CPC COOPERATIVE PATENT CLASSIFICATION

C07J STEROIDS (seco-steroids C07C)

NOTE

This subclass covers compounds containing a cyclopenta[a]hydrophenanthrene skeleton or a ring structure derived therefrom:
- by contraction or expansion of one ring by one or two atoms;
- by contraction or expansion of two rings each by one atom;
- by contraction of one ring by one atom and expansion of one ring by one atom;
- by substitution of one or two carbon atoms of the cyclopenta[a]hydrophenanthrene skeleton, which are not shared by rings, by hetero atoms, in combination with the above defined contraction or expansion or not, or;
- by condensation with carbocyclic or heterocyclic rings in combination with one or more of the foregoing alterations or not.

Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing carbon, hydrogen, halogen or oxygen

1/00 Normal steroids containing carbon, hydrogen, halogen or oxygen, not substituted in position 17 beta by a carbon atom, e.g. estrane, androstane

1/0003 . {Androstane derivatives}
1/0007 . . {not substituted in position 17}
1/0011 . . {substituted in position 17 by a keto group}
1/0014 . . {substituted in position 17 alfa, not substituted in position 17 beta}
1/0018 . . {substituted in position 17 beta, not substituted in position 17 alfa}
1/0022 . . . {the substituent being an OH group free esterified or etherified}
1/0025 . . . . {Esters}
1/0029 . . . . {Ethers}
1/0033 . . {substituted in position 17 alfa and 17 beta}
1/0037 . . . {the substituent in position 17 alfa being a saturated hydrocarbon group}
1/004 . . . {the substituent in position 17 alfa being an unsaturated hydrocarbon group}
1/0044 . . . . {Alkenyl derivatives}
1/0048 . . . . {Alkynyl derivatives}
1/0051 . {Estrane derivatives}
1/0055 . . {not substituted in position 17}
1/0059 . . {substituted in position 17 by a keto group}
1/0062 . . {substituted in position 17 alfa not substituted in position 17 beta}
1/0066 . . {substituted in position 17 beta not substituted in position 17 alfa}
1/007 . . . {the substituent being an OH group free esterified or etherified}
1/0074 . . . . {Esters}
1/0077 . . . . {Ethers}
1/0081 . . {Substituted in position 17 alfa and 17 beta}
1/0085 . . . {the substituent in position 17 alfa being a saturated hydrocarbon group}
1/0088 . . . {the substituent in position 17 alfa being an unsaturated hydrocarbon group}
1/0092 . . . . {Alkenyl derivatives}
1/0096 . . . . {Alkynyl derivatives}

3/00 Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 beta by one carbon atom

3/005 . {the carbon atom being part of a carboxylic function}

5/00 Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 beta by a chain of two carbon atoms, e.g. pregnane and substituted in position 21 by only one singly bound oxygen atom, {i.e. only one oxygen bound to position 21 by a single bond}

5/0007 . {not substituted in position 17 alfa}
5/0015 . . {not substituted in position 16}
5/0023 . . {substituted in position 16}
5/003 . . . {by a saturated or unsaturated hydrocarbon group including 16-alkylidene substitutes}
5/0038 . . . . {by an alkyl group}
5/0046 . {substituted in position 17 alfa}
5/0053 . . {not substituted in position 16}
5/0061 . . {substituted in position 16}
5/0069 . . . {by a saturated or unsaturated hydrocarbon group}
5/0076 . . . . {by an alkyl group}
5/0084 . . . . {by an alkylene group}
5/0092 . . . {by an OH group free esterified or etherified}

7/00 Normal steroids containing carbon, hydrogen, halogen or oxygen substituted in position 17 beta by a chain of two carbon atoms (C07J 5/00 takes precedence)

7/0005 . {not substituted in position 21}
7/001 . . {substituted in position 20 by a keto group}
7/0015 . . . {not substituted in position 17 alfa}
7/002 . . . . {not substituted in position 16}
7/0025 . . . . {substituted in position 16}
7/003 . . . . . {by a saturated or unsaturated hydrocarbon group}
7/0035 . . . . . {by a hydroxy group free esterified or etherified}
7/004 . . . {substituted in position 17 alfa}
7/0045 . . . . {not substituted in position 16}
7/005 . . . . {substituted in position 16}
7/0055 . . . . . {by a saturated or unsaturated hydrocarbon group}
7/006 . . . . . {by a hydroxy group free esterified or etherified}
7/0065 . . {substituted in position 20 by an OH group free esterified or etherified}
7/007 . . . {not substituted in position 17 alfa}
7/0075 . . . {substituted in position 17 alfa}
7/008 . {substituted in position 21}
7/0085 . . {by an halogen atom}
7/009 . . {by only one oxygen atom doubly bound}

7/0095 . . {carbon in position 21 is part of carboxylic group}

9/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen substituted in position 17 beta by a chain of more than two carbon atoms, e.g. cholane, cholestane, coprostane**

9/005 . {containing a carboxylic function directly attached or attached by a chain containing only carbon atoms to the cyclopenta[a]hydrophenanthrene skeleton}

11/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen, not substituted in position 3**

13/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen having a carbon-to-carbon double bond from or to position 17 {**(for carbonyl groups C07J 1/00)**}**

13/002 . {with double bond in position 13 (17)}

13/005 . {with double bond in position 16 (17)}

13/007 . {with double bond in position 17 (20)}

15/00 **Stereochemically pure steroids containing carbon, hydrogen, halogen or oxygen having a partially or totally inverted skeleton, e.g. retrosteroids, L-isomers**

15/005 . {Retrosteroids (9 beta 10 alfa)}

17/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen, having an oxygen-containing hetero ring not condensed with the cyclopenta(a)hydrophenanthrene skeleton** (cardanolide, bufanolide C07J 19/00)

17/005 . {Glycosides}

19/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen, substituted in position 17 by a lactone ring**

19/005 . {Glycosides}

21/00 **Normal steroids containing carbon, hydrogen, halogen or oxygen having an oxygen-containing hetero ring spiro-condensed with the cyclopenta(a)hydrophenanthrene skeleton**

21/001 . {Lactones}

21/003 . . {at position 17}

21/005 . {Ketals}

21/006 . . {at position 3}

21/008 . . {at position 17}

Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing sulfur

31/00 **Normal steroids containing one or more sulfur atoms not belonging to a hetero ring**

31/003 . {the S atom directly linked to a ring carbon atom of the cyclopenta(a)hydrophenanthrene skeleton}

31/006 . {not covered by C07J 31/003}

33/00 **Normal steroids having a sulfur-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton**

33/002 . {not condensed}

33/005 . {spiro-condensed}

33/007 . . {Cyclic thioketals}

Normal steroids, i.e. cyclopenta(a)hydrophenanthrenes, containing nitrogen

41/00 **Normal steroids containing one or more nitrogen atoms not belonging to a hetero ring**

41/0005 . {the nitrogen atom being directly linked to the cyclopenta(a)hydro phenanthrene skeleton}

41/0011 . . {Unsubstituted amino radicals}

41/0016 . . {Oximes}

41/0022 . . {Isocyanates; Isothiocyanates}

41/0027 . . {Azides}

41/0033 . {not covered by C07J 41/0005}

NOTE

In groups C07J 41/0038 - C07J 41/0094 all references to substituents in position 17-beta of the steroid skeleton include substituents at the 17-position when there is a double bond to or from position 17, and all references to an amide group include all nitrogen substituted carbonyl groups

41/0038 . . {with an androstane skeleton, including 18- or 19-substituted derivatives, 18-nor derivatives and also derivatives where position 17-beta is substituted by a carbon atom not directly bonded to a further carbon atom and not being part of an amide group}

41/0044 . . {with an estrane or gonane skeleton, including 18-substituted derivatives and derivatives where position 17-beta is substituted by a carbon atom not directly bonded to another carbon atom and not being part of an amide group}

41/005 . . {the 17-beta position being substituted by an uninterrupted chain of only two carbon atoms, e.g. pregnane derivatives}

41/0055 . . {the 17-beta position being substituted by an uninterrupted chain of at least three carbon atoms which may or may not be branched, e.g. cholane or cholestane derivatives, optionally cyclised, e.g. 17-beta-phenyl or 17-beta-furyl derivatives}

41/0061 . . . {one of the carbon atoms being part of an amide group}

41/0066 . . {the 17-beta position being substituted by a carbon atom forming part of an amide group}

41/0072 . . {the A ring of the steroid being aromatic}

41/0077 . . {substituted in position 11-beta by a carbon atom, further substituted by a group comprising at least one further carbon atom}

41/0083 . . . {substituted in position 11-beta by an optionally substituted phenyl group not further condensed with other rings}

41/0088 . . {containing unsubstituted amino radicals}

41/0094 . . {containing nitrile radicals, including thiocyanide radicals}

43/00 **Normal steroids having a nitrogen-containing hetero ring spiro-condensed or not condensed with the cyclopenta(a)hydrophenanthrene skeleton**

43/003 . {not condensed}

43/006 . {spiro-condensed}

51/00 **Normal steroids with unmodified cyclopenta(a)hydrophenanthrene skeleton not provided for in groups C07J 1/00 - C07J 43/00**

53/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by condensation with a carbocyclic rings or by formation of an additional ring by means of a direct link between two ring carbon atoms, {including carboxyclic rings fused to the cyclopenta(a)hydrophenanthrene skeleton are included in this class}**

53/001 . {spiro-linked}
53/002 . {Carbocyclic rings fused}
53/004 . . {3 membered carbocyclic rings}
53/005 . . . {in position 12}
53/007 . . . {in position 6-7}
53/008 . . . {in position 15/16}

Nor- or homo steroids

61/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of only one ring by one or two atoms**

63/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by expansion of only one ring by one or two atoms**

63/002 . {Expansion of ring A by one atom, e.g. A homo steroids}
63/004 . {Expansion of ring B by one atom, e.g. B homo steroids}
63/006 . {Expansion of ring C by one atom, e.g. C homo steroids}
63/008 . {Expansion of ring D by one atom, e.g. D homo steroids}

65/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of two rings, each by one atom**

67/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by expansion of two rings, each by one atom**

69/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton has been modified by contraction of only one ring by one atom and expansion of only one ring by one atom**

71/00 **Steroids in which the cyclopenta(a)hydrophenanthrene skeleton is condensed with a heterocyclic ring** (spiro-condensed heterocyclic rings C07J 21/00, C07J 33/00, C07J 43/00)

71/0005 . {Oxygen-containing hetero ring}
71/001 . . {Oxiranes}
71/0015 . . . {at position 9(11)}
71/0021 . . . {at position 14(15)}
71/0026 . . {cyclic ketals}
71/0031 . . . {at positions 16, 17}
71/0036 . {Nitrogen-containing hetero ring}
71/0042 . . {Nitrogen only}
71/0047 . . . {at position 2(3)}
71/0052 . . . {at position 16(17)}
71/0057 . . {Nitrogen and oxygen}
71/0063 . . . {at position 2(3)}
71/0068 . . . {at position 16(17)}
71/0073 . {Sulfur-containing hetero ring}
71/0078 . . {containing only sulfur}
71/0084 . . . {Episulfides}
71/0089 . . {containing sulfur and oxygen}
71/0094 . . {containing sulfur and nitrogen}

73/00 **Steroids in which the cyclopenta[a]hydrophenanthrene skeleton has been modified by substitution of one or two carbon atoms by hetero atoms**

73/001 . {by one hetero atom}
73/003 . . {by oxygen as hetero atom}
73/005 . . {by nitrogen as hetero atom}
73/006 . . {by sulfur as hetero atom}
73/008 . {by two hetero atoms}

75/00 **Processes for the preparation of steroids in general**

75/005 . {Preparation of steroids by cyclization of non-steroid compounds}