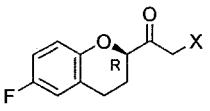
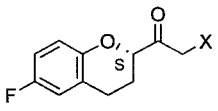
In one aspect, there is provided a process for the synthesis of chromanyl haloketones of formula IIIa and/or IIIb as separate isomers or as a racemic mixture



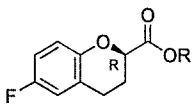
(IIIa)



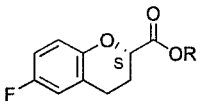
(IIIb)

comprising the following steps:

a. reacting an ester of formula IIa and/or IIb,



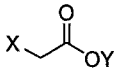
(IIa)



(IIb)

wherein R is a linear C_1-C_6 alkyl group, in form of separate isomer or as a racemic mixture

with a metal-organic compound and a salt of a haloacetic acid of general formula A



Formula A

wherein X=F, Cl, Br, I and Y= H, Li, Na, K, Mg;

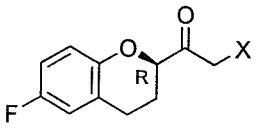
wherein the reaction of said ester with the metal-organic compound is carried out at a temperature between -10°C and +10°C,

wherein the metal-organic compound is an organic magnesium compound of formula RMgX, where X is a halogen and R is an amine or a linear or branched, preferably tertiary, C1-C6 alkyl residue.

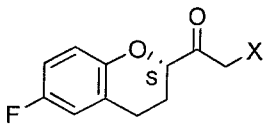
b. carrying out an *in situ* decarboxylation by treatment with an aqueous inorganic acid until reaching a pH equal to or less than 5, to give the corresponding chromanyl haloketone of formula IIIa and/or IIIb in the form of a separate isomer or in racemic form.

CLAIMS

1. A process for the synthesis of chromanyl haloketones of formula IIIa and/or IIIb as separate isomers or as a racemic mixture



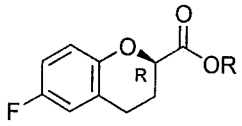
(IIIa)



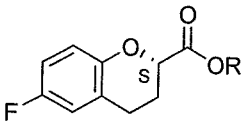
(IIIb)

comprising the following steps:

a. reacting an ester of formula IIa and/or IIb,



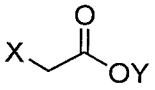
(IIa)



(IIb)

wherein R is a linear C_1-C_6 alkyl group, in form of separate isomer or as a racemic mixture

with a metal-organic compound and a salt of a haloacetic acid of general formula A



Formula A

wherein X=F, Cl, Br, I and Y= H, Li, Na, K, Mg;

wherein the reaction of said ester with the metal-organic compound is carried out at a temperature between -10°C and +10°C,

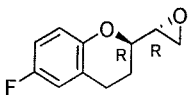
8. The process according to claim 6 or 7, wherein the catalyst is (*R*)MeCBS or (*S*)MeCBS.

9. The process according to claim 6 or 7, wherein the catalyst is (*R*)BuCBS or (*S*)BuCBS.

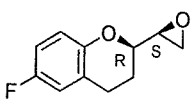
10. The process according to any one of claims from 6 to 9, wherein the complex of the borane is selected from the group comprising borane-diethylaniline (DEA*BH3), borane-dimethylsulfide (BH3*DMS), borane-tetrahydrofuran (BH3*THF).

11. The process according to any one of claims from 6 to 10 comprising the following additional step:

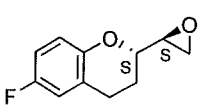
d. carrying out an *in situ* cyclization of the said haloalcohol IVa-IVd with an aqueous solution of an alkaline base, to give the corresponding epoxides of formula Ia-Id in the form of separate optically active isomers:



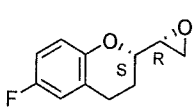
(Ia)



(Ib)



(Ic)



(Id)

12. The process according to claim 11, wherein the alkaline base at step d is a NaOH, LiOH or KOH solution.

13. The process according to any one of claims from 11 to 12, comprising the following additional step:

17. The process according to any one of claims from 15 to 16, comprising the following additional step:

i. removing the benzyl protecting group and forming a hydrochloride salt, to obtain a product Nebivolol hydrochloride.

18. The process according to claim 17, wherein the benzyl group is removed by catalytic hydrogenation with $Pd(OH)_2$ catalyst.

19. The process according to claim 18, wherein the solvent of the hydrogenation is acetic acid water 7: 1

20. The process according to any one of claims from 17 to 19, in which the hydrochloride salt of Nebivolol is obtained by cation exchange with NaCl solution.