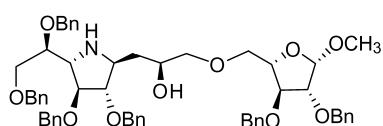


Virginie Liautard, Valérie Desvergne, Olivier R. Martin*

Tetrahedron: Asymmetry 19 (2008) 1999



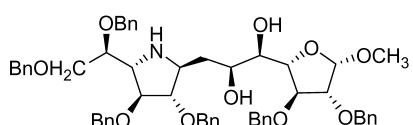
$[\alpha]_D = -30$ (c 0.59, CHCl₃)
Configuration: β -L-arabino and D-threo-L-galacto



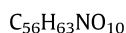
Methyl 2,3-di-O-benzyl-5-O-(1,2,4,5-tetra-O-benzyl-3,6,7-trideoxy-3,6-imino-D-threo-L-galacto-nonit-9-yl)- β -L-arabinofuranoside

Virginie Liautard, Valérie Desvergne, Olivier R. Martin*

Tetrahedron: Asymmetry 19 (2008) 1999



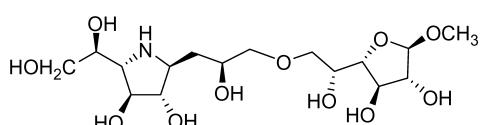
$[\alpha]_D = -30$ (c 0.59, CHCl₃)
Configuration: α -D-threo-L-galacto-D-galacto



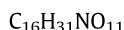
Methyl 2,3,9,10,12,13-hexa-O-benzyl-7,8,11-trideoxy-8,11-imino- α -D-threo-L-galacto-D-galacto-trideco-1,4-furanoside

Virginie Liautard, Valérie Desvergne, Olivier R. Martin*

Tetrahedron: Asymmetry 19 (2008) 1999



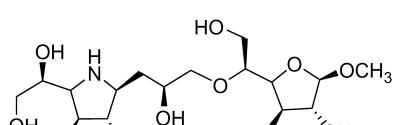
$[\alpha]_D = -50$ (c 0.41, H₂O)
Configuration: β -D-galacto and D-threo-L-galacto



Methyl 6-O-(3,6,7-trideoxy-3,6-imino-D-threo-L-galacto-nonit-9-yl)- β -D-galactofuranoside

Virginie Liautard, Valérie Desvergne, Olivier R. Martin*

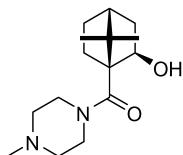
Tetrahedron: Asymmetry 19 (2008) 1999



$[\alpha]_D = -45$ (c 0.49, H₂O)
Configuration: β -D-galacto and D-threo-L-galacto

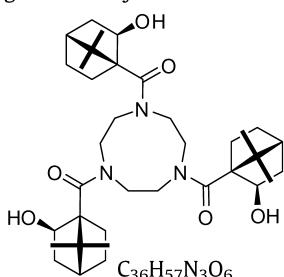


Methyl 5-O-(3,6,7-trideoxy-3,6-imino-D-threo-L-galacto-nonit-9-yl)- β -D-galactofuranoside



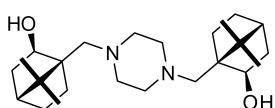
$C_{15}H_{26}N_2O_2$
(1S)-10-Oxo-10-(4-methylpiperidin-1-yl)isoborneol

Source of chirality: (1S)-ketopinic acid
 $[\alpha]_D^{20} = -7.6$ (*c* 0.34, CH_2Cl_2)
 Absolute configuration: (1S,2R,4R)



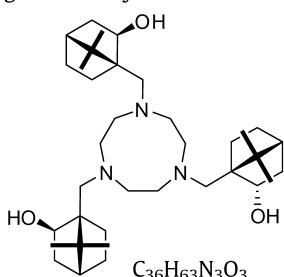
$C_{36}H_{57}N_3O_6$
N,N',N''-Tris{[(1S,2R)-7,7-dimethyl-2-hydroxynorborn-1-yl]carbonyl}-1,4,7-triazonane

Source of chirality: (1S)-ketopinic acid
 $[\alpha]_D^{20} = -137.2$ (*c* 0.50, CH_2Cl_2)
 Absolute configuration: (1S,1'S,1''S,2R,2'R,2''R,4R,4'R,4''R)



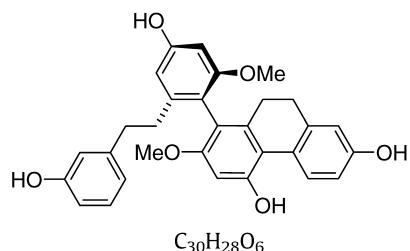
$C_{24}H_{42}N_2O_2$
N,N'-Bis{[(1R,2R)-7,7-dimethyl-2-hydroxynorborn-1-yl]methyl}piperazine

Source of chirality: (1S)-ketopinic acid
 $[\alpha]_D^{20} = -69.3$ (*c* 0.31, $CHCl_3$)
 Absolute configuration: (1R,1'R,2R,2'R,4R,4'R)



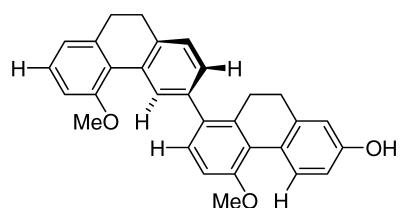
$C_{36}H_{63}N_3O_3$
N,N',N''-Tris{[(1R,2R)-7,7-dimethyl-2-hydroxynorborn-1-yl]methyl}-1,4,7-triazonane

Source of chirality: (1S)-ketopinic acid
 $[\alpha]_D^{20} = -22.1$ (*c* 0.095, CH_2Cl_2)
 Absolute configuration: (1R,1'R,1''R,2R,2''R,4R,4'R,4''R)



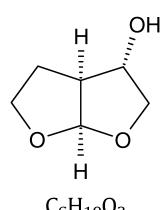
(*-*)-CD [310 nm]
Absolute configuration: (aS)

(aS)-8-(2-(3-Hydroxyphenethyl)-4-hydroxy-6-methoxyphenyl)-7-methoxy-9,10-dihydrophenanthrene-2,5-diol



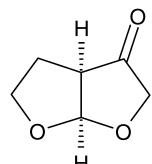
(*+*)-CD [310 nm]
Absolute configuration: (aS)

(aS)-1-(2,7-Dihydroxy-4-methoxy-9,10-dihydrophenanthren-1-yl)-4-methoxy-9,10-dihydrophenanthrene-2,7-diol



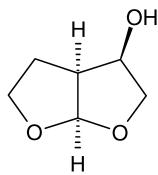
Er = 97:3 (chiral GC analysis)
 $[\alpha]_D^{25} = -29.6$ (c 1.40, CHCl_3)
 Source of chirality: asymmetric catalysis with $[\text{Cu}((S,S)\text{-phenyl-bis(oxazolinyl)pyridine})](\text{SbF}_6)_2$
 Absolute configuration: (S,S)
 Absolute configuration: (3S,3aS,6aR)

(3S,3aS,6aR)-Hexahydrofuro[2,3-b]furan-3-ol



Er = 97:3
 $[\alpha]_D^{25} = -151.9$ (c 0.89, CHCl_3)
 Source of chirality: asymmetric catalysis with $[\text{Cu}((S,S)\text{-phenyl-bis(oxazolinyl)pyridine})](\text{SbF}_6)_2$
 Absolute configuration: (S,S)
 Absolute configuration: (3aR,6aR)

(3aR,6aR)-Tetrahydrofuro[2,3-b]furan-3(2H)-one



$C_6H_{10}O_3$
(3R,3aS,6aR)-Hexahydrofuro[2,3-b]furan-3-ol

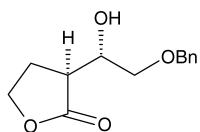
Er = 97:3

$[\alpha]_D^{25} = -11.6$ (c 0.73, MeOH)

Source of chirality: asymmetric catalysis with $[\text{Cu}((S,S)\text{-phenyl-bis(oxazolinyl)pyridine})](\text{SbF}_6)_2$

Absolute configuration: (S,S)

Absolute configuration: (3R,3aS,6aR)



$C_{13}H_{16}O_4$
(3S)-3-[(1S)-2-(Benzylxy)-1-hydroxyethyl]dihydrofuran-2(3H)-one

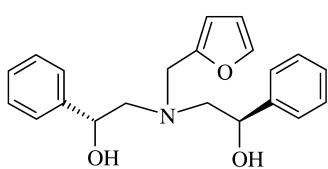
Er = 97:3

$[\alpha]_D^{25} = -8.0$ (c 2.61, CHCl_2)

Source of chirality: asymmetric catalysis with $[\text{Cu}((S,S)\text{-phenyl-bis(oxazolinyl)pyridine})](\text{SbF}_6)_2$

Absolute configuration: (S,S)

Absolute configuration: (S,S)

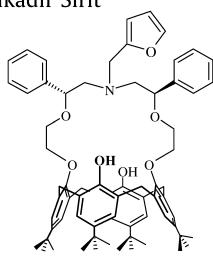


$C_{21}H_{23}NO_3$
(R,R)-2-[Furfuryl-(2-hydroxy-2-phenylethyl)-amino]-1-phenylethanol

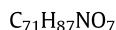
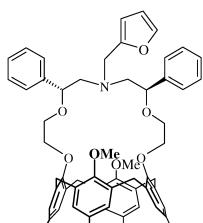
$[\alpha]_D^{25} = -72.0$ (c 1, CHCl_3)

Source of chirality: (R)-(+)-styrene oxide

Absolute configuration: (R,R)



$C_{69}H_{83}NO_7$
N-Furfuryl-5,11,17,23-tetra-tert-butyl-25,27-dihydroxy-26,28-(4'R,8'R-diphenyl-6'-aza-3',9'-dioxaundecane)-dioxycalix[4]arene

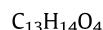
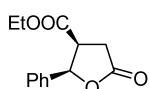


N-Furfuryl-5,11,17,23-tetra-*tert*-butyl-25,27-dimethoxy-26,28-(4'R,8'R-diphenyl-6'-aza-3',9'-dioxaundecane)-dioxycalix[4]arene

[α]_D²⁵ = -6.0 (c 1, CHCl₃)

Source of chirality: (R)-(+)-styrene oxide

Absolute configuration: (R,R)



Ethyl (2*R*,3*S*)-(+)-5-oxo-2-phenyltetrahydro-3-furancarboxylate

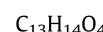
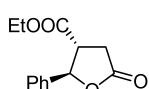
Ee = 94% (by chiral HRGC)

[α]_D²⁵ = +10.0 (c 0.54, MeOH)

$\Delta\epsilon_{217} = +2.9$ (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2*R*,3*S*)



Ethyl (2*R*,3*R*)(-)-5-oxo-2-phenyltetrahydro-3-furancarboxylate

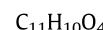
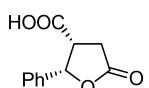
Ee = 93% (by chiral HRGC)

[α]_D²⁵ = -55.3 (c 0.58, MeOH)

$\Delta\epsilon_{221} = -2.7$ (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2*R*,3*R*)



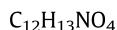
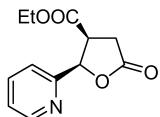
(2*S*,3*S*)-(+)-5-Oxo-2-phenyltetrahydro-3-furancarboxylic acid

Ee = 32% (by chiral HRGC)

[α]_D²⁵ = +19 (c 0.2, MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2*S*,3*S*)



Ethyl (2R,3S)-(-)-5-oxo-2-(2-pyridyl)tetrahydro-3-furancarboxylate

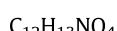
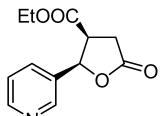
Ee = 98% (by chiral HRGC)

[α]_D²⁵ = -7.3 (c 0.49, MeOH)

$\Delta\epsilon_{215}$ = +2.0 (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3S)



Ethyl (2R,3S)-(+)-5-oxo-2-(3-pyridyl)tetrahydro-3-furancarboxylate

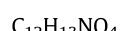
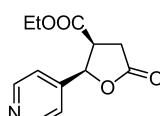
Ee = 99% (by chiral HRGC)

[α]_D²⁵ = +14.7 (c 0.6, MeOH)

$\Delta\epsilon_{209}$ = +2.6 (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3S)



Ethyl (2R,3S)-(+)-5-oxo-2-(4-pyridyl)tetrahydro-3-furancarboxylate

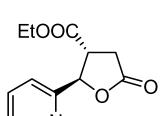
Ee = 99% (by chiral HRGC)

[α]_D²⁵ = +12.6 (c 0.35, MeOH)

$\Delta\epsilon_{210}$ = +2.0 (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3S)



Ethyl (2R,3R)-(-)-5-oxo-2-(2-pyridyl)tetrahydro-3-furancarboxylate

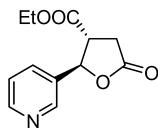
Ee = 80% (by chiral HRGC)

[α]_D²⁵ = -52.8 (c 0.49, MeOH)

$\Delta\epsilon_{213}$ = -2.3 (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3R)



C₁₂H₁₃NO₄

Ethyl (2R,3R)-(-)-5-oxo-2-(3-pyridyl)tetrahydro-3-furancarboxylate

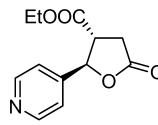
Ee = 94% (by chiral HRGC)

[α]_D²⁵ = -51.6 (c 0.5, MeOH)

$\Delta\epsilon_{215}$ = -1.0 (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3R)



C₁₂H₁₃NO₄

Ethyl (2R,3R)-(-)-5-oxo-2-(4-pyridyl)tetrahydro-3-furancarboxylate

Ee = 89% (by chiral HRGC)

[α]_D²⁵ = -48.7 (c 0.23, MeOH)

$\Delta\epsilon_{215}$ = -2.2 (MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3R)



C₁₀H₁₀BrNO₄

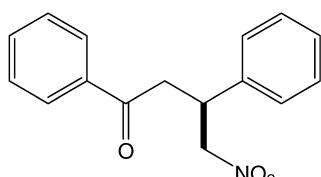
Ethyl (2R,3R)-(-)-5-oxo-2-(2-pyridyl)tetrahydro-3-furancarboxylic acid hydrobromide

Ee = 80% (by chiral HRGC)

[α]_D²⁵ = -23.4 (c 0.47, H₂O)

Source of chirality: enzymatic resolution

Absolute configuration: (2R,3R)



C₁₆H₁₅NO₃

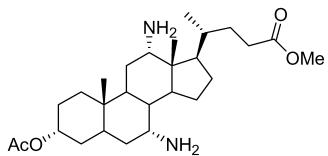
(S)-4-Nitro-1,3-diphenylbutan-1-one

Ee = 68.5% (by Chiral HPLC with chiralcel AD-H column)

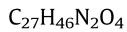
[α]_D²⁵ = -11.1 (c 1.00, CH₂Cl₂)

Source of chirality: per-6-amino- β -cyclodextrin

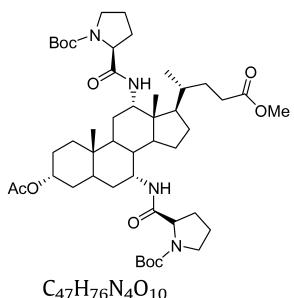
Absolute configuration: (3S)



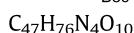
$[\alpha]_D^{22} = +35.0$ (*c* 1.00, CH₂Cl₂)
Source of chirality: natural source



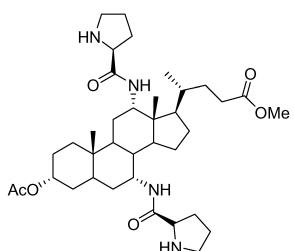
Methyl 3α-acetyloxy-12α,7α-diamino-5α-cholan-24-oate



$[\alpha]_D^{22} = +79.5$ (*c* 1.00, CH₂Cl₂)
Source of chirality: natural source



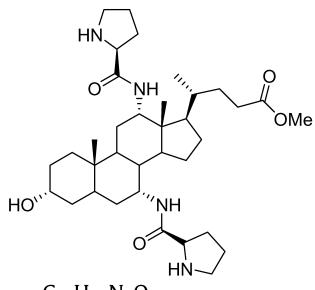
Methyl 3α-acetyloxy-7α,12α-bis(Boc-D-prolinoyl)amino-5α-cholan-24-oate



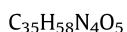
$[\alpha]_D^{22} = +43.4$ (*c* 1.00, CH₂Cl₂)
Source of chirality: natural source



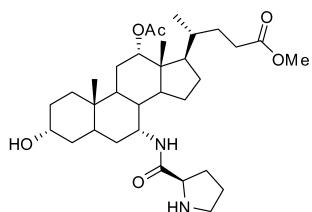
Methyl 3α-acetyloxy-12α,7α-bis(D-prolinoyl)amino-5α-cholan-24-oate



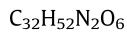
$[\alpha]_D^{22} = +112.7$ (*c* 1.00, CH₂Cl₂)
Source of chirality: natural source



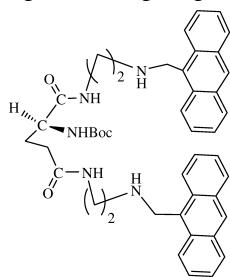
Methyl 3α-hydroxy-12α,7α-bis(D-prolinoyl)amino-5α-cholan-24-oate



$[\alpha]_D^{22} = +132.6$ (*c* 1.00, CH_2Cl_2)
Source of chirality: natural source

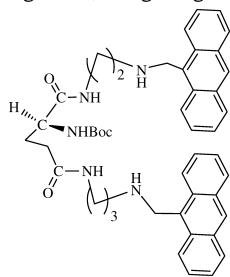


Methyl 3α-hydroxy-12α-acetyloxy-7α-(D-prolinoyl)amino-5α-cholan-24-oate



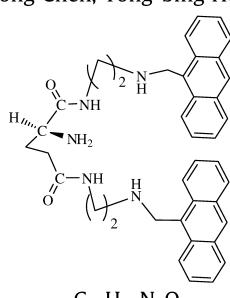
$[\alpha]_D^{20} = -169$ (*c* 0.071, CHCl_3)

tert-butyl (S)-1,3-bis(2-((anthracen-10-yl)methylamino)ethylcarbamoyl)propylcarbamate



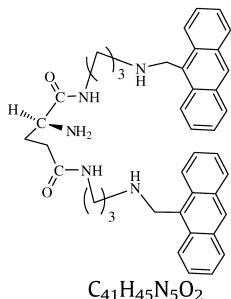
$[\alpha]_D^{20} = +81.1$ (*c* 0.074, CHCl_3)

tert-butyl (S)-1,3-bis(3-((anthracen-10-yl)methylamino)propylcarbamoyl)propylcarbamate



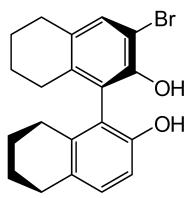
$[\alpha]_D^{20} = -114.2$ (*c* 0.061, CHCl_3)

(S)-N¹, N⁶-bis(2-((anthracen-10-yl)methylamino)ethyl)2-aminopentanediamide



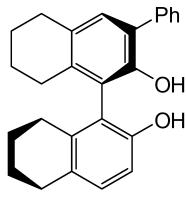
$[\alpha]_D^{20} = +109$ (c 0.064, CHCl₃)

(S)-N¹, N⁶-bis(3-((anthracen-10-yl)methylamino)propyl)-2-aminopentanediamide



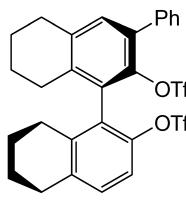
Ee = 100%
 $[\alpha]_D^{25} = +55.9$ (c 1.19, CH₂Cl₂)
 Source of chirality: resolution
 Absolute configuration: (R)

(R)-(+)-3-Bromo-5,6,7,8-tetrahydro-1-(5,6,7,8-tetrahydro-2-hydroxynaphthalen-1-yl)naphthalen-2-ol



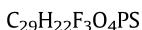
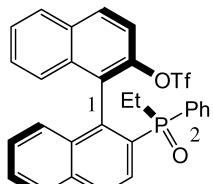
Ee = 100%
 $[\alpha]_D^{25} = +83.5$ (c 0.76, CH₂Cl₂)
 Source of chirality: resolution
 Absolute configuration: (R)

(R)-(+)-5,6,7,8-Tetrahydro-1-(5,6,7,8-tetrahydro-2-hydroxynaphthalen-1-yl)-3-phenylnaphthalen-2-ol



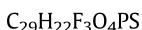
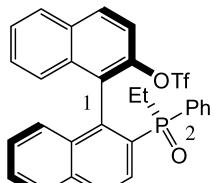
Ee = 100%
 $[\alpha]_D^{25} = -59.2$ (c 1.05, CH₂Cl₂)
 Source of chirality: resolution
 Absolute configuration: (R)

(R)-(-)-2,2'-Bis((trifluoromethanesulfonyl)oxy)-3-phenyl-1,1'-binaphthalene



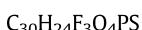
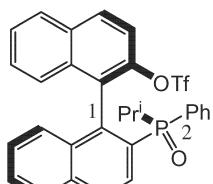
(1R,2S)-(-)-2-(Ethyl(phenyl)phosphinyl)-2'-(trifluoromethanesulfonyloxy)-1,1'-binaphthalene

Ee = 100%
 $[\alpha]_D^{25} = -48.6$ (c 0.70, CH_2Cl_2)
 Source of chirality: resolution
 Absolute configuration: (1R,2S)



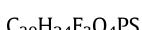
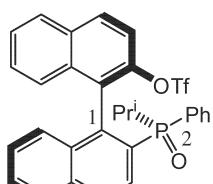
(1R,2R)-(+)-2-(Ethyl(phenyl)phosphinyl)-2'-(trifluoromethanesulfonyloxy)-1,1'-binaphthalene

Ee = 100%
 $[\alpha]_D^{25} = +26.1$ (c 1.13, CH_2Cl_2)
 Source of chirality: resolution
 Absolute configuration: (1R,2R)



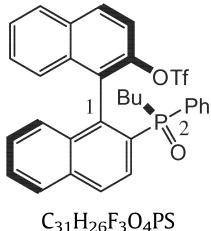
(1R,2S)-(-)-2-(Isopropyl(phenyl)phosphinyl)-2'-(trifluoromethanesulfonyloxy)-1,1'-binaphthalene

Ee = 100%
 $[\alpha]_D^{25} = -75.0$ (c 0.92, CH_2Cl_2)
 Source of chirality: resolution
 Absolute configuration: (1R,2S)



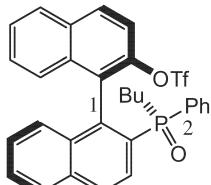
(1R,2R)-(+)-2-(Isopropyl(phenyl)phosphinyl)-2'-(trifluoromethanesulfonyloxy)-1,1'-binaphthalene

Ee = 100%
 $[\alpha]_D^{25} = +28.2$ (c 1.06, CH_2Cl_2)
 Source of chirality: resolution
 Absolute configuration: (1R,2R)



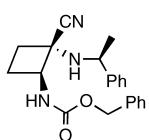
$C_{31}H_{26}F_3O_4PS$
(1R,2S)-(-)-2-(Butyl(phenyl)phosphinyl)-2'-(trifluoromethanesulfonyl)oxy-1,1'-binaphthalene

Ee = 100%
 $[\alpha]_D^{25} = -69.2$ (c 0.86, CH_2Cl_2)
 Source of chirality: resolution
 Absolute configuration: (1R,2S)



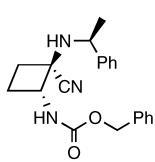
$C_{31}H_{26}F_3O_4PS$
(1R,2R)-(+)-2-(Butyl(phenyl)phosphinyl)-2'-(trifluoromethanesulfonyl)oxy-1,1'-binaphthalene

Ee = 100%
 $[\alpha]_D^{25} = +31.7$ (c 1.08, CH_2Cl_2)
 Source of chirality: resolution
 Absolute configuration: (1R,2R)



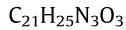
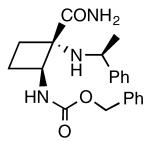
$C_{21}H_{23}N_3O_2$
2-(N-Benzylloxycarbonyl)amino-1-(1'-phenylethyl)aminocyclobutanecarbonitrile

Ee >99%
 $[\alpha]_D^{20} = -181$ (c 1.00, $CHCl_3$)
 Source of chirality: (S)- α -phenylethylamine
 Absolute configuration: (1S,2S,1'S)



$C_{21}H_{23}N_3O_2$
2-(N-Benzylloxycarbonyl)amino-1-(1'-phenylethyl)aminocyclobutanecarbonitrile

Ee >99%
 $[\alpha]_{D65}^{20} = -23.6$ (c 1.00, $CHCl_3$)
 Source of chirality: (S)- α -phenylethylamine
 Absolute configuration: (1R,2R,1'S)



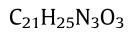
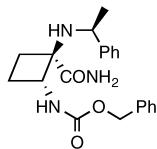
2-(N-Benzylloxycarbonyl)amino-1-(1'-phenylethyl)aminocyclobutanecarboxamide

Ee >99%

$[\alpha]_D^{20} = -53$ (c 1.00, CHCl₃)

Source of chirality: (S)- α -phenylethylamine

Absolute configuration: (1S,2S,1'S)



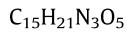
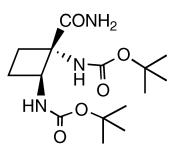
2-(N-Benzylloxycarbonyl)amino-1-(1'-phenylethyl)aminocyclobutanecarboxamide

Ee >99%

$[\alpha]_D^{20} = -15.4$ (c 1.00, CHCl₃)

Source of chirality: (S)- α -phenylethylamine

Absolute configuration: (1R,2R,1'S) assigned by X-ray analysis



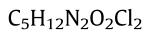
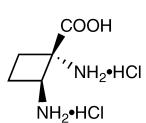
1,2-Di-[(N-tert-butyloxycarbonyl)amino]cyclobutanecarboxamide

Ee >99%

$[\alpha]_D^{20} = -15$ (c 0.25, CHCl₃)

Source of chirality: (S)- α -phenylethylamine

Absolute configuration: (1S,2S)



1,2-Diaminocyclobutanecarboxylic acid-hydrochloride

Ee >99%

$[\alpha]_D^{20} = -4$ (c 0.60, H₂O)

Source of chirality: (S)- α -phenylethylamine

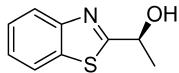
Absolute configuration: (1S,2S)

Ee = 98% on Astec B-DM GC column

 $[\alpha]_D^{20} = -18.5$ (c 1, CHCl₃)

Source of chirality: bioreduction by baker's yeast

Absolute configuration: (S)

C₉H₉NOS

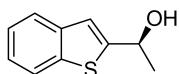
(S)-1-(Benzo[d]thiazol-2-yl)ethanol

Ee = 99% on on Astec B-DM GC column

 $[\alpha]_D^{20} = -21.2$ (c 1, CHCl₃)

Source of chirality: bioreduction by baker's yeast

Absolute configuration: (S)

C₁₀H₁₀OS

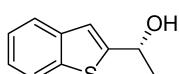
(S)-1-(Benzo[b]thiophen-2-yl)ethanol

Ee = 99% on on Astec B-DM GC column

 $[\alpha]_D^{20} = +21.2$ (c 1, CHCl₃)

Source of chirality: bioreduction by baker's yeast

Absolute configuration: (S)

C₁₀H₁₀OS

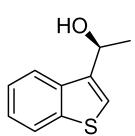
(R)-1-(Benzo[b]thiophen-2-yl)ethanol

Ee = 99% on on Astec B-DM GC column

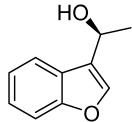
 $[\alpha]_D^{20} = -27.1$ (c 1, CHCl₃)

Source of chirality: bioreduction by baker's yeast

Absolute configuration: (S)

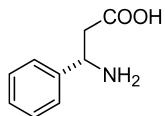
C₁₀H₁₀OS

(S)-1-(Benzo[b]thiophen-3-yl)ethanol



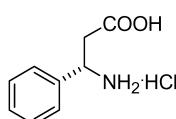
$C_{10}H_{10}O_2$
(S)-1-(Benzofuran-3-yl)ethanol

Ee = 99% on Astec B-DM GC column
 $[\alpha]_D^{20} = -18.95$ (c 1, $CHCl_3$)
 Source of chirality: bioreduction by baker's yeast
 Absolute configuration: (S)



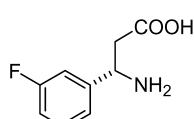
$C_9H_{11}NO_2$
(S)-3-Amino-3-phenylpropanoic acid

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = -8$ (c 0.27, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



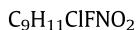
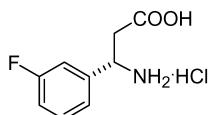
$C_9H_{12}ClNO_2$
(S)-3-Amino-3-phenylpropanoic acid hydrochloride

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +4$ (c 0.3, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



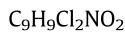
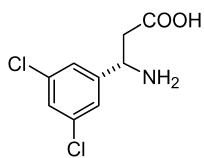
$C_9H_{10}FNO_2$
(S)-3-Amino-3-(3-fluorophenyl)propanoic acid

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = -1.8$ (c 0.38, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



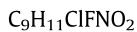
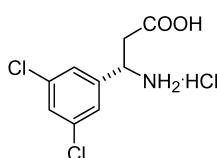
(S)-3-Amino-3-(3-fluorophenyl)propanoic acid hydrochloride

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +5.7$ (c 0.31, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



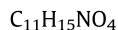
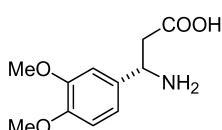
(S)-3-Amino-3-(3,5-dichlorophenyl)propanoic acid

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = -5.5$ (c 0.38, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



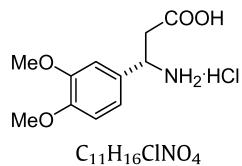
(S)-3-Amino-3-(3,5-dichlorophenyl)propanoic acid hydrochloride

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +5.7$ (c 0.34, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



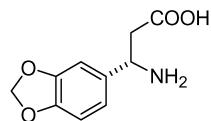
(S)-3-Amino-3-(3,4-dimethoxyphenyl)propanoic acid

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +1.3$ (c 0.51, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



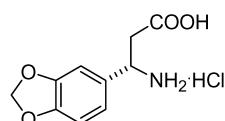
(S)-3-Amino-3-(3,4-dimethoxyphenyl)propanoic acid hydrochloride

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +7.2$ (*c* 0.315, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



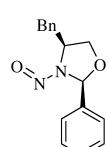
(S)-3-Amino-3-benzo[1,3]dioxol-5-ylpropanoic acid

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +4$ (*c* 0.3, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



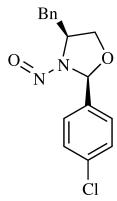
(S)-3-Amino-3-benzo[1,3]dioxol-5-ylpropanoic acid hydrochloride

Ee >99% by GC on a Chirasil L-Val column after derivatization with CH_2N_2 and Ac_2O
 $[\alpha]_D^{25} = +8.9$ (*c* 0.33, H_2O)
 Source of chirality: lipase PS-catalyzed hydrolysis
 Absolute configuration: (3S)



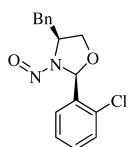
(2S,4S)-4-Benzyl-3-nitroso-2-phenyloxazolidine

$[\alpha]_D^{20} = -45$ (*c* 0.85, CHCl_3)
 Source of chirality: L-phenylalanine



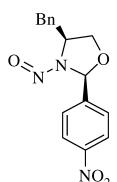
$C_{16}H_{15}N_2O_2Cl$
(2S,4S)-4-Benzyl-2-(4-chlorophenyl)-3-nitrooxazolidine

$[\alpha]_D^{20} = -49$ (*c* 0.90, $CHCl_3$)
Source of chirality: L-phenylalanine



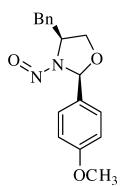
$C_{16}H_{15}N_2O_2Cl$
(2S,4S)-4-Benzyl-2-(2-chlorophenyl)-3-nitrooxazolidine

$[\alpha]_D^{20} = -48$ (*c* 1.00, $CHCl_3$)
Source of chirality: L-phenylalanine



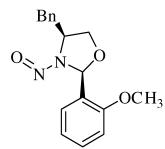
$C_{16}H_{15}N_3O_4$
(2S,4S)-4-Benzyl-2-(4-nitrophenyl)-3-nitrooxazolidine

$[\alpha]_D^{20} = -52$ (*c* 1.00, $CHCl_3$)
Source of chirality: L-phenylalanine



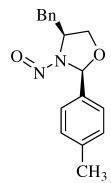
$C_{17}H_{18}N_2O_3$
(2S,4S)-4-Benzyl-2-(4-methoxyphenyl)-3-nitrooxazolidine

$[\alpha]_D^{20} = -43$ (*c* 1.00, $CHCl_3$)
Source of chirality: L-phenylalanine



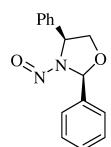
$[\alpha]_D^{20} = -40$ (c 1.20, CHCl₃)
Source of chirality: L-phenylalanine

C₁₇H₁₈N₂O₃
(2S,4S)-4-Benzyl-2-(2-methoxyphenyl)-3-nitrosooxazolidine



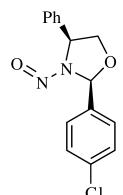
$[\alpha]_D^{20} = -38$ (c 1.00, CHCl₃)
Source of chirality: L-phenylalanine

C₁₇H₁₈N₂O₂
(2S,4S)-4-Benzyl-3-nitroso-2-p-tolyloxazolidine



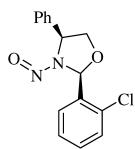
$[\alpha]_D^{20} = -35$ (c 0.40, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine

C₁₅H₁₄N₂O₂
(2S,4S)-3-Nitroso-2,4-diphenyloxazolidine



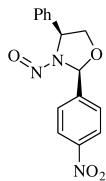
$[\alpha]_D^{20} = -37$ (c 0.50, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine

C₁₅H₁₃N₂O₂Cl
(2S,4S)-2-(4-Chlorophenyl)-3-nitroso-4-phenyloxazolidine



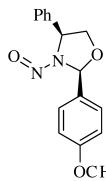
$[\alpha]_D^{20} = -32$ (c 0.70, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine

C₁₅H₁₃N₂O₂Cl
(2S,4S)-2-(2-Chlorophenyl)-3-nitroso-4-phenyloxazolidine



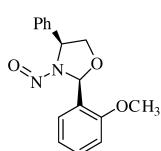
$[\alpha]_D^{20} = -39$ (c 1.20, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine

C₁₅H₁₃N₃O₄
(2S,4S)-2-(4-Nitrophenyl)-3-nitroso-4-phenyloxazolidine



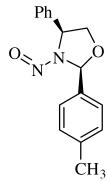
$[\alpha]_D^{20} = -41$ (c 1.10, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine

C₁₆H₁₆N₂O₃
(2S,4S)-2-(4-Methoxyphenyl)-3-nitroso-4-phenyloxazolidine

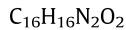


$[\alpha]_D^{20} = -39$ (c 1.00, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine

C₁₆H₁₆N₂O₃
(2S,4S)-2-(2-Methoxyphenyl)-3-nitroso-4-phenyloxazolidine

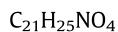
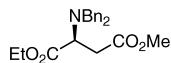


$[\alpha]_D^{20} = -32$ (*c* 0.90, CHCl₃)
Source of chirality: L-(+)-2-phenylglycine



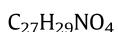
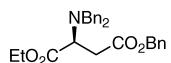
(2S,4S)-3-Nitroso-4-phenyl-2-p-tolylloxazolidine

Ee = 94%
 $[\alpha]_D = -76.5$ (*c* 0.39, CHCl₃)
Absolute configuration: (S)



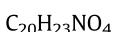
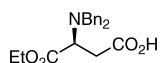
(S)-1-Ethyl 4-methyl 2-(dibenzylamino)succinate

Ee = 96%
 $[\alpha]_D = -58.2$ (*c* 0.40, CHCl₃)
Absolute configuration: (S)



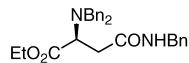
(S)-1-Ethyl 4-benzyl 2-(dibenzylamino)succinate

Ee = 96%
 $[\alpha]_D = -96.2$ (*c* 0.40, CHCl₃)
Absolute configuration: (S)



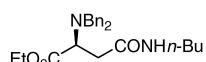
(S)-3-(Dibenzylamino)-4-ethoxy-4-oxobutanoic acid

Ee = 99%
[α]_D = -79.8 (c 0.54, CHCl₃)
Absolute configuration: (S)



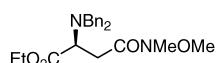
C₂₇H₃₀N₂O₃
(S)-Ethyl 4-(benzylamino)-2-(dibenzylamino)-4-oxobutanoate

Ee = 95%
[α]_D = -79.9 (c 0.46, CHCl₃)
Absolute configuration: (S)



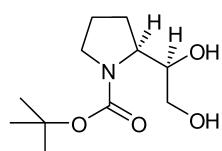
C₂₄H₃₂N₂O₃
(S)-Ethyl 4-(butylamino)-2-(dibenzylamino)-4-oxobutanoate

Ee = 98%
[α]_D = -78.2 (c 0.35, CHCl₃)
Absolute configuration: (S)

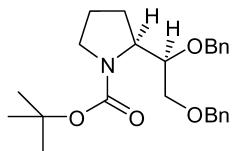


C₂₂H₂₈N₂O₄
(S)-Ethyl 2-(dibenzylamino)-4-(methoxy(methyl)amino)-4-oxobutanoate

Ee, de >95% (NMR)
[α]_D²⁰ = -42.7 (c 1.1, CHCl₃)
Source of chirality: natural product, AD-mix β
Absolute configuration; (2S,1'R)

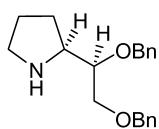


C₁₁H₂₁NO₄
(2S)-N-tert-Butoxycarbonyl-2-[(1'R)-1',2'-dihydroxy-ethyl]-pyrrolidine



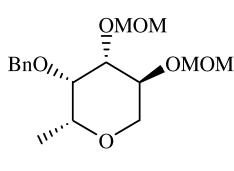
Ee, de >95% (NMR)
 $[\alpha]_D^{20} = -70.1$ (c 0.7, CHCl₃)
 Source of chirality: natural product, AD-mix β
 Absolute configuration; (2S,1'R)

C₂₅H₃₃NO₄
 (2S)-N-tert-Butoxycarbonyl-2-[(1'R)-1',2'-dibenzylxyloxy-ethyl]-pyrrolidine



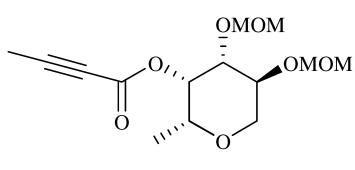
Ee, de >95% (NMR)
 $[\alpha]_D^{20} = -34.6$ (c 0.6, CHCl₃)
 Source of chirality: natural product, AD-mix β
 Absolute configuration; (2S,1'R)

C₂₀H₂₅NO₂
 (2S)-2-[(1'R)-1',2'-Dibenzylxyloxy-ethyl]-pyrrolidine



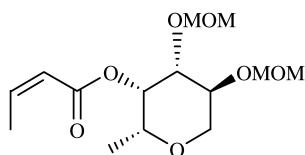
$[\alpha]_D = -100.7$ (c 1.4, CHCl₃)
 Source of chirality: D-xylose
 Absolute configuration: (2R,3S,4R,5S)

C₁₇H₂₆O₆
 (2R,3S,4R,5S)-3-(Benzylxyloxy)-4,5-bis(methoxymethoxy)-2-methyl-tetrahydro-2H-pyran



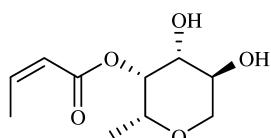
$[\alpha]_D = +13.5$ (c 0.2, CHCl₃)
 Source of chirality: D-xylose
 Absolute configuration: (2R,3S,4R,5S)

C₁₄H₂₂O₇
 (2R,3S,4R,5S)-4,5-Bis(methoxymethoxy)-2-methyl-tetrahydro-2H-pyran-3-yl-but-2-yn-oate



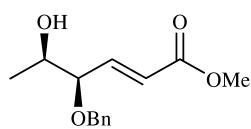
$C_{14}H_{24}O_7$
(Z)-[(2R,3S,4R,5S)-4,5-Bis(methoxymethoxy)-2-methyl-tetrahydro-2H-pyran-3-yl)-but-2-enoate

$[\alpha]_D = +34.4$ (*c* 0.2, $CHCl_3$)
Source of chirality: *D*-xylose
Absolute configuration: (2*R*,3*S*,4*R*,5*S*)



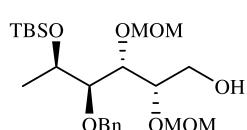
$C_{10}H_{16}O_5$
Ophiocerin-D

$[\alpha]_D = +38.4$ (*c* 0.1, $CHCl_3$)
Source of chirality: *D*-xylose
Absolute configuration: (2*R*,3*S*,4*R*,5*S*)



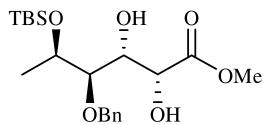
$C_{14}H_{18}O_4$
(4*R*,5*R*,*E*)-Methyl 4-(benzyloxy)-5-hydroxyhex-2-enoate

$[\alpha]_D = -22.8$ (*c* 1.2, $CHCl_3$)
Source of chirality: *D*-xylose
Absolute configuration: (4*R*,5*R*)



$C_{23}H_{42}O_7Si$
(2*R*,3*R*,4*R*,5*R*)-4-(Benzylxyloxy)-5-(tert-butyldimethylsilyloxy)-2,3-bis(methoxymethoxy)hexan-1-ol

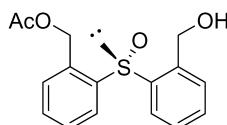
$[\alpha]_D = -30.4$ (*c* 2.4, $CHCl_3$)
Source of chirality: *D*-xylose
Absolute configuration: (2*R*,3*R*,4*R*,5*R*)



$[\alpha]_D = +12.8$ (*c* 1.5, CHCl₃)
Source of chirality: *D*-xylose
Absolute configuration: (2*R*,3*R*,4*R*,5*R*)

C₂₀H₃₄O₆Si
(2*R*,3*R*,4*R*,5*R*)-Methyl 4-(benzyloxy)-5-(*tert*-butyldimethylsilyloxy)-2,3-dihydroxy hexanoate

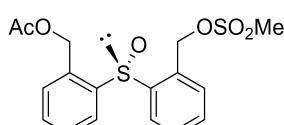
Michał Rachwalski, Małgorzata Kwiatkowska, Józef Drabowicz, Marcin Kłos,
Wanda M. Wieczorek, Małgorzata Szyrej, Lesław Sieroń, Piotr Kiełbasiński*



Ee = 100%
 $[\alpha]_D = +60.0$ (*c* 1.0, CHCl₃)
Source of chirality: enzymatic desymmetrization
Absolute configuration: (R)

C₁₆H₁₆O₄S
(*R*)-2-Acetoxymethylphenyl 2'-hydroxymethylphenyl sulfoxide

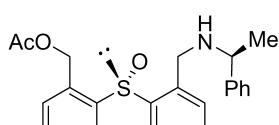
Michał Rachwalski, Małgorzata Kwiatkowska, Józef Drabowicz, Marcin Kłos,
Wanda M. Wieczorek, Małgorzata Szyrej, Lesław Sieroń, Piotr Kiełbasiński*



Ee = 100%
 $[\alpha]_D = +12.4$ (*c* 1.0, CHCl₃)
Source of chirality: asymmetric synthesis
Absolute configuration: (S)

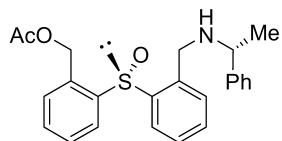
C₁₇H₁₈O₆S₂
(*S*)-2-Acetoxymethylphenyl 2'-methanosulfonyloxymethylphenyl sulfoxide

Michał Rachwalski, Małgorzata Kwiatkowska, Józef Drabowicz, Marcin Kłos,
Wanda M. Wieczorek, Małgorzata Szyrej, Lesław Sieroń, Piotr Kiełbasiński*



Ee = 100%
 $[\alpha]_D = -36.2$ (*c* 1.0, CHCl₃)
Source of chirality: stereospecific synthesis
Absolute configuration: (R_S,S_C)

C₂₄H₂₅NO₃S
(R_S,S_C)-2-Acetoxymethylphenyl 2'-(α-phenylethyl)aminomethylphenyl sulfoxide

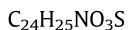


Ee = 100%

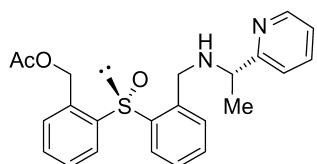
$[\alpha]_D = +17.3$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,R_C)



(R_S,R_C)-2-Acetoxymethylphenyl 2'-(α-phenylethyl)aminomethylphenyl sulfoxide

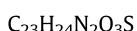


Ee = 100%

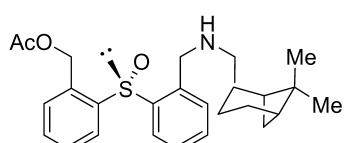
$[\alpha]_D = -38.1$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,S_C)



(R_S,S_C)-2-Acetoxymethylphenyl 2'-(1-(α-pyridyl)ethyl)aminomethylphenyl sulfoxide



Ee = 100%

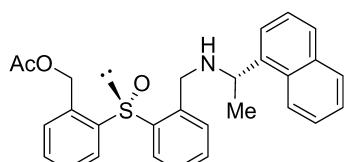
$[\alpha]_D = -19.0$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,S_{C1},S_{C2},S_{C5})



(R_S,S_{C1},S_{C2},S_{C5})-2-Acetoxymethylphenyl 2'-(cis)-myrtanylaminomethylphenyl sulfoxide

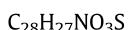


Ee = 100%

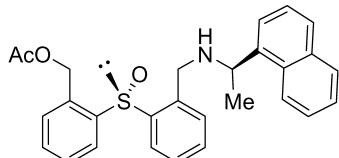
$[\alpha]_D = -12.0$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,S_C)



(R_S,S_C)-2-Acetoxymethylphenyl 2'-(1-(α-naphthyl)ethyl)aminomethylphenyl sulfoxide



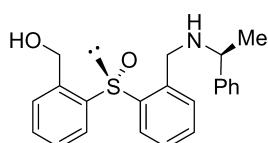
$C_{28}H_{27}NO_3S$
(R_S, R_C)-2-Acetoxymethylphenyl 2'-(1-(α -naphthyl)ethyl)aminomethylphenyl sulfoxide

Ee = 100%

$[\alpha]_D = -4.1$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S, R_C)



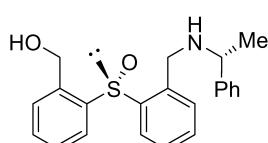
$C_{22}H_{23}NO_2S$
(R_S, S_C)-2-Hydroxymethylphenyl 2'-(α -phenylethyl)aminomethylphenyl sulfoxide

Ee = 100%

$[\alpha]_D = -15.9$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S, S_C)



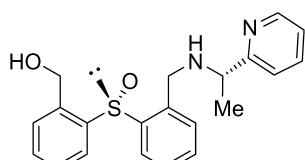
$C_{22}H_{23}NO_2S$
(R_S, R_C)-2-Hydroxymethylphenyl 2'-(α -phenylethyl)aminomethylphenyl sulfoxide

Ee = 100%

$[\alpha]_D = -15.6$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S, R_C)



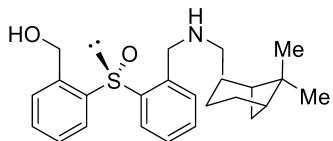
$C_{21}H_{22}N_2O_2S$
(R_S, S_C)-2-Hydroxymethylphenyl 2'-(1-(α -pyridyl)ethyl)aminomethylphenyl sulfoxide

Ee = 100%

$[\alpha]_D = -17.4$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S, S_C)



Ee = 100%

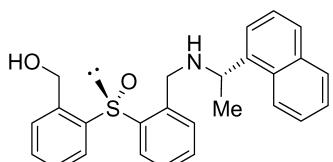
$[\alpha]_D = -8.8$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,S_{C1},S_{C2},S_{C5})

C₂₄H₃₁NO₂S

(R_S,S_{C1},S_{C2},S_{C5})-2-Hydroxymethylphenyl 2'-(cis)-myrtanylaminomethylphenyl sulfoxide



Ee = 100%

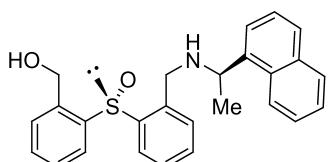
$[\alpha]_D = +13.2$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,S_C)

C₂₆H₂₅NO₂S

(R_S,S_C)-2-Hydroxymethylphenyl 2'-(1-(alpha-naphthyl)ethyl)aminomethylphenyl sulfoxide



Ee = 100%

$[\alpha]_D = -30.7$ (c 1.0, CHCl₃)

Source of chirality: stereospecific synthesis

Absolute configuration: (R_S,R_C)

C₂₆H₂₅NO₂S

(R_S,R_C)-2-Hydroxymethylphenyl 2'-(1-(alpha-naphthyl)ethyl)aminomethylphenyl sulfoxide