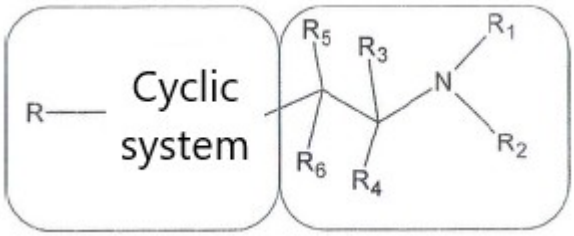
2.

2-phenylethylamine derivatives – I-NPS group

Any compound derived from 2-phenylethylamine with the element A in the molecule structure (detailed structure of which is defined in the paragraph 1.1) connected with the element B (detailed structure of which is defined in the paragraph 1.2) with 500 U of overall maximum molecular mass and salts of these compounds, if their existence is possible.



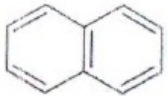
ELEMENT A ELEMENT B

1.1 ELEMENT A

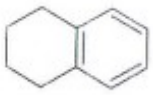
a) Element A can contain following cyclic structures: phenyl-, naphthyl-, tetralinyl-, methylenedioxyphenyl-, ethylenedioxyphenyl-, furyl-, pyrrolyl-, thiofuranyl-, pyridyl-, benzofuranyl-, dihydrobenzofuranyl-, indanyl-, indenyl-, tetrahydrobenzodifuranyl-, benzodifuranyl-, tetrahydrobenzodipyranyl-, cyclopentyl-, cyclohexyl-.

Cyclic structure of the element A:

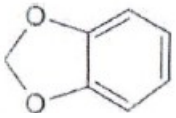
Phenyl-



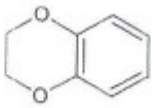
Naphthyl-



Tetralinyl-

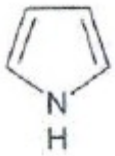


Methylenedioxyphenyl-

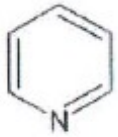


Ethylnedioxyphenyl-

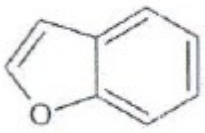
Furyl-



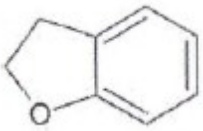
Pyrroyl-



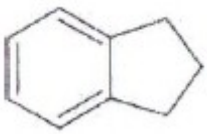
Thiofuranyl- Pyridyl-



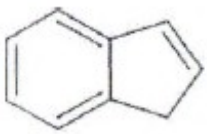
Benzofuranyl-



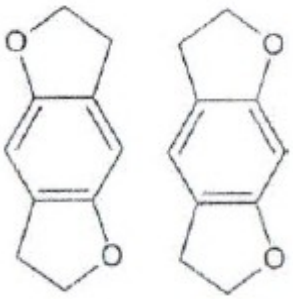
Dihydrobenzofuranyl-



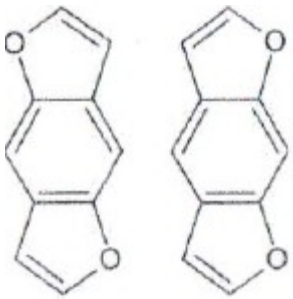
Indanyl-



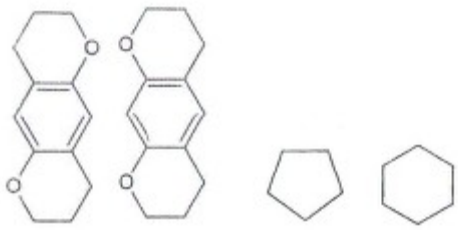
Indenyl-



Tetrahydrobenzodifuranyl-



Benzodifuranyl-



tetrahydrobenzodipiranyl- cyclopentyl- cyclohexyl-

b) The hydrogen atom in the element A cyclic systems, described in the paragraph 1.1a, can be substituted in any position (one or several) with R substituent in the form of the following atoms: fluorine, chlorine, bromine, iodine, or with the following groups: alkyl (containing up to 6 carbon atoms, i.e. up to C6), alkenyl (up to C6), alkynyl (up to C6), alkyloxy (up to C6), carboxyl, alkylsulfonic (up to C6), nitric. The groups mentioned above can be further substituted, in any possible combination if chemically possible, with the following atoms or the combinations of atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, what, among others, can lead to the elongation of the substituent chain up to 8 atoms maximum (excluding hydrogen atoms and atoms in the cyclic structure).

1.2 ELEMENT B

The hydrogen atoms in the element B can be substituted with the R1, R2, R3, R4, R5, R6 substituents in the form of the following atoms, groups of atoms, or cyclic systems:

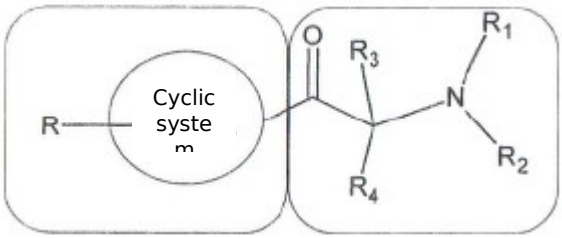
a) Alkyl group (up to C6) cycloalkyl group (up to C6), benzyl group (up to C6), alkenyl group (up to C6) alkylcarbonyl group (up to C6), hydroxyl group, and amine group can be the R1 and R2 substituents localised by the nitrogen atom. Moreover, the substituents can form the cyclic system where the nitrogen atom can be within the ring structure (e.g. pyrrolidine, piperidine), and can be connected with other fragments of the element B. The substituents mentioned above, R1 and R2, can be further substituted in any combination, if possible chemically, with the

following atoms or the combinations of following atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, or with methoxy group or alkyl group (up to C6) what, among others, can lead to the elongation of the substituent chain up to 6 atoms maximum (excluding hydrogen atoms and the atoms in the cyclic system).

b) R3 and R4 substituents localised by the C1 carbon atom and R5 and R6 substituents localised by the C2 carbon can be the following atoms: fluorine, chlorine, bromine, iodine, or the following groups: alkyl (up to C10), cycloalkyl (up to C10), benzyl, phenyl, alkenyl (up to C10), alkynyl (up to C10) hydroxyl, alkyloxy (up to C10), alkylsulfonyl (up to C10), alkyloxycarbonyl (up to C10), wherein it is possible to connect the substituent with the R substituent of the element A closing the ring and forming the cyclic structure. The substituents mentioned above – R3, R4, R5, R6 – if present in the form of groups can be further substituted in any combination, if possible chemically, with atoms or combination of atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, what among others can lead to the elongation of the substituent chain up to 10 atoms maximum (excluding the hydrogen atoms and atoms in the cyclic system).

Cathinone (2-amino-1-phenylpropan-1-one) derivatives– II-NPS group

Any compound derived from 2-amino-1-phenylpropan-1-one containing the element A (detailed structure of which is described in the paragraph 2.1) in the molecule structure, connected with the element B (detailed structure of which is described in the paragraph 2.2) with 500 U of overall maximum molecular mass, and salts of these compounds, if their existence is possible.



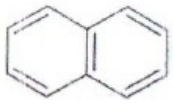
ELEMENT A ELEMENT B

2.1 ELEMENT A

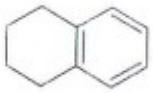
a) Element A can contain the following cyclic systems: phenyl-, naphthyl-, tetralinyl-. methylenedioxyphenyl-, ethylenedioxyphenyl-, furyl-, pyrrolyl-, thiofuranyl-, pyridyl-, benzofuranyl-, dihydrobenzofuranyl-, indanyl-, indenyl-, tetrahydrobenzodifuranyl-, benzodifuranil-, tetrahydrobenzodipyranyl-, cyclopentyl-, cyclohexyl-.

Cyclic system of the element A:

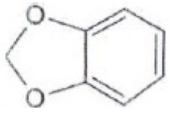
Phenyl-



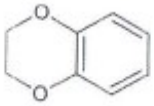
Naphthyl-



Tetralinyl-

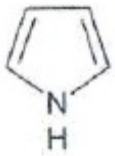


Methylenedioxyphenyl-

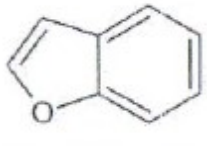


Ethylnedioxyphenyl-

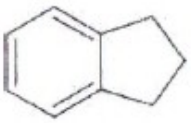
Furyl-



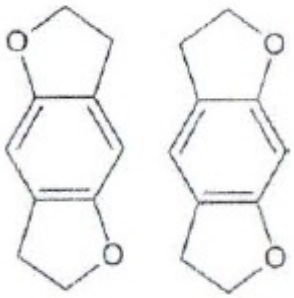
Pyrroyl-



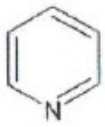
Benzofuranyl-



Indanyl-

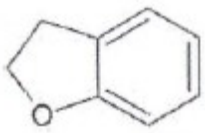


Tetrahydrobenzodifuranyl-

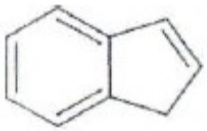


Thiofuranyl-

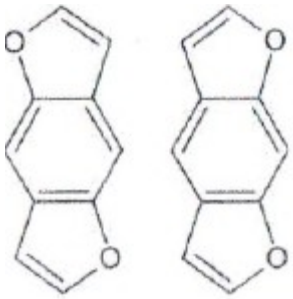
Pyridyl-



Dihydrobenzofuranyl-



Indenyl-



Benzodifuranyl-

tetrahydrobenzodipiranyl- cyclopentyl- cyclohexyl-

b) The hydrogen atom in the element A cyclic systems, described in the paragraph 2.1a, can be substituted in any position (one or several) with R substituent in the form of the following atoms: fluorine, chlorine, bromine, iodine, or with the following groups: alkyl (containing up to 6 carbon atoms, i.e. up to C6), alkenyl (up to C6), alkynyl (up to C6), alkyloxy (up to C6), carboxyl, alkylsulfonic (up to C6), nitric. The groups mentioned above can be further substituted, in any possible combination if chemically possible, with the following atoms or the combinations of atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, what, among others, can lead to the elongation of the substituent chain up to 8 atoms maximum (excluding hydrogen atoms and atoms in the cyclic system).

2.2 ELEMENT B

The hydrogen atoms in the element B can be substituted with the R1, R2, R3, R4 substituents in the form of the following atoms, groups of atoms, or cyclic systems:

a) Alkyl group (up to C6) cycloalkyl group (up to C6), benzyl group (up to C6), alkenyl group (up to C6) alkylcarbonyl group (up to C6), hydroxyl group, and amine group can be the R1 and R2 substituents localised by the nitrogen atom. Moreover, the substituents can form the cyclic system where the nitrogen atom can be within the ring structure (e.g. pyrrolidine, piperidine), and can be connected with other fragments of the element B. The substituents mentioned above, R1 and R2, can be further substituted in any combination, if possible chemically, with the following atoms or the combinations of following

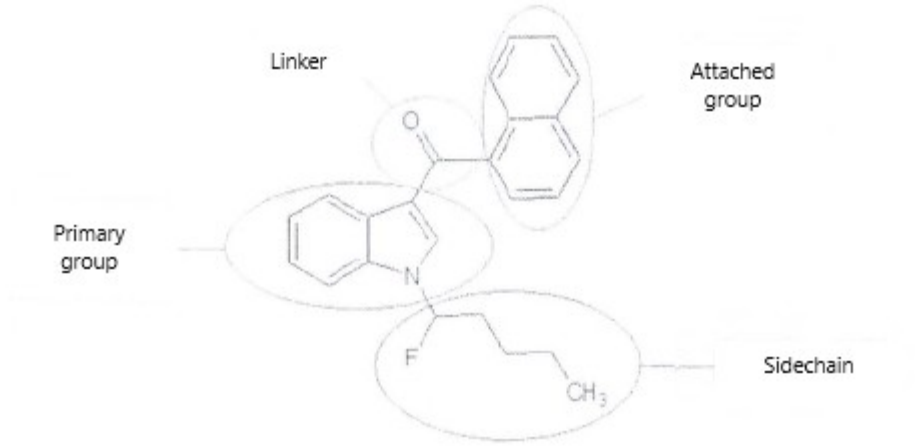
atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, or with methoxy group or alkyl group (up to C6) what among others can lead to the elongation of the substituent chain up to 6 atoms maximum (excluding hydrogen atoms and atoms in the cyclic system).

b) R3 and R4 substituents localised by the C1 carbon atom can be the following atoms: fluorine, chlorine, bromine, iodine, or following groups: alkyl (up to C10), cycloalkyl (up to C10), benzyl, phenyl, alkenyl (up to C10), alkynyl (up to C10) hydroxyl, alkyloxy (up to C10), alkylsulfonyl (up to C10), alkyloxycarbonyl (up to C10), wherein it is possible to connect the R3 or R4 substituent with the R substituent of the element A closing the ring and forming the cyclic structure. The substituents mentioned above – R3, R4 – if present in the form of groups can be further substituted in any combination, if possible chemically, with the following atoms or the combinations of following atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, what, among others, can lead to the elongation of the substituent chain up to 10 atoms maximum (excluding the hydrogen atoms and atoms in the cyclic system).

3. Synthetic cannabinoids (cannabinomimetics) – III-NPS group

Any compound containing within its structure four elements described as: primary group, linker, attached group, sidechain, described in details in paragraphs 3.1 to 3.4, and their salts, if their existence is possible.

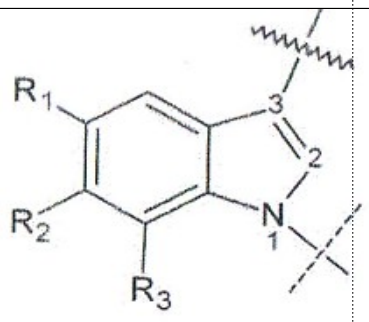
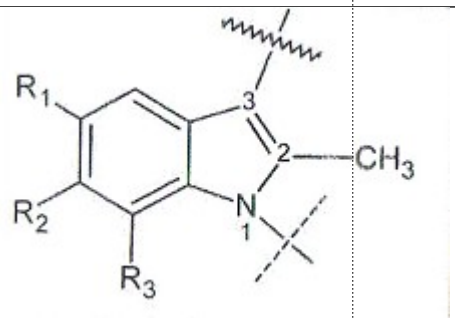
The model structure of the synthetic cannabinoids is presented below with 1-fluoro-JWH-01 as the example:

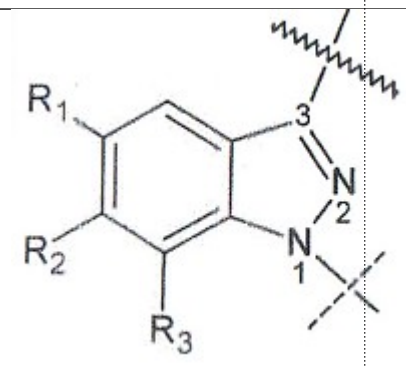
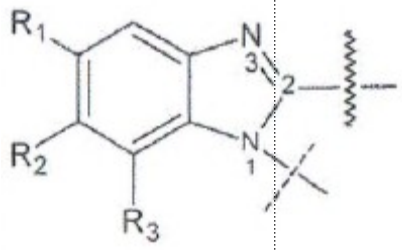
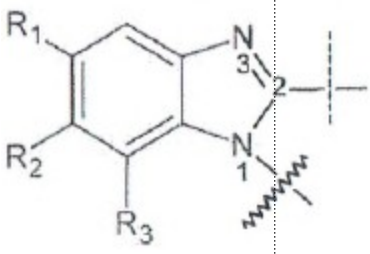


3.1 Primary group:

The hydrogen atoms in the primary group being one of the cyclic systems described in articles a to e can be substituted in the positions 5, 6, or 7 with the substituents R1, R2, R3 in the form of the following atoms: fluorine, chlorine, bromine, iodine, or the following groups: methyl, methoxy, nitro.

Cyclic systems of the primary group:

a) Indol-1,3-diyl (substitution to the linker through position 3, to the sidechain through the nitrogen atom in the position 1)	
b) 2-methylindol-1,3-diyl (substitution to the linker through position 3, to the sidechain through the nitrogen atom in the position 1)	

c) Indazol-1,3-diyl (substitution to the linker through position 3, to the sidechain through the nitrogen atom in the position 1)	
d) Benzimidazole-1,2-diyl isomer I (substitution to the linker through position 2, to the sidechain through the nitrogen atom in the position 1)	
e) Benzimidazole-1,2-diyl isomer II (substitution to the linker through nitrogen atom in the position 1, to the sidechain through the position 2)	

3.2 Primary group linker:

Following elements can form the primary group linker:

a) carbonyl or azacarbonyl group,
b) carboxyamide group (connection with the primary structure via carbon by the carbonyl group),
c) carboxyl group (connection with the primary structure via carbon by the carbonyl group),
d) cyclic system which can contain carbon atoms or heteroatoms: nitrogen, oxygen, sulphur, with the size of the ring up to 5 atoms (including carbon atoms and heteroatoms) connected directly with the primary group by the double bond with the nitrogen atom in the connection location.

3.3 Attached group:

The attached group can consist of the combination of following atoms: carbon, hydrogen, nitrogen, oxygen, sulphur, fluorine, chlorine, bromine, iodine, with 400 u of overall maximum molecular mass, giving the following structures:

a) saturated, unsaturated or aromatic ring, including polycyclic an heterocyclic rings, with any possible substitutions, wherein it is also possible to attach the ring to the linker by the substituent.
b) Linear or branched carbon chain which can also contain the heteroatoms in the structure, with any possible subtitutions, consisting of up to 12 atoms maximum in the longest chaing (excluding hydrogen atoms).

3.4 Sidechain

The sidechain attached to the primary group in the manner described in the paragraph 3.1 a-e which can exist in the form of the following structures:

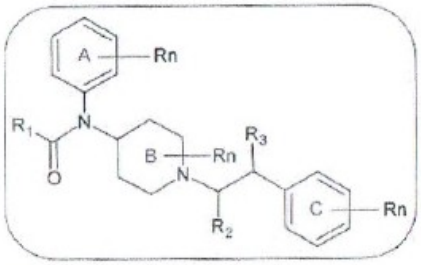
a) Saturated or monounsaturated, linear or branched hydrocarbon chain, where the carbon

atoms can be substituted with the oxygen and sulphur atoms and overall chain length is three to seven atoms (excluding hydrogen atoms), wherein the hydrogen atoms in the chain can be substituted with the following atoms: fluorine, chlorine, iodine, or with the following groups: trifluoromethyl or cyan.

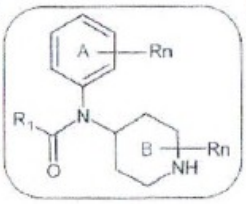
b) Saturated, unsaturated or aromatic ring containing five, six or seven carbon atoms, which can be substituted with nitrogen, oxygen, or sulphur atoms, connected with the primary group directly or via the mehtylene group, ethylene group, or 2-oxoethylene group, wherein the hydrogen atoms in the ring can be additionally substituted with the following atoms: fluorine, chlorine, bromine, iodine, or with the following groups: trifluoromethyl, methoxy, or cyan. Moreover, the hydrogen atom by the nitrogen atom can be substituted with the methyl or ethyl group.

4. Phenantyl derivatives of the IV-NPS group

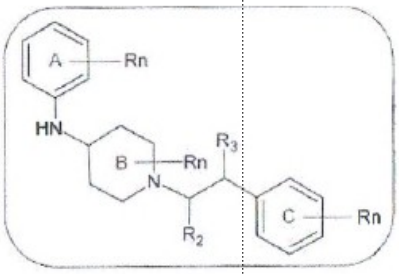
Any compound containing structure I, II, or III with 500 U of overall maximum molecular mass, where in the Rn, R1, R2, R3 positions can be substituted with atoms or groups of atoms independently of the location of the substitution, according to the following description (paragraph. 4.1 and 4.2).



STRUCTURE I



STRUCTURE II



STRUCTURE III

4.1 In the structure I, II, and III:

a) The hydrogen atoms of the ring A and C can be substituted in any position (one or several) with the substitutent (Rn) in the form of the following atoms: chlorine, fluorine, bromine, iodine, or the following groups: alkyl, (up to 6 carbon atoms (up to C6), alkyloxy (up to C6).
b) The hydrogen atoms of the ring B can be substituted in any position (one or several) with the substitutent (Rn) in the form of the following atoms: chlorine, fluorine, bromine, iodine, or the following groups: alkyl (up to C6), O-alkylcarboxyl (up to C6) connected with the ring through the carbon atoms of the acidic residue alkyl group.
c) The C ring can be substituted with the cyclic system (saturated, unsaturated, or aromatic) containing up to 6 carbon atoms forming the ring, wherein the carbon atom can be substituted wht the heteroatoms such as: oxygen, sulphur, nitrogen.
d) The R2 and R3 substitutent can be: alkyl group (up to C6) or hydroxyl group.

4.2 In the structure I and II:

The R1 substituent can be any of the following groups: alkyl (up to C6), alkenyl (up to C6), alkynyl

(up to C6), alkyloxy (up to C6), alkylocarboxyl (up to C6) attached via the carbon of the alkyl group, or the methylendioxyphenyl group attached via the carbon of the aromatic ring, or cyclic system (saturated, or unsaturated) containing up to 6 carbon atoms forming the ring, wherein the carbon atom can be substituted with the following heteroatoms: oxygen, sulphur, nitrogen, and additionally the ring can contain the substituents in form of chlorine, bromine, or fluorine atoms, or the alkyl group (up to C6).