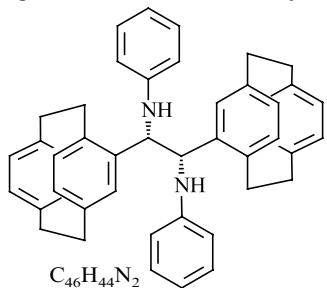


Elena V. Sergeeva, Valeria I. Rozenberg,* Dmitrii Yu. Antonov,
Evgenii V. Vorontsov, Zoya A. Starikova and Henning Hopf*

Tetrahedron: Asymmetry 13 (2002) 1121



N,N-Diphenyl-(1*S*,2*S*)-di-((*R*)-[2.2]paracyclophane-4-yl)-1,2-ethanediamine

D.e. >99%

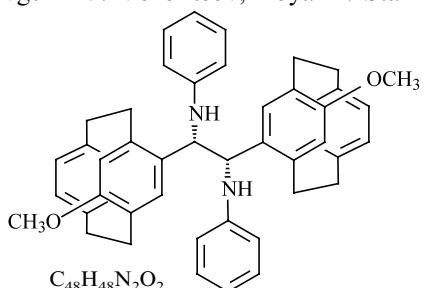
$[\alpha]_D^{22} = -15.7$ (*c* 0.36, C₆H₆)

Source of chirality: stereoselective synthesis

Absolute configuration: (*Rp,S,S,Rp*)

Elena V. Sergeeva, Valeria I. Rozenberg,* Dmitrii Yu. Antonov,
Evgenii V. Vorontsov, Zoya A. Starikova and Henning Hopf*

Tetrahedron: Asymmetry 13 (2002) 1121



N,N-Diphenyl-(1*S*,2*S*)-di-((*R*)-7-methoxy[2.2]paracyclophane-4-yl)-1,2-ethanediamine

D.e. >99%

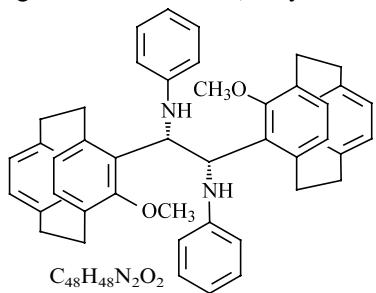
$[\alpha]_D^{22} = +49.4$ (*c* 0.23, C₆H₆)

Source of chirality: stereoselective synthesis

Absolute configuration: (*Rp,S,S,Rp*)

Elena V. Sergeeva, Valeria I. Rozenberg,* Dmitrii Yu. Antonov,
Evgenii V. Vorontsov, Zoya A. Starikova and Henning Hopf*

Tetrahedron: Asymmetry 13 (2002) 1121



N,N-Diphenyl-(1*S*,2*S*)-di-((*R*)-4-methoxy[2.2]paracyclophane-4-yl)-1,2-ethanediamine

D.e. >99%

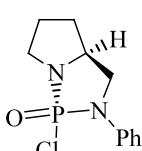
$[\alpha]_D^{22} = +28.7$ (*c* 0.27, C₆H₆)

Source of chirality: stereoselective synthesis

Absolute configuration: (*Rp,S,S,Rp*)

Deevi Basavaiah,* Gone Jayapal Reddy and
Vanampally Chandrashekhar

Tetrahedron: Asymmetry 13 (2002) 1125

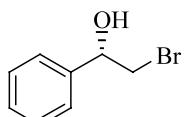


(2*S*,5*S*)-1,3-Diaza-2-phospho-2-oxo-2-chloro-3-phenylbicyclo[3.3.0]octane

$[\alpha]_D^{25} = +127.2$ (*c* 2.1, CHCl₃)

Source of chirality: L-glutamic acid

Absolute configuration: 2*S*,5*S*



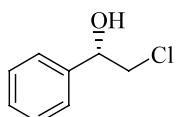
(S)-2-Bromo-1-phenylethanol

E.e. = 87%

[α]_D²⁵ = +39.0 (*c* 1.0, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



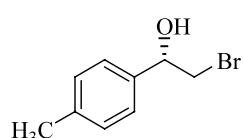
(S)-2-Chloro-1-phenylethanol

E.e. = 81%

[α]_D²⁵ = +40.0 (*c* 1.0, cyclohexane)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



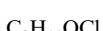
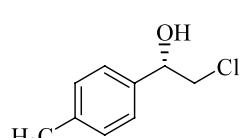
(S)-2-Bromo-1-(4-methylphenyl)ethanol

E.e. = 83%

[α]_D²⁵ = +37.5 (*c* 1.0, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



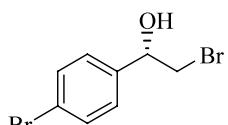
(S)-2-Chloro-1-(4-methylphenyl)ethanol

E.e. = 82%

[α]_D²⁵ = +42.0 (*c* 1.0, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



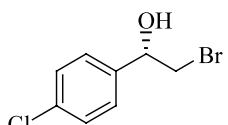
(S)-2-Bromo-1-(4-bromophenyl)ethanol

E.e. = 86%

[α]_D²⁵ = +30.7 (*c* 2.4, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



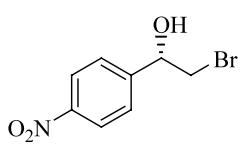
(S)-2-Bromo-1-(4-chlorophenyl)ethanol

E.e. = 88%

[α]_D²⁵ = +37.9 (*c* 1.2, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



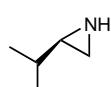
(S)-2-Bromo-1-(4-nitrophenyl)ethanol

E.e. = 91%

[α]_D²⁵ = +32.0 (*c* 1, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



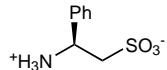
(R)-2-Isopropylaziridine

E.e. = 100%

[α]_D²⁰ = +21.7 (*c* 1.11, EtOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)



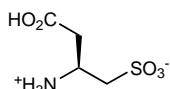
(S)-2-Amino-2-phenylethanethanesulfonic acid

Ee = 100%

[α]_D²⁰ = -1.4 (c 1.11, EtOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)



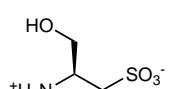
(S)-2-Amino-2-carboxyethanesulfonic acid

Ee = 100%

[α]_D²⁰ = -8.4 (c 7.3, H₂O) (monohydrate)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)



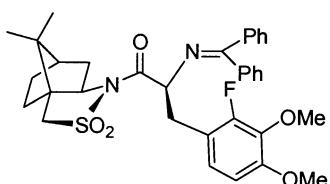
(S)-2-Amino-3-hydroxypropanesulfonic acid

Ee = 100%

[α]_D²⁰ = -7.4 (c 1.11, H₂O)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)

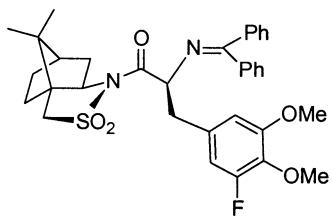


(2R)-N-[(2S)-2-((Diphenylmethylidene)amino)-2-(2'-fluoro-3',4'-dimethoxybenzyl)-ethan-1-oyl]bornane-10,2-sultam

D.e. >97%

[α]_D²⁰ = -107.3 (c 0.24, CHCl₃)

Source of chirality: chiral material and asymmetric induction

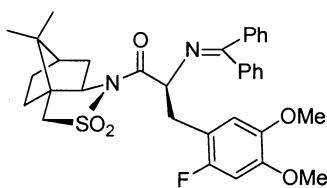
 $C_{34}H_{37}FN_2O_5S$

(2R)-N-[{(2S)-2-((Diphenylmethylidene)amino)-2-(5'-fluoro-3',4'-dimethoxybenzyl)-ethan-1-oyl]bornane-10,2-sultam

D.e. >97%

 $[\alpha]_D^{20} = -121.5$ (*c* 0.59, CHCl₃)

Source of chirality: chiral material and asymmetric induction

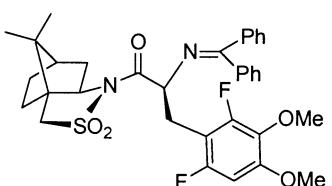
 $C_{34}H_{37}FN_2O_5S$

(2R)-N-[{(2S)-2-((Diphenylmethylidene)amino)-2-(2'-fluoro-4',5'-dimethoxybenzyl)-ethan-1-oyl]bornane-10,2-sultam

D.e. >97%

 $[\alpha]_D^{20} = -106.5$ (*c* 0.68, CHCl₃)

Source of chirality: chiral material and asymmetric induction

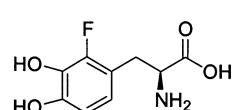
 $C_{34}H_{36}F_2N_2O_5S$

(2R)-N-[{(2S)-2-((Diphenylmethylidene)amino)-2-(2',6'-difluoro-3',4'-dimethoxybenzyl)-ethan-1-oyl]bornane-10,2-sultam

D.e. >97%

 $[\alpha]_D^{20} = -90.6$ (*c* 0.40, CHCl₃)

Source of chirality: chiral material and asymmetric induction

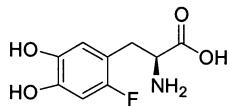
 $C_9H_{10}FNO_4$

2-Fluoro-L-3,4-dihydroxyphenylalanine

E.e. >99%

 $[\alpha]_D^{20} = -4.6$ (*c* 0.48, 1 M HCl)

Source of chirality: asymmetric induction

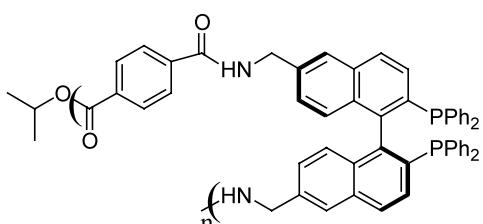


$C_9H_{10}FNO_4$
6-Fluoro-L-3,4-dihydroxyphenylalanine

E.e. >99%

 $[\alpha]_D^{20} = -5.5$ (*c* 0.50, 1 M HCl)

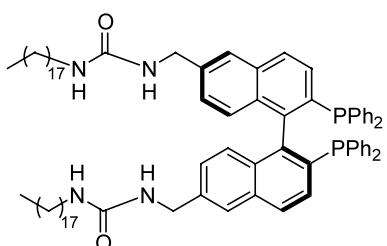
Source of chirality: asymmetric induction



Poly((*S*)-6,6'-diaminomethyl-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl-co-terephthalic acid)

 $[\alpha]_D = +66$ (*c* 1, DMF)

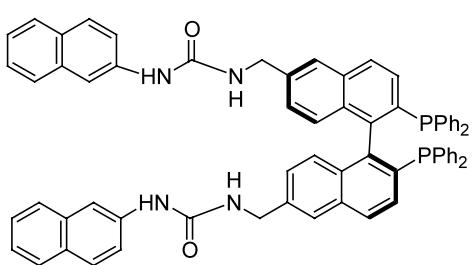
Source of chirality: enantiopure BINOL

Absolute configuration: (*S*)

N,N''-[(S)-6,6'-(2,2'-Bis(diphenylphosphino)-1,1'-binaphthalene) bis(methylene)] bis N'-(octadecyl) urea

 $[\alpha]_D = +62$ (*c* 1, DMF)

Source of chirality: enantiopure BINOL

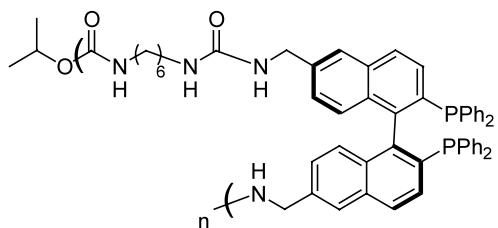
Absolute configuration: (*S*)

N,N''-[(S)-6,6'-(2,2'-Bis(diphenylphosphino)-1,1'-binaphthalene) bis(methylene)] bis N'-(2-naphthyl) urea

 $[\alpha]_D = +59$ (*c* 1, DMF)

Source of chirality: enantiopure BINOL

Absolute configuration: (*S*)

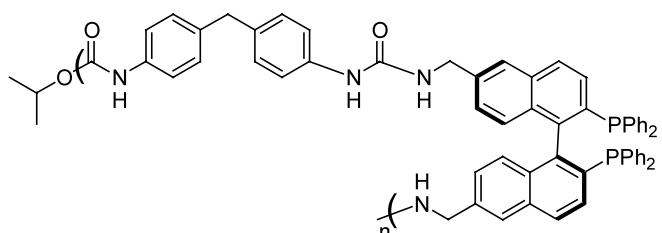


(S)-6,6'-Diaminomethyl-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl-co-diisocyanatohexane

$[\alpha]_D = +87$ (*c* 0.041, DMF)

Source of chirality: enantiopure BINOL

Absolute configuration: (*S*)

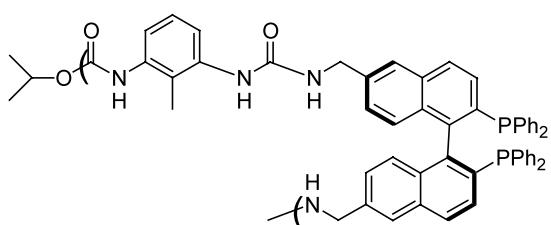


Poly((S)-6,6'-diaminomethyl-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl-co-4,4'-methylenabis(phenylisocyanate))

$[\alpha]_D = -91$ (*c* 0.086, DMF)

Source of chirality: enantiopure BINOL

Absolute configuration: (*S*)

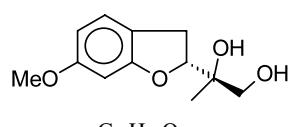


Poly((S)-6,6'-diaminomethyl-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl-co-2,6-diisocyanato toluene)

$[\alpha]_D = -96$ (*c* 0.345, DMF)

Source of chirality: enantiopure BINOL

Absolute configuration: (*S*)

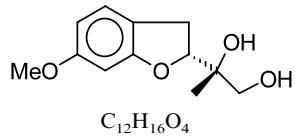


(2*R*,1'*S*)-(-)-2,3-Dihydro-2-(1',2'-dihydroxy-1'-methylpropyl)-6-methoxybenzofuran

$[\alpha]_D^{25} = -27.6$ (*c* 2.88, CHCl₃)

Source of chirality: (*R*)-2,3-dihydro-2-(1'-methylpropyl)-6-methoxybenzofuran

Absolute configuration: 2*R*,1'*S* (determined by asymmetric synthesis)

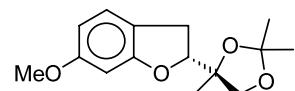


(2R,1'R)-(-)-2,3-Dihydro-2-(1',2'-dihydroxy-1'-methylethyl)-6-methoxybenzofuran

[α]_D²⁵ = -21.2 (c 9.53, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'R (determined by asymmetric synthesis)

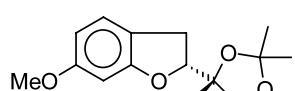


(2R,1'S)-(-)-2,3-Dihydro-2-(2',2',4'-trimethyl-1',3'-dioxolan-4'-yl)-6-methoxybenzofuran

[α]_D²⁵ = -45.1 (c 7.71, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'S (determined by asymmetric synthesis)

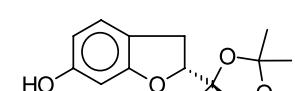


(2R,1'R)-(-)-2,3-Dihydro-2-(2',2',4'-trimethyl-1',3'-dioxolan-4'-yl)-6-methoxybenzofuran

[α]_D²⁵ = -31.2 (c 6.94, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'R (determined by asymmetric synthesis)

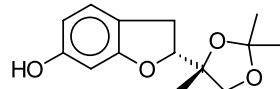


(2R,1'S)-(-)-2,3-Dihydro-2-(2',2',4'-trimethyl-1',3'-dioxolan-4'-yl)-6-hydroxybenzofuran

[α]_D²⁵ = -42.1 (c 1.52, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'S (determined by asymmetric synthesis)



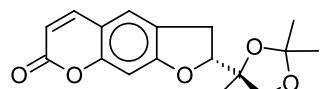
C₁₄H₁₈O₄

(2R,1'R)-(-)-2,3-Dihydro-2-(2',2',4'-trimethyl-1',3'-dioxolan-4'-yl)-6-hydroxybenzofuran

[α]_D²⁵ = -57.6 (c 1.91, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylene)-6-methoxybenzofuran

Absolute configuration: 2R,1'R (determined by asymmetric synthesis)



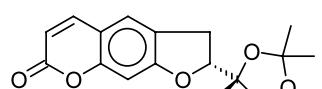
C₁₇H₁₈O₅

(2R,1'S)-(+)-2,3-Dihydro-2-(2',2',4'-trimethyl-1',3'-dioxolan-4'-yl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = +4.1 (c 1.72, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylene)-6-methoxybenzofuran

Absolute configuration: 2R,1'S (determined by asymmetric synthesis and X-ray)



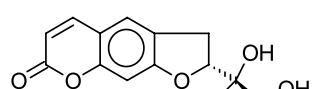
C₁₇H₁₈O₅

(2R,1'R)-(+)-2,3-Dihydro-2-(2',2',4'-trimethyl-1',3'-dioxolan-4'-yl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = +36.4 (c 1.62, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylene)-6-methoxybenzofuran

Absolute configuration: 2R,1'R (determined by asymmetric synthesis and X-ray)



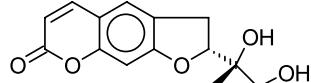
C₁₄H₁₄O₅

(2R,1'S)-(+)-2,3-Dihydro-2-(1',2'-dihydroxy-1'-methylethyl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = +17.2 (c 0.99, MeOH)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylene)-6-methoxybenzofuran

Absolute configuration: 2R,1'S (determined by asymmetric synthesis)



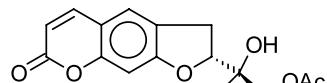
C₁₄H₁₄O₅

(2R,1'R)-(-)-2,3-Dihydro-2-(1',2'-dihydroxy-1'-methylethyl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = -16.7 (c 0.30, MeOH)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'R (determined by asymmetric synthesis)



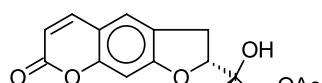
C₁₆H₁₆O₆

(2R,1'S)-(-)-2,3-Dihydro-2-(1'-hydroxy-2'-acetoxy-1'-methylethyl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = -20.8 (c 0.77, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'S (determined by asymmetric synthesis)



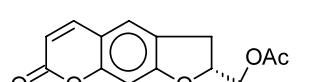
C₁₆H₁₆O₆

(2R,1'R)-(-)-2,3-Dihydro-2-(1'-hydroxy-2'-acetoxy-1'-methylethyl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = -39.5 (c 0.81, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'R (determined by asymmetric synthesis)



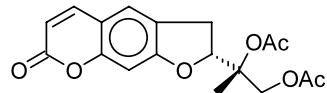
C₁₈H₁₈O₇

(2R,1'S)-(-)-2,3-Dihydro-2-(1',2'-diacetoxy-1'-methylethyl)-7H-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = -3.8 (c 1.30, CHCl₃)

Source of chirality: (R)-2,3-dihydro-2-(1'-methylethyl)-6-methoxybenzofuran

Absolute configuration: 2R,1'S (determined by asymmetric synthesis)



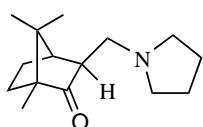
C₁₈H₁₈O₇

(2*R*,1'*R*)-(-)-2,3-Dihydro-2-(1',2'-diacetoxy-1'-methylethyl)-7*H*-furo[3,2-g][1]benzopyran-7-one

[α]_D²⁵ = -15 (*c* 1.00, CHCl₃)

Source of chirality: (*R*)-2,3-dihydro-2-(1'-methylene)-6-methoxybenzofuran

Absolute configuration: 2*R*,1'*R* (determined by asymmetric synthesis)



C₁₅H₂₅NO

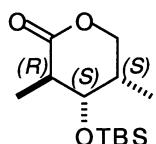
(1*R*,3*S*,4*R*)-(+)-3-[(Pyrrolidylamino)methyl]camphor

D.e. = 84%

[α]_D²⁵ = +46.2 (*c* 5, CH₂Cl₂)

Source of chirality: synthesis

Absolute configuration: 1*R*,3*S*,4*R*



C₁₃H₂₆O₃Si

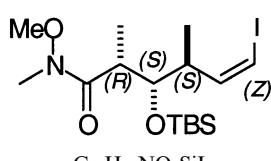
(3*R*,4*S*,5*S*)-4-(tert-Butyldimethylsilyloxy)-3,5-dimethyltetrahydropyran-2-one

Mp = 55–55.5°C (pentane)

[α]_D¹⁸ = +20.4 (*c* 0.22, CHCl₃)

Source of chirality: Evans' auxiliary

Absolute configuration: 3*R*,4*S*,5*S*



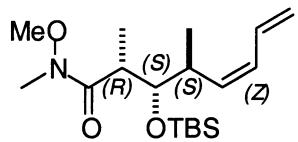
C₁₆H₃₂NO₃SiI

(2*R*,3*S*,4*S*,5*Z*)-3-(tert-Butyldimethylsilyloxy)-6-iodo-2,4-dimethylhex-5-enoic acid methoxymethylamide

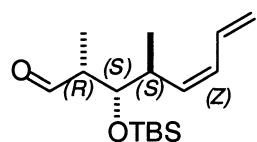
[α]_D¹⁸ = +65.9 (*c* 1.0, CHCl₃)

Source of chirality: Evans' auxiliary

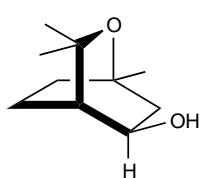
Absolute configuration: 2*R*,3*S*,4*S*,5*Z*

 $C_{18}H_{35}NO_3Si$ (2R,3S,4S,5Z)-3-(*tert*-Butyldimethylsilyloxy)-2,4-dimethylocta-5,7-dienoic acid methoxymethylamide $[\alpha]_D^{18} = +53.2$ (*c* 0.01, CHCl₃)

Source of chirality: Evans' auxiliary

Absolute configuration: 2*R*,3*S*,4*S*,5*Z* $C_{16}H_{30}O_2Si$ (2R,3S,4S,5Z)-3-(*tert*-Butyldimethylsilyloxy)-2,4-dimethylocta-5,7-dienal $[\alpha]_D^{18} = -16.7$ (*c* 1.30, CHCl₃)

Source of chirality: Evans' auxiliary

Absolute configuration: 2*R*,3*S*,4*S*,5*Z*(1*R*,4*S*,5*R*)-(+)-*exo*-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane-5-ol

E.e. >99%

 $[\alpha]_D^{25} = +49.8$ (*c* 1.04, CHCl₃)

Source of chirality: enzymatic resolution

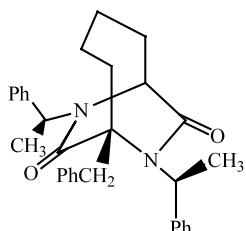
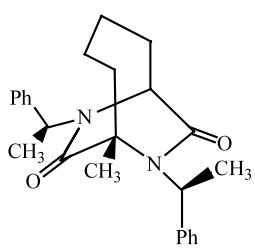
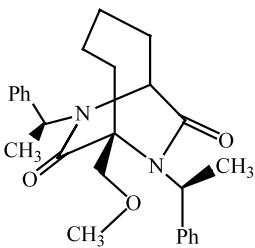
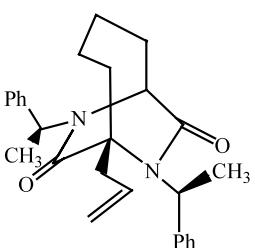
Absolute configuration: 1*R*,4*S*,5*R*(1*R*,4*S*,5*R*)-(+)-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]oct-5-ene

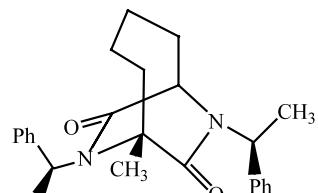
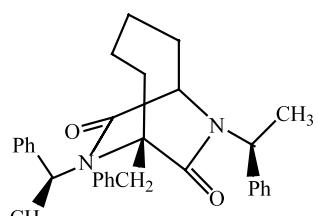
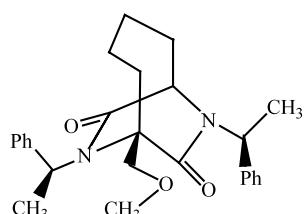
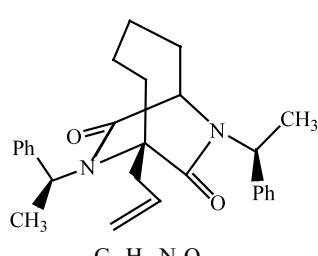
E.e. >99%

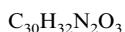
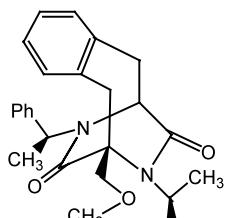
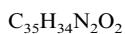
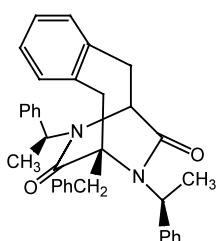
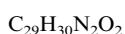
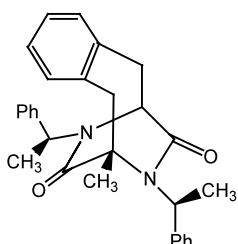
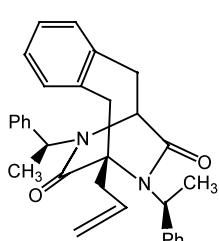
 $[\alpha]_D^{25} = -39.8$ (*c* 1.00, CHCl₃)

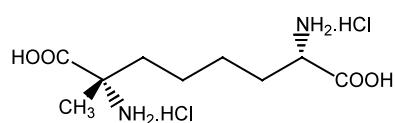
Source of chirality: enzymatic resolution

Absolute configuration: 1*R*,4*S*,5*R*

 $C_{31}H_{34}N_2O_2$ (1*R*,4*S*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-1-benzyl-3,6-dioxobicyclo[4.2.2]decane $[\alpha]_D = +94.8$ (*c* 0.22, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*R*,4*S*,1'*S* $C_{25}H_{30}N_2O_2$ (1*S*,4*S*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-3,6-dioxo-1-methylbicyclo[4.2.2]decane $[\alpha]_D = -49.7$ (*c* 0.84, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,4*S*,1'*S* $C_{26}H_{32}N_2O_3$ (1*R*,4*S*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-3,6-dioxo-1-methoxymethylbicyclo[4.2.2]decane $[\alpha]_D = +133.7$ (*c* 1.04, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*R*,4*S*,1'*S* $C_{27}H_{32}N_2O_2$ (1*R*,4*S*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-1-allyl-3,6-dioxobicyclo[4.2.2]decane $[\alpha]_D = +207.1$ (*c* 1.26, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*R*,4*S*,1'*S*

 $C_{25}H_{30}N_2O_2$ (1*R*,4*R*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-3,6-dioxo-1-methylbicyclo[4.2.2]decane $[\alpha]_D = -168.2$ (*c* 1.41, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*R*,4*R*,1'*S* $C_{31}H_{34}N_2O_2$ (1*S*,4*R*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-1-benzyl-3,6-dioxobicyclo[4.2.2]decane $[\alpha]_D = -187.5$ (*c* 1.03, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,4*R*,1'*S* $C_{26}H_{32}N_2O_3$ (1*S*,4*R*,1'*S*)-2,5-Bis-[*N*-(1'-phenethyl)]-3,6-dioxo-1-methoxymethylbicyclo[4.2.2]decane $[\alpha]_D = -224.9$ (*c* 0.53, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,4*R*,1'*S* $C_{27}H_{32}N_2O_2$ (1*S*,4*R*,1'*S*)-2,5-Bis-[*N*-(1'-phenylethyl)]-1-allyl-3,6-dioxobicyclo[4.2.2]decane $[\alpha]_D = -185.4$ (*c* 0.58, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,4*R*,1'*S*

(1*R*,10*S*,1'*S*)-11,13-Bis-[*N*-(1'-phenethyl)]-1-methoxymethyl-11,13-diazatricyclo[8.2.2.0^{3,8}]tetradeca-3,5,7-triene-12,14-dione $[\alpha]_D = +82.4$ (*c* 2.08, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*R*,10*S*,1'*S*(1*S*,10*S*,1'*S*)-11,13-Bis-[*N*-(1'-phenethyl)]-1-benzyl-11,13-diazatricyclo[8.2.2.0^{3,8}]tetradeca-3,5,7-triene-12,14-dione $[\alpha]_D = +30.7$ (*c* 0.91, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,10*S*,1'*S*(1*S*,10*S*,1'*S*)-11,13-Bis-[*N*-(1'-phenylethyl)]-1-methyl-11,13-diazatricyclo[8.2.2.0^{3,8}]tetradeca-3,5,7-triene-12,14-dione $[\alpha]_D = -31.4$ (*c* 1.57, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,10*S*,1'*S*(1*S*,10*S*,1'*S*)-11,13-Bis-[*N*-(1'-phenylethyl)]-1-allyl-11,13-diazatricyclo[8.2.2.0^{3,8}]tetradeca-3,5,7-triene-12,14-dione $[\alpha]_D = +77.2$ (*c* 1.94, CHCl₃)Source of chirality: (*S*)-phenylethylamineAbsolute configuration: 1*S*,10*S*,1'*S*

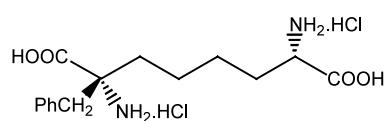


$C_9H_{20}Cl_2N_2O_4$
(2S,7S)-2-Methyl-2,7-diaminosuberic acid hydrochloride

$[\alpha]_D = +31.1$ (*c* 0.49, 1N HCl)

Source of chirality: (*S*)-phenethylamine

Absolute configuration: 2*S*,7*S*

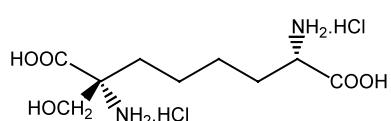


$C_{14}H_{24}Cl_2N_2O_4$
(2*R*,7*S*)-2-Benzyl-2,7-diaminosuberic acid hydrochloride

$[\alpha]_D = +18.2$ (*c* 0.18, 1N HCl)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 2*R*,7*S*

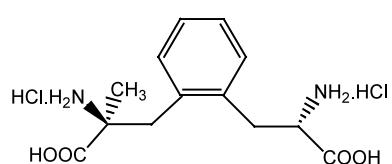


$C_9H_{20}Cl_2N_2O_5$
(2*R*,7*S*)-2-Hydroxymethyl-2,7-diaminosuberic acid hydrochloride

$[\alpha]_D = +20.9$ (*c* 0.96, 1N HCl)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 2*R*,7*S*

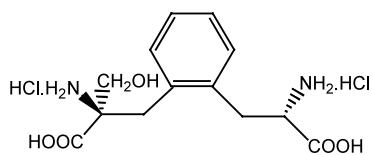


$C_{13}H_{20}Cl_2N_2O_4$
1-[(2'-Amino-2'-carboxy-2'-methyl)ethyl]-2-[(2''-amino-2''-carboxy)ethyl]benzene hydrochloride

$[\alpha]_D = +5.6$ (*c* 1.26, 1N HCl)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 2'S,2"S

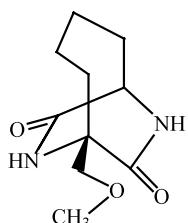


$C_{13}H_{20}Cl_2N_2O_5$
1-[(2'-Amino-2'-carboxy-2'-hydroxymethyl)ethyl]-2-[(2''-amino-2''-carboxy)ethyl]benzene hydrochloride

$[\alpha]_D = +10.6$ (*c* 0.44, 1N HCl)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 2'R,2"S

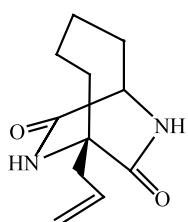


$C_{18}H_{24}N_2O_3$
(1*S*,4*R*)-3,6-Dioxo-1-methoxymethyl-2,5-diazabicyclo[4.2.2]decane

$[\alpha]_D = -166$ (*c* 0.73, CH₃OH)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 1*S*,4*R*

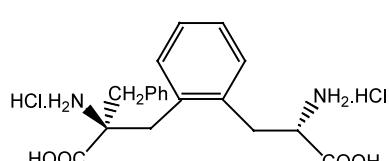


$C_{19}H_{24}N_2O_2$
(1*S*,4*R*)-3,6-Dioxo-1-allyl-2,5-diazabicyclo[4.2.2]decane

$[\alpha]_D = -240.7$ (*c* 0.32, CH₃OH)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 1*S*,4*R*



$C_{19}H_{24}Cl_2N_2O_4$
1-[(2'-Amino-2'-benzyl-2'-carboxy)ethyl]-2-[(2''-amino-2''-carboxy)ethyl]benzene hydrochloride

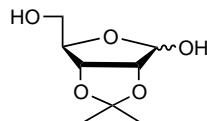
$[\alpha]_D = -10.7$ (*c* 0.51, 1N HCl)

Source of chirality: (*S*)-phenylethylamine

Absolute configuration: 2'R,2"S

Hyung Ryong Moon, Won Jun Choi, Hea Ok Kim
and Lak Shin Jeong*

Tetrahedron: Asymmetry 13 (2002) 1189



C₈H₁₄O₅
2,3-*O*-Isopropylidene-D-ribose

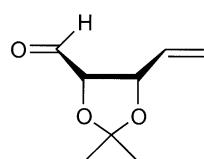
[α]_D²⁵ = -36.2 (*c* 1.45, CH₃COCH₃)

Source of chirality: D-ribose

Absolute configuration: 4S,5S

Hyung Ryong Moon, Won Jun Choi, Hea Ok Kim
and Lak Shin Jeong*

Tetrahedron: Asymmetry 13 (2002) 1189



C₈H₁₂O₃
(4S,5S)-2,2-Dimethyl-5-vinyl[1,3]dioxolane-4-carbaldehyde

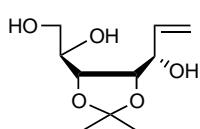
[α]_D²⁵ = +3.3 (*c* 1.33, CHCl₃)

Source of chirality: D-ribose

Absolute configuration: 4S,5S

Hyung Ryong Moon, Won Jun Choi, Hea Ok Kim
and Lak Shin Jeong*

Tetrahedron: Asymmetry 13 (2002) 1189



C₁₀H₁₈O₅
1-[(4R,5S)-5-((1S)-1-Hydroxyallyl)-2,2-dimethyl[1,3]dioxolan-4-yl]ethane-1,2-diol

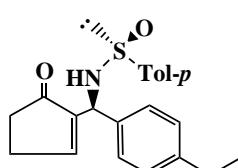
[α]_D²⁵ = -30.5 (*c* 1.23, CHCl₃)

Source of chirality: D-ribose

Absolute configuration: 1S,4R,5S

Min Shi* and Yong-Mei Xu

Tetrahedron: Asymmetry 13 (2002) 1195

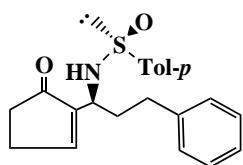


C₂₁H₂₂NO₂S
(S,S)-4-Methylbenzenesulfonic acid [(4-ethylphenyl)(5-oxocyclopent-1-enyl)methyl]amide

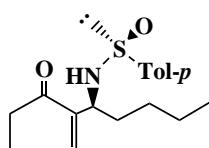
[α]_D = +104.9 (*c* 0.5, CHCl₃)

Source of chirality: homochiral sulfinimine starting material

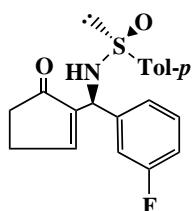
Absolute configuration: S_S,S

 $C_{21}H_{23}NO_2S$ (S,S) -4-Methylbenzenesulfinic acid [1-(5-oxocyclopent-1-enyl)-3-phenylpropyl]amide $[\alpha]_D = +85.3$ (*c* 0.67, CHCl₃)

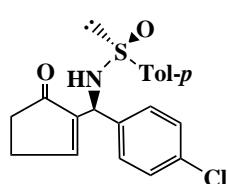
Source of chirality: homochiral sulfinimine starting material

Absolute configuration: *S_S,S* $C_{17}H_{22}NO_2S$ (S,S) -4-Methylbenzenesulfinic acid [1-(5-oxocyclopent-1-enyl)pentyl]amide $[\alpha]_D = +122.5$ (*c* 1.05, CHCl₃)

Source of chirality: homochiral sulfinimine starting material

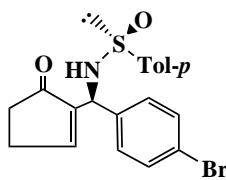
Absolute configuration: *S_S,S* $C_{18}H_{17}FNO_2S$ (S,S) -4-Methylbenzenesulfinic acid [(3-fluorophenyl)(5-oxocyclopent-1-enyl)methyl]amide $[\alpha]_D = +104.7$ (*c* 0.91, CHCl₃)

Source of chirality: homochiral sulfinimine starting material

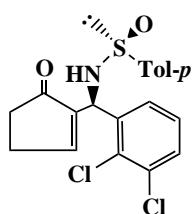
Absolute configuration: *S_S,S* $C_{18}H_{17}ClNO_2S$ (S,S) -4-Methylbenzenesulfinic acid [(4-chlorophenyl)(5-oxocyclopent-1-enyl)methyl]amide $[\alpha]_D = +107$ (*c* 0.19, CHCl₃)

Source of chirality: homochiral sulfinimine starting material

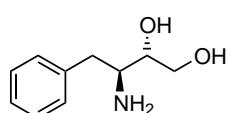
Absolute configuration: *S_S,S*

 $C_{18}H_{17}BrNO_2S$ (S_S,S)-4-Methylbenzenesulfinic acid [(4-bromophenyl)(5-oxocyclopent-1-enyl)methyl]amide $[\alpha]_D = +106.4$ (*c* 2.40, CHCl₃)

Source of chirality: homochiral sulfinimine starting material

Absolute configuration: S_S,S $C_{18}H_{16}Cl_2NO_2S$ (S_S,S)-4-Methylbenzenesulfinic acid [(2,3-dichlorophenyl)(5-oxocyclopent-1-enyl)methyl]amide $[\alpha]_D = +144.6$ (*c* 1.05, CHCl₃)

Source of chirality: homochiral sulfinimine starting material

Absolute configuration: S_S,S $C_{10}H_{15}NO_2$

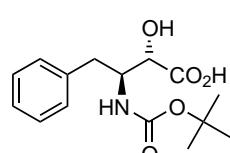
(2S,3S)-3-Amino-4-phenylbutane-1,2-diol

Ee = 100%

 $[\alpha]_D^{25} = -35.2$ (*c* 0.95, MeOH)

Source of chirality: chiral pool [(S)-phenylalanine]

Absolute configuration: (2S,3S)

 $C_{11}H_{19}NO_4S$

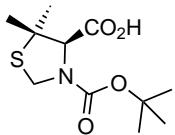
(R)-3-tert-Butoxycarbonyl-5,5-dimethyl-1,3-thiazolidine-4-carboxylic acid

Ee = 99.4%

 $[\alpha]_D^{24} = -76.4$ (*c* 1.00, EtOH)

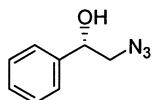
Source of chirality: enzymatic hydrolysis

Absolute configuration: (R)



$C_{15}H_{21}NO_5$
(*S,S*)-3-*N*-*tert*-Butoxycarbonylaminoo-2-hydroxy-4-phenylbutanoic acid

E.e.=100%

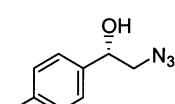
 $[\alpha]_D^{20}=-2.7$ (*c* 1.00, MeOH)Source of chirality: chiral pool [(*S*)-phenylalanine]Absolute configuration: (2*S*,3*S*)

$C_8H_9N_3O$
(*S*)-(+)-2-Azido-1-phenylethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

 $[\alpha]_D^{20}=+104.5$ (*c* 1.30, CHCl₃)

Source of chirality: asymmetric reduction

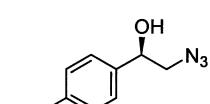
Absolute configuration: *S*

$C_9H_{11}N_3O$
(*S*)-(+)-2-Azido-1-(*p*-tolyl)ethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

 $[\alpha]_D^{20}=+103.2$ (*c* 1.46, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*

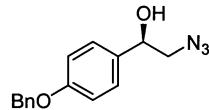
$C_9H_{11}N_3O_2$
(*R*)-(-)-2-Azido-1-(*p*-methoxyphenyl)ethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

 $[\alpha]_D^{20}=-117.4$ (*c* 1.30, CHCl₃)

Source of chirality: asymmetric reduction

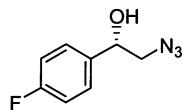
Absolute configuration: *R*

 $C_{15}H_{15}N_3O_2$ (R)-(-)-2-Azido-1-(*p*-benzyloxyphenyl)ethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

 $[\alpha]_D^{20}=-72.2$ (*c* 1.10, CHCl₃)

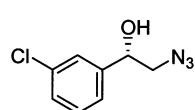
Source of chirality: asymmetric reduction

Absolute configuration: *R* $C_8H_8FN_3O$ (S)-(+)-2-Azido-1-(*p*-fluorophenyl)ethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

 $[\alpha]_D^{20}=+92.8$ (*c* 2.07, CHCl₃)

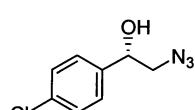
Source of chirality: asymmetric reduction

Absolute configuration: *S* $C_8H_8ClN_3O$ (S)-(+)-2-Azido-1-(*m*-chlorophenyl)ethanol

E.e.=99% (by HPLC analysis on Chiralcel OD-H chiral column)

 $[\alpha]_D^{20}=+84.5$ (*c* 1.42, CHCl₃)

Source of chirality: asymmetric reduction

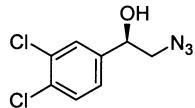
Absolute configuration: *S* $C_8H_8ClN_3O$ (S)-(+)-2-Azido-1-(*p*-chlorophenyl)ethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

 $[\alpha]_D^{20}=+96.4$ (*c* 1.25, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



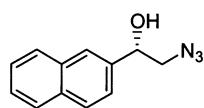
$C_8H_7Cl_2N_3O$
 (R) -(-)-2-Azido-1-(3',4'-dichlorophenyl)ethanol

E.e.=100% (by HPLC analysis on Whelk-01 chiral column)

$[\alpha]_D^{20}=-103.9$ (c 0.92, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *R*



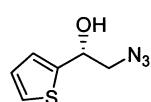
$C_{12}H_{11}N_3O$
 (S) -(+)-2-Azido-1-(2'-naphthyl)ethanol

E.e.=99% (by HPLC analysis on Whelk-01 chiral column)

$[\alpha]_D^{20}=+125.2$ (c 0.55, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



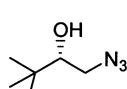
$C_6H_7N_3OS$
 (R) -(+)-2-Azido-1-(2'-thienyl)ethanol

E.e.=98% (by HPLC analysis on Chiraldel OD chiral column)

$[\alpha]_D^{20}=+75.2$ (c 1.00, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *R*



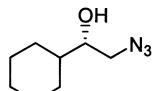
$C_6H_{13}N_3O$
 (S) -(+)-2-Azido-1-(*tert*-butyl)ethanol

E.e.=98% (by GC analysis on β -Dex 120 chiral column)

$[\alpha]_D^{20}=+1.4$ (c 1.05, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



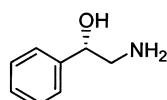
(S)-(+)-2-Azido-1-(cyclohexyl)ethanol

E.e.=99% (by GC analysis on α -Dex 120 chiral column)

$[\alpha]_D^{20}=+14.2$ (*c* 1.04, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



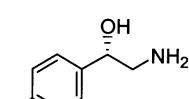
(S)-(+)-2-Amino-1-phenylethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

$[\alpha]_D^{20}=+48.6$ (*c* 2.01, EtOH)

Source of chirality: asymmetric reduction

Absolute configuration: *S*

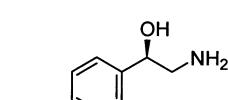
(S)-(+)-2-Amino-1-(*p*-tolyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

$[\alpha]_D^{20}=+42.3$ (*c* 0.54, EtOH)

Source of chirality: asymmetric reduction

Absolute configuration: *S*

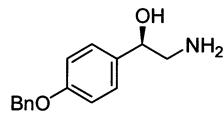
(R)-(-)-2-Amino-1-(*p*-methoxyphenyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

$[\alpha]_D^{20}=-39.9$ (*c* 1.03, abs. EtOH)

Source of chirality: asymmetric reduction

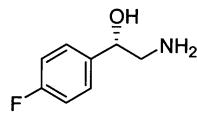
Absolute configuration: *R*

 $C_{15}H_{17}NO_2$ (R)-(-)-2-Amino-1-(*p*-benzyloxyphenyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=-75.7$ (*c* 0.53, EtOH)

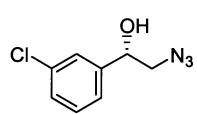
Source of chirality: asymmetric reduction

Absolute configuration: *R* $C_8H_{10}FNO$ (S)-(+)-2-Amino-1-(*p*-fluorophenyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+40.9$ (*c* 0.48, EtOH)

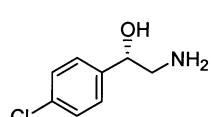
Source of chirality: asymmetric reduction

Absolute configuration: *S* $C_8H_{10}ClNO$ (S)-(+)-2-Amino-1-(*m*-chlorophenyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+78.9$ (*c* 0.21, EtOH)

Source of chirality: asymmetric reduction

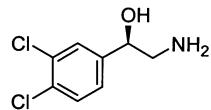
Absolute configuration: *S* $C_8H_{10}ClNO$ (S)-(+)-2-Amino-1-(*p*-chlorophenyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+67.4$ (*c* 0.35, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*

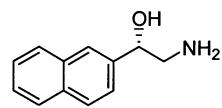
 $C_8H_9Cl_2NO$

(R)-(-)-2-Amino-1-(3',4'-dichlorophenyl)ethanol

E.e.=100% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=-34.7$ (*c* 0.42, EtOH)

Source of chirality: asymmetric reduction

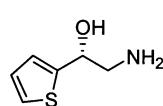
Absolute configuration: *R* $C_{12}H_{13}NO$

(S)-(+)2-Amino-1-(2'-naphthyl)ethanol

E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+40.0$ (*c* 0.31, EtOH)

Source of chirality: asymmetric reduction

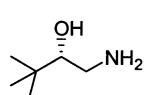
Absolute configuration: *S* C_6H_9NOS

(R)-(+)-2-Amino-1-(2'-thienyl)ethanol

E.e.=98% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+31.0$ (*c* 0.53, CH_2Cl_2)

Source of chirality: asymmetric reduction

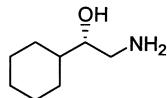
Absolute configuration: *R* $C_6H_{15}NO$ (S)-(+)-2-Amino-1-(*tert*-butyl)ethanol

E.e.=98% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+25.9$ (*c* 0.47, EtOH)

Source of chirality: asymmetric reduction

Absolute configuration: *S*

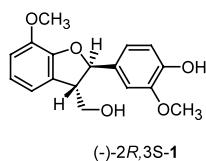
 $C_8H_{17}NO$

(S)-(+)-2-Amino-1-(cyclohexyl)ethanol

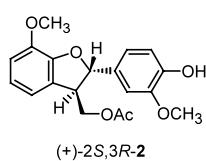
E.e.=99% (based on enantiomeric purity of the corresponding 2-azido alcohol)

 $[\alpha]_D^{20}=+12.1$ (*c* 0.37, EtOH)

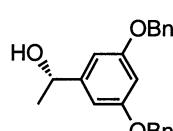
Source of chirality: asymmetric reduction

Absolute configuration: *S*(-)-2*R*,3*S*-1 $C_{17}H_{18}O_5$ (-)-2*R*,3*S*-2-(4-Hydroxy-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-2,3-dihydrobenzo[*b*]furan $[\alpha]_D=-10.6$ (*c* 0.1, CH_2Cl_2)CD: λ ($\Delta\epsilon$): 292 nm (-0.05), 241 nm (0.14)HPLC: Chiral-AGP (0.01 M phosphate buffer-*iPrOH*=95:5), 3.2 and 5.9 min

Ee=84%

(+)-2*S*,3*R*-2 $C_{19}H_{20}O_6$ (+)-2*S*,3*R*-2-(4-Hydroxy-3-methoxyphenyl)-3-acetoxymethyl-7-methoxy-2,3-dihydrobenzo[*b*]furan $[\alpha]_D=+17.9$ (*c* 0.1, CH_2Cl_2)CD: λ ($\Delta\epsilon$): 289 nm (+0.08), 242 nm (-0.09)HPLC: Chiral-AGP (0.01 M phosphate buffer-*iPrOH*=9:1), 3.2 and 17.7 min

Ee=84%

 $C_{22}H_{22}O_3$

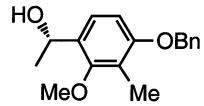
(S)-1-(3,5-Dibenzyloxyphenyl)ethanol

E.e.=68% (by HPLC)

 $[\alpha]_D^{26}=-12.4$ (*c* 1.00, $CHCl_3$)

Source of chirality: lipase resolution

Absolute configuration: *S*



C₁₇H₂₀O₃

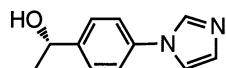
(S)-1-(4-Benzylxy-2-methoxy-3-methylphenyl)ethanol

E.e. = 43% (by HPLC)

[α]_D²² = -11.1 (*c* 1.00, CHCl₃)

Source of chirality: lipase resolution

Absolute configuration: *S*



C₁₁H₁₂N₂O

(S)-1-(4-(Imidazol-1-yl)phenyl)ethanol

E.e. >98% (by HPLC)

[α]_D¹⁷ = -33 (*c* 0.48, MeOH)

Source of chirality: lipase resolution

Absolute configuration: *S*