaboroles as depicted below:

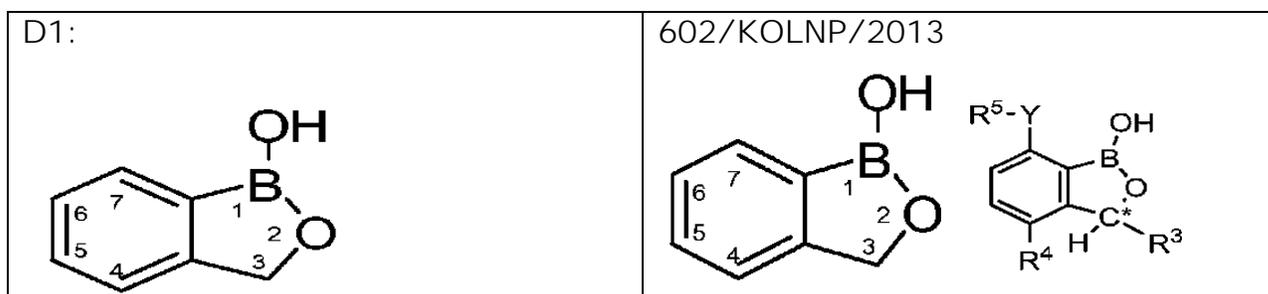


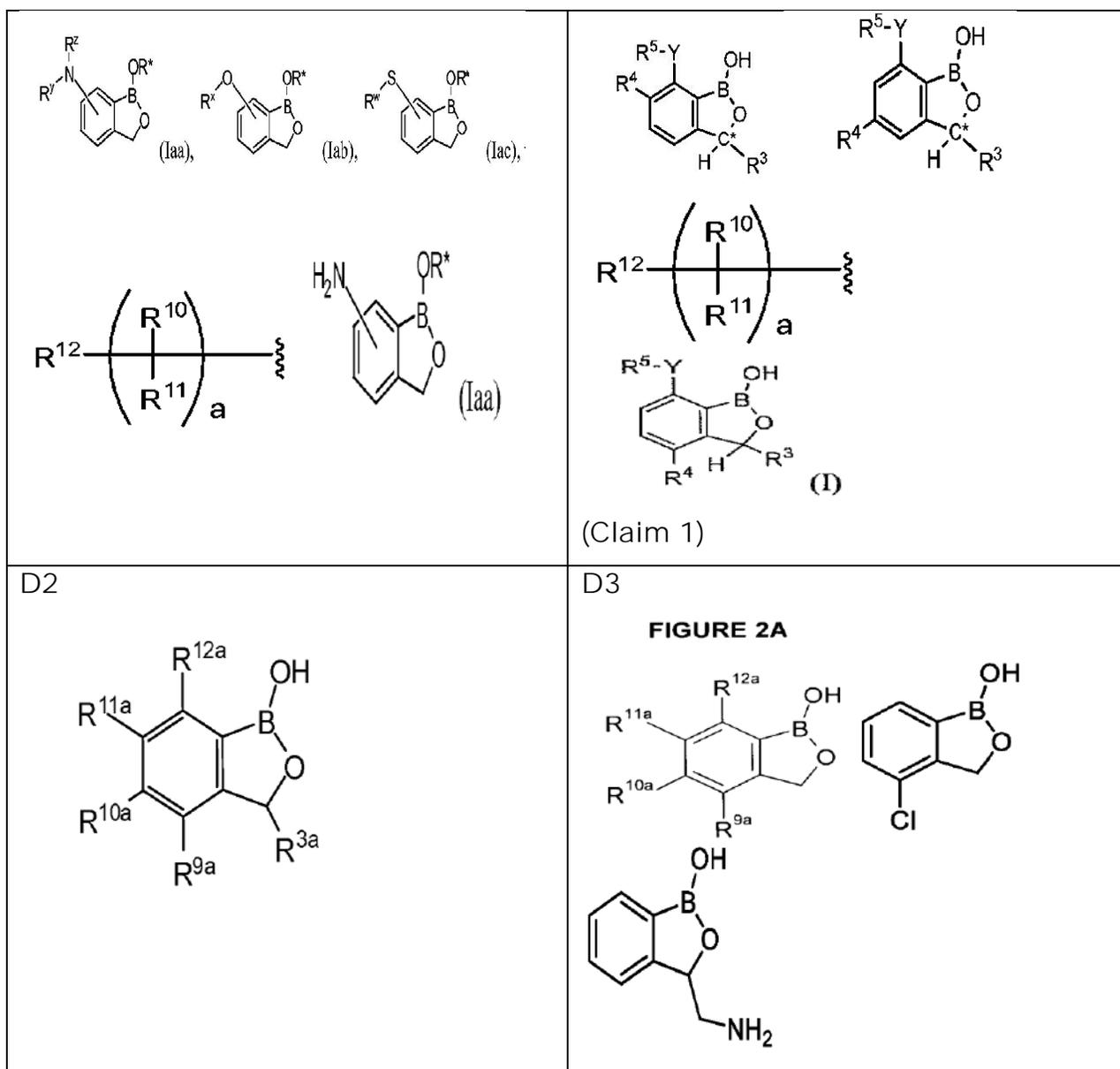
88. Anacor's WO2006089067 specifically discloses below embodiments, wherein R^{1b} can be H; R^{7b} is a member selected from H, methyl, ethyl and phenyl. R^{10b} is a member selected from H, OH, NH₂, SH, halogen, substituted or unsubstitutedphenoxy, substituted or unsubstitutedphenylalkyloxy, substituted or unsubstitutedphenylthio and substituted or unsubstitutedphenylalkylthio. R^{11b} is a member selected from H,



89. Thus, based on the disclosure of the WO'892 application and later documents, a person skilled in the art can very well create benzoxaborole compounds having a halogen substituent at 4th position of the benzo[c][1,2]oxaboroles with reasonable expectation that such compounds would also exhibit antibacterial activity.

90. A POSITA who is equipped with the state of art disclosed in D1, D2, D3 and D4 would look at the multiple Anacor filings and would be motivated to adopt and experiment on the same lines to arrive at an effective anti-bacterial compound and compositions containing them. Therefore given the disclosure made in the D1 to D4 documents the claims of '602 is found to be obvious and lacks any ingenuity over the cited prior art documents to be granted a patent monopoly.
91. From the above prior art documents- all coming from Anacor itself, it is evident that the claimed compound with substitution at 4th position (including Halogen substitution) in the markush structure is obvious. A POSITA from the reading of the above listed prior art documents is clearly motivated to work on the possible substituents on the known and discovered benzoxaborole genus of compounds with same markush structure exhibiting antibacterial activity.
92. It is further emphasized that most of the above prior art documents are from Anacor), thereby establishing the fact that Applicant already is aware of the know-how around benzoxaborole compounds including present 602 claims. The markush structure of the benzoxaborole remains the same since the disclosure was made much before the year 2006 in several patent documents. The Applicant has been making minor tweaks to a structure and filing multiple patents. The substitutions made to the markush structure in these prior art documents cover all the possible embodiments and multiple compounds can be obtained with anti-bacterial effect.





93. The Applicant continues to file multiple patent applications for same class of drugs i.e. benzoxaborole derivative with various substitutions to obtain multiple patent monopolies over iterations of the core benzoxaborole compound markush. The present '602 application also claims same set of benzoxaborole derivative compound which is both structurally and functionally similar for use in the treatment of bacterial infections as disclosed in the prior art documents, therefore claims are found to be obvious and lacks inventive step.

94. The Opponent submits that the Controller, while determining inventive step, has held that mere “replacement of alkyl and/or other group” to a known structure cannot be considered as technical advancement under S. 2(1) (ja) (See order dated 21.02.2020 of the Assistant Controller of Patents and Designs in the matter of patent application 478/MUMNP/2015 and annexed herewith as **Annexure -2**).
95. Hence the present claims (1/ 2/3/4/ 6/ 10/ 18 and 21) are obvious for a POSITA and is also found to lack inventive step thereby failing to fulfill the requirement under Section 2(1)(j) and 2(1)(ja) of the Patents Act, 1970.

III. CLAIMS OF THE PRESENT APPLICATION ARE CHALLENGED UNDER SECTION 25(1)(F) OF THE PATENTS ACT, ON GROUND OF NOT BEING PATENTABLE ON ACCOUNT OF SECTION 3(d), 3(f) AND SECTION 3(e) AND THEREFORE ARE OBJECTED TO UNDER SECTION 25(1) (f)

96. Section 25(1)(f) of the Patents Act allows opposition to grant of patent on the ground of the claimed invention not being an invention within the meaning of the Patents Act, 1970. Section 25(1)(f) reads as follows:

*“(1) Where an application for a patent has been published but a patent has not been granted, any person may, in writing, represent by way of opposition to the Controller against the grant of patent on the ground—
.. (f) that the subject of any claim of the complete specification is not an invention within the meaning of this Act, or is not patentable under this Act.”*

97. Opponent submits that S.25(1)(f) applies to the present claims under multiple frames of analysis:
- a) No disclosure of technical advance (GSK656) and hence not an invention;
 - b) Section 3(d) applies since presently claimed compounds are structurally very similar to compounds from D1 and enhanced efficacy data is not

given and the submitted data in Applicant's response is very limited compared to claim scope;

c) Section 3(e) applies to claim 12 – as it seeks to cover a mere admixture with excipients.

98. As noted in the earlier section, present Specification does not disclose GSK656 and it is only the later WO documents that actually disclose GSK656. An inventive step requires a 'technical advance as compared to existing knowledge'. It is this 'technical advance' which is the inventor's hardwork and for which he gets the monopoly. As of the filing date of present '602 Specification, as much as it pertains to GSK656, the Applicant had not made any 'technical advance' in the '602 Specification over actual knowledge in the year 2011 and so there was no case of having an 'inventive step'. The 'technical advance' came in later for which the Applicant filed later patent specifications.
99. Since no 'technical advance' actually came in via the '602 Specification (as GSK656 was invented and disclosed much later), there is no 'inventive step' disclosed in the present Specification and hence the '602 Specification does not contain the GSK656 invention. Since the '602 Specification does not contain 'inventive step' pertaining to GSK656, thus to the extent that claims (1/ 2/3/4/ 6/ 10/ 18 and 21) seek to cover GSK656 or a composition covering GSK656 as the invention, the Specification lacks an 'inventive step' and hence these claims cannot be granted in present form.
100. The Opponent agrees with and supports the Controller's continued objection u/s 3(d) against the amended 21 claims 1-14 since the compound(s) of present claims are different from D1 with respect to substituents at R4 only (i.e. halogen, methyl and methoxy in present Specification) whereas D1 discloses compounds with "Hydrogen" substitution. The Controller has noted that since the compounds of the present application and **D1** are

structurally very close to each other the present claimed compounds should be considered mere derivative of a known compounds without any enhancement (except the tested compound) in therapeutic efficacy with respect to **D1** (the closest known compound). Unless, Applicant can show enhanced efficacy, it cannot pass the burden of Section 3(d) and the claims will be liable to be rejected u/s 3(d).

THAT CLAIMS OF PRESENT APPLICATION ARE NOT AN INVENTION UNDER SECTION 3(e)

101. It is submitted that claim 12 of the Present Application is liable to be rejected as the claimed composition is a mere admixtures resulting in mere aggregation of properties and not an invention under Section 3(e) of the Patents Act.
102. The Patents Act under Section 3(e) excludes patentability of a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance.
103. It may be noted that while determining the question of a claim passing the test of Section 3(e), Asst. Controller of Patents and Designs had remarked that, *“The question of efficacy and or synergism are matters of scientific facts which are required to be embodied in the specification so that the said characteristics are apparent from the specification.”* (See order of the Asst. Controller of Patents & Designs in patent application 314/MUM/2008, at lines 3-5 at internal page 7 annexed herewith as **Annexure -3**).
104. The Applicant has not even given a pro-forma composition of the Markush compounds OR any of the 22 specific compounds (A through V) with any specific excipients (carriers) – in terms of a working composition anywhere in the Specification. Further the burden is on the Applicant to show synergism by supportive experimental data or comparative examples.

Further, such burden is not discharged by merely indicating the weight of each of the ingredients of the composition. (See the order of the Controller in 3725/CHENP/2006, herewith annexed as **Annexure -4** at internal page 4. Para 8)

105. It is submitted that composition claimed in Claim 12 of the Present Application is a mere admixture of a compound of claim 1, or its pharmaceutical salt with unspecified excipients. The resulting formulation will have mere aggregation of properties of the individual components. Further, the Applicant has failed to disclose any synergistic effect of the claimed composition in the complete specification. With the failure to fulfill its obligation to provide experimental or comparative data to show synergy of the claimed formulation, the formulation of claim 12 fails Section 3(e) and must be rejected.

IV. THAT THE APPLICANT FAILED TO DISCLOSE INFORMATION REQUIRED BY SECTION 8, HENCE THE OPPOSITION IS RAISED UNDER SECTION 25(1)(h)

106. If the patent applicant fails to furnish information required under Section 8 of the Patents Act, within the time prescribed by law, the application may be objected to under Section 25(1) (h) of the Patents Act.

107. An objection under Section 25(1)(h) is raised herein without prejudice to the grounds raised above. It is submitted that the Applicant has failed to comply with the mandatory requirements of Section 8 of the Patents Act.

108. In the context of fulfillment of the applicant's duty under Section 8, the Opponent submits two important rulings from the Hon'ble High Court of Delhi.

a) Suresh Behl vs. Koninklijke Philips Electronics [MANU/DE/2785/2014] (while adjudicating a matter on revocation) had noted, *“For the aforesaid*

reasons, we are of the view that the power to revoke a patent under Section 64(1) is discretionary and consequently it is necessary for the Court to consider the question as to whether the omission on the part of the plaintiff was intentional or whether it was a mere clerical and bonafide error.”

b) Chemtura Corporation vs. Union of India (UOI) and Ors.[2009 (41) PTC260(Del)]

109. That is, while determining issue of omission of information to be submitted under Section 8(1), it is to be seen whether omission of that information was intention or was a mere clerical or *bona-fide* error. If the omission was intention, the claims must be rejected. Attention is drawn to the Form-3 dated 10.10.2019 filed by the Applicant. It may be noted that regarding the update on the US Application no. 15/685,846 (published as US20170355719), the Applicant discloses the status as, “To be abandoned”.
110. However, an analysis of the file wrapper of the US Application no. 15/685,846 indicates that a notice from the US Patent and Trademark Office to the Applicant dated 30/Apr/2019 notifying “Final Rejection” of the Application. The Final Rejection indicates that the claims of the corresponding application in the US did not meet the patentability standards. It is submitted that the updated Form-3 was filed by the Applicant on 10/Oct/2019, yet it deliberately did not disclose the rejection of the US Application no. 15/685,846 which was notified months before on 30/Apr/2019.
111. Therefore, the Applicant has deliberately not disclose the information related to the status of corresponding applications in other jurisdictions as required under Section 8(1) of the Patents Act. The claims of the Present Application must therefore be rejected.

PRAYER FOR RELIEF

112. In view of the above said references Opponent prays as follows:

- a) To be heard and be allowed to lead evidence (documentary and oral) before any order is passed;
- b) To reject the claims of Application No. 602/KOLNP/2013 *in toto*;
- c) To allow the Opponent to file further documents as evidence if necessary to support the averments;
- d) To allow amendment of the opposition as and when the need may arise;
- e) To allow the Opponent to make further submissions in case the Applicant amends the claims;
- f) For costs in this matter;
- g) For any further and other relief in the facts and circumstances that may be granted in favour of the Opponent in the interest of justice.

Dated this 12th day of November, 2020



RAJESHWARI H. IN/PA – 358
AGENT FOR THE OPPONENT
OF RAJESHWARI AND ASSOCIATES

To
The Controller of Patents
The Patent Office
Kolkata