

Novelty

in organic chemistry



Novelty - Section 4 IL Patents Law

- *“An invention is deemed new if it was not published, in Israel or abroad, before the application date –*
- *by written, visual, audible or any other description, in a manner that enables a skilled person to make it according to the particulars of the description;*
- *by exploitation or exhibition, in a manner that enables a skilled person to make it according to the particulars thus made known.”*

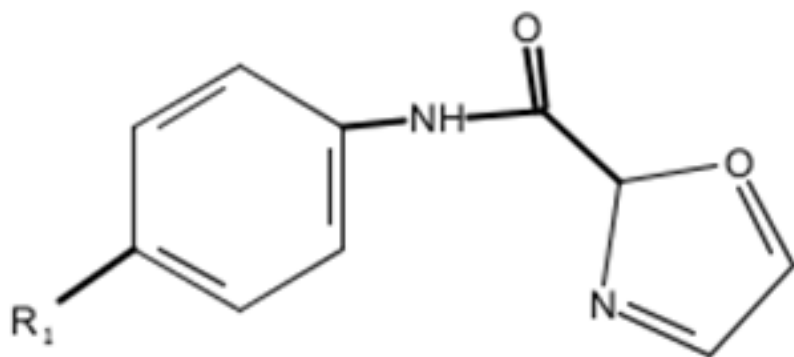
- An invention can be a product or a process.
- In general, product can be compound, specific crystal form, specific isomer, combination of compounds, compound for use or composition disclosing the compound.
- The obtainment has to be referred to the special claim, not to the whole invention .

- Lack of novelty is based on a single prior art reference .
In deciding questions of “Novelty”, there should be no difference between the subject matter of the cited document and the invention. Two or several documents (“mosaic“) can't be combined to determine lack of novelty . All parts of invention are to be described in the same document. But It is not called “mosaic“ using dictionary, encyclopedia or Wikipedia to interpret some terms.
- The used terms in the application can be interpreted as would be understood by Common knowledge , for example, “alkyl” can be interpreted as “ethyl” .
- A matter that wasn’t described in an earlier publication, can't be added

- **Determining of Novelty wherein:**
 1. **compounds in the application, and the reference are described by “Markush formula”**
 2. **there is an overlapping of the general definitions of compounds, several cases of overlapping are to be taken into account.**

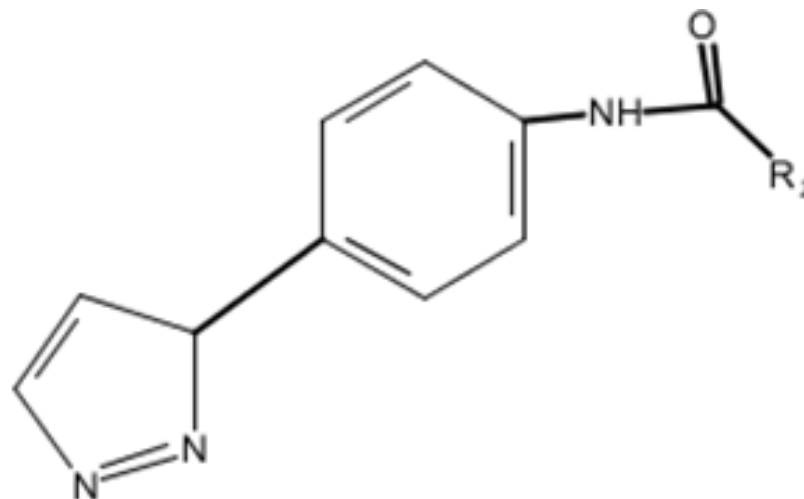
- **Regarding the above overlap: if the specific claimed compounds are not exemplified in cited document, novelty of the claimed compounds can be recognized.**

Application



R1 is aryl or 5-6 membered heteroaryl group containing at least one heteroatom selected from N, O, S.

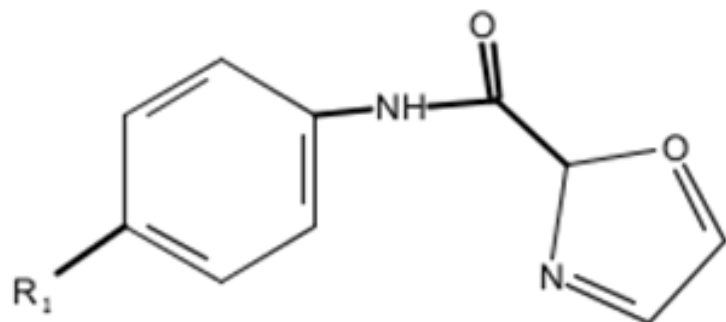
Publication



R2 is aryl or 5-6 membered heteroaryl group containing at least one heteroatom selected from N, O, S.

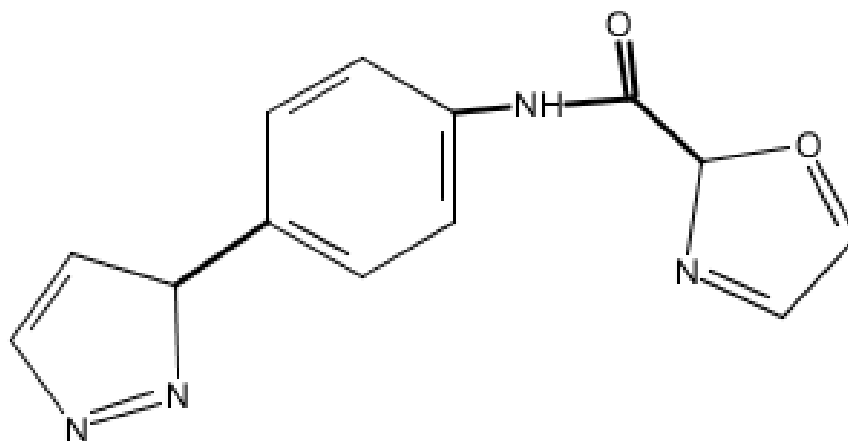
- If the specific compounds, that fall under application definitions, are exemplified in the cited document, the publication denies a novelty of the claimed compounds.

Application



R₁ is aryl or 5-6 membered heteroaryl group containing at least one heteroatom selected from N, O, S.

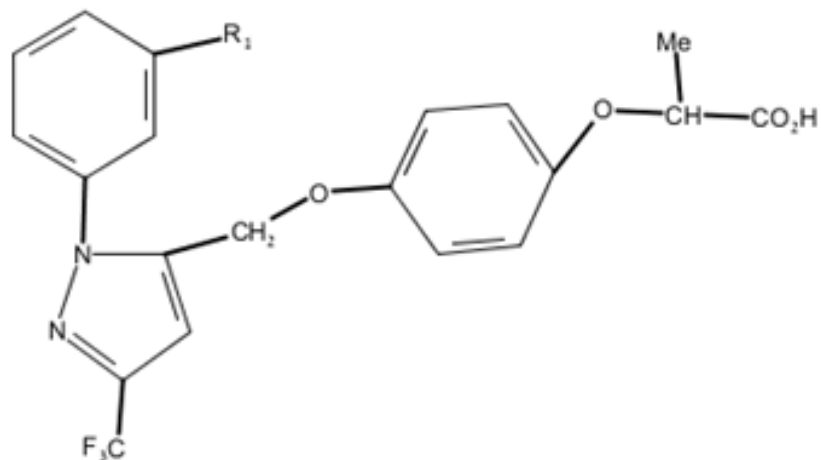
Example (cited document)



Exceptions :

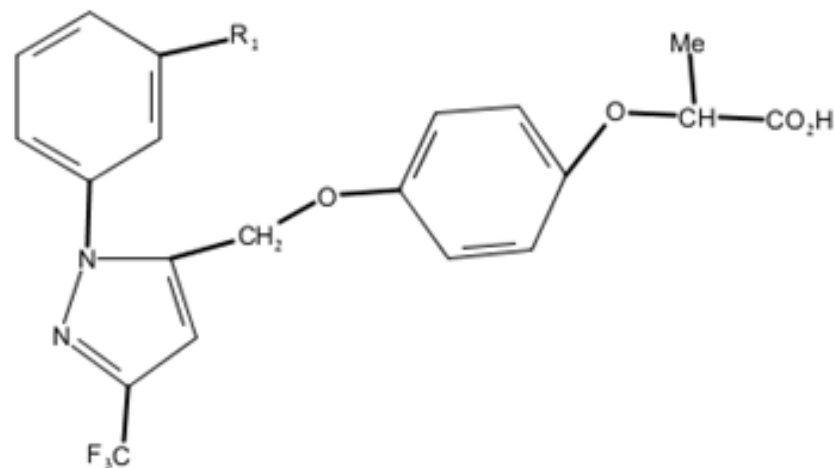
- If exist an overlap between two general definitions of compounds, in application and in publication, and at the same time, compounds are not exemplified in both documents, the publication can be cited according to section 4 of the Israeli patent law.
- If definitions of two Markush structures overlap and both Markush formulas are very similar, in such specific case the publication can be cited according to section 4 of Israeli patent law.

Application



- R_1 is C_1 - C_6 alkyl, aryl or 4-5 membered cycloalkyl.

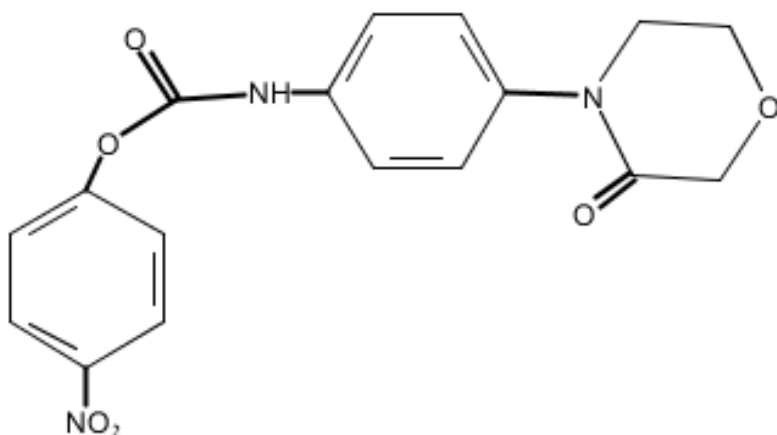
Publication



- R_1 is C_1 - C_6 alkyl, aryl

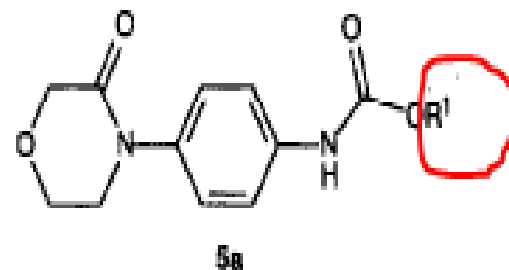
- It has to be noted that *different parts of the same cited document can be combined:*
- If the exemplified compound comprises a substituent that is defined as R radical while, at the same time, the definitions of R in the other part of the document description overlaps with R's definitions of claimed compounds, the document can be cited according to section 4 of Israeli patent law.

Application



Citation

40. A compound of Formula 5a:

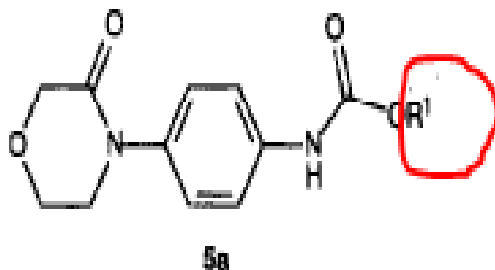


wherein

R^1 is alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, or substituted aryl alkyl.

Claims of the citation

40. A compound of Formula 5a:



wherein

R^1 is alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, or substituted aryl alkyl.

Description of the citation

For example, without limitation, substituted compounds may comprise one or more substituents selected from the group consisting of: R^1 , OR^1 , NR^1R^2 , SR^1 , halogen, $SiR^1R^2R^3$, $OC(O)R^1$, $C(O)R^1$, CO_2R^1 , $CONR^1R^2$, $NR^1C(O)_2R^2$, $S(O)R^1$, $S(O)_2R^1$, CN , and NO_2 .

- If specific compounds are claimed in the application while:
 - ☞ the compounds for the same use in the publication are described by Markush formula means
 - ☞ the compounds are not exemplifiedthe novelty of the invention is recognized.

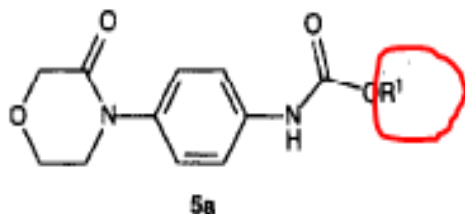
- When the application and publication exemplify the same specific compounds, the prior art document has to be cited according to section 4 of the Israeli patent law.

- **Novelty of claimed compounds could be denied using documents describing same compounds, used for any aim, even if used as an intermediates in some process.**

Claims of application

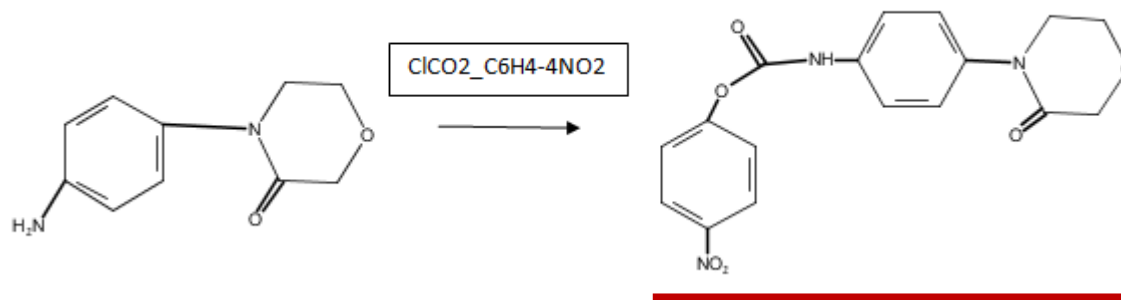
Cited document

40. A compound of Formula 5a:



wherein

R¹ is alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, or substituted aryl alkyl.



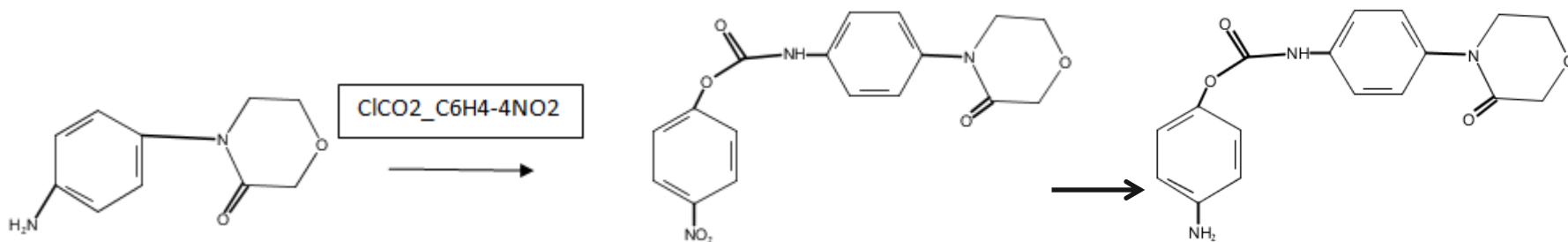
■ General Practice In Organic Chemistry:

Application's Claims	Citation	
<u>Markush Formula</u>	Only Generic Definition overlaps	Novel (depends on overlapping degree)
	Specific Compounds	Not novel
Specific Compounds	<u>Markush Formula</u>	Novel
	Specific compounds	Not Novel

Novelty of a Process:

- Unless all the steps of the process (claimed in the application) appear in a single prior publication, the novelty of the process will be recognized.
- Novelty of a claimed process, which is part of a several-steps process that was described in an other document, can be denied by that document.

The cited document



- **The section 50 of Israeli Patent Law says: “If the invention is a process, then the patent shall apply also to the direct product of the process.”**
- **Therefore the IP Law recognize claims drafted as “Product by process”**
- **The novelty of subject matter of claim “Product by process” in application can be anticipated by the same process described in the previous publication.**

- **The subject matter of an application could be a compound for a special use or a second use as well.**

- **For example: a compound for use in the treatment of Alzheimer's disease is claimed, the publication describing the same compound for use in the treating of neurodegenerative diseases can be used to deny the novelty of such claim.**

Second use

Israeli law recognizes applications formulated for second use of known compounds.

Document disclosing compounds for first use can't anticipate the claims formulated for second use of the said compounds.

Different applications filed for the same invention

According to criteria set out by section 2 of the Israeli law, if more than one application was applied for a patent for the same invention, then the patent shall be granted to the first to validly apply.

As such, if previously applied claim (first application) overlaps with current claim (second application), second one should not be granted.

COMPOSITIONS describes:

1. **Ingredients** **A + B + C + D**
 - **Active ones** **A and B**
 - **Additives** **C and D**
2. **Ratio** **A 2%-15%, B 10%-30%**
3. **Special form of composition**

■ Application

1. A formulation comprising:
A 20% + B 40%.
2. A formulation of claim 1
further comprising D and F
additives

■ Previous document

1. A formulation comprising:
A 2%-30% + B 20% - 50% +
additives (C, D, F, G)

Previous document
anticipates a novelty of
application.