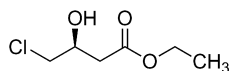


Stereochemistry abstracts

Stefan Bräutigam,* Stephanie Bringer-Meyer and Dirk Weuster-Botz*

Tetrahedron: Asymmetry 18 (2007) 1883



Ethyl (*S*)-4-chloro-3-hydroxybutyrate

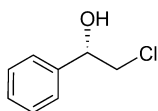
$E_e > 99.7\%$

$[\alpha]_{\text{D}}^{20} = -14$ neat

Source of chirality: asymmetric whole cell biocatalysis with ionic liquids

Stefan Bräutigam,* Stephanie Bringer-Meyer and Dirk Weuster-Botz*

Tetrahedron: Asymmetry 18 (2007) 1883



(*S*)- α -Chloro-1-phenylethanol

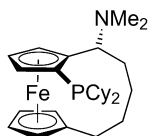
$E_e > 99.7\%$

$[\alpha]_{\text{D}}^{20} = +48$ (*c* 2.8, cyclohexane)

Source of chirality: asymmetric whole cell biocatalysis with ionic liquids

Ambroz Almássy, Katalin Barta, Giancarlo Franciò, Radovan Šebesta,* Walter Leitner* and Štefan Toma

Tetrahedron: Asymmetry 18 (2007) 1893



(*R,pS*)-1-(Dicyclohexylphosphanyl)-2,1'-[1-(dimethylamino)pentan-1,5-diyl]ferrocene

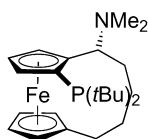
$[\alpha]_{\text{D}} = -207$ (*c* 0.70, acetone)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,pS*)

Ambroz Almássy, Katalin Barta, Giancarlo Franciò, Radovan Šebesta,* Walter Leitner* and Štefan Toma

Tetrahedron: Asymmetry 18 (2007) 1893



(*R,pS*)-1-(Di-*tert*-butylphosphanyl)-2,1'-[1-(dimethylamino)pentan-1,5-diyl]ferrocene

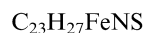
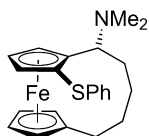
$[\alpha]_{\text{D}} = -395$ (*c* 0.45, methanol)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,pS*)

Ambroz Almáŝsy, Katalin Barta, Giancarlo Franciò, Radovan Šebesta,*
Walter Leitner* and Štefan Toma

Tetrahedron: Asymmetry 18 (2007) 1893



(*R,pS*)-1-(Phenylsulfanyl)-2,1'-[1-(dimethylamino)pentan-1,5-diyl]ferrocene

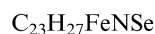
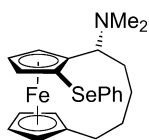
$[\alpha]_D = -155$ (*c* 0.79, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,pS*)

Ambroz Almáŝsy, Katalin Barta, Giancarlo Franciò, Radovan Šebesta,*
Walter Leitner* and Štefan Toma

Tetrahedron: Asymmetry 18 (2007) 1893



(*R,pS*)-1-(Phenylselenenyl)-2,1'-[1-(dimethylamino)pentan-1,5-diyl]ferrocene

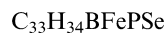
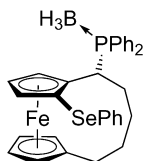
$[\alpha]_D = -148$ (*c* 0.85, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,pS*)

Ambroz Almáŝsy, Katalin Barta, Giancarlo Franciò, Radovan Šebesta,*
Walter Leitner* and Štefan Toma

Tetrahedron: Asymmetry 18 (2007) 1893



(*R,pS*)-1-(Phenylselenenyl)-2,1'-[1-(diphenylphosphanyl)pentan-1,5-diyl]ferrocene, borane complex

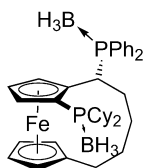
$[\alpha]_D = -259$ (*c* 0.27, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,pS*)

Ambroz Almáŝsy, Katalin Barta, Giancarlo Franciò, Radovan Šebesta,*
Walter Leitner* and Štefan Toma

Tetrahedron: Asymmetry 18 (2007) 1893



(*R,pS*)-1-(Dicyclohexylphosphanyl)-2,1'-[1-(diphenylphosphanyl)pentan-1,5-diyl]ferrocene, bis(borane) complex

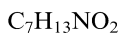
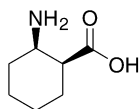
$[\alpha]_D = -204$ (*c* 0.32, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,pS*)

Jun-ichi Matsuo,* Masahiko Okano, Kosuke Takeuchi,
Hiroyuki Tanaka and Hiroyuki Ishibashi*

Tetrahedron: Asymmetry 18 (2007) 1906



(1*S*,2*R*)-2-Aminocyclohexanecarboxylic acid

Ee = >99%

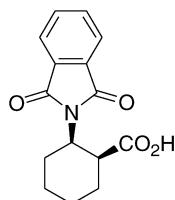
$[\alpha]_D^{29} = +20.2$ (c 0.25, H₂O)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*)

Jun-ichi Matsuo,* Masahiko Okano, Kosuke Takeuchi,
Hiroyuki Tanaka and Hiroyuki Ishibashi*

Tetrahedron: Asymmetry 18 (2007) 1906



(1*S*,2*R*)-2-Phthalimidocyclohexanecarboxylic acid

Ee = >99%

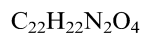
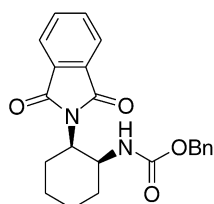
$[\alpha]_D^{28} = +98.3$ (c 1.00, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*)

Jun-ichi Matsuo,* Masahiko Okano, Kosuke Takeuchi,
Hiroyuki Tanaka and Hiroyuki Ishibashi*

Tetrahedron: Asymmetry 18 (2007) 1906



(1*S*,2*R*)-1-(*N*-Benzyloxycarbonylamino)-2-phthalimidocyclohexane

Ee = >99%

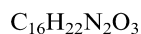
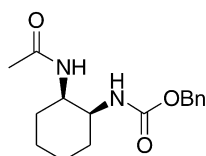
$[\alpha]_D^{29} = +92.1$ (c 0.10, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*)

Jun-ichi Matsuo,* Masahiko Okano, Kosuke Takeuchi,
Hiroyuki Tanaka and Hiroyuki Ishibashi*

Tetrahedron: Asymmetry 18 (2007) 1906



(1*S*,2*R*)-1-(*N*-Benzyloxycarbonylamino)-2-acetamidocyclohexane

Ee = >99%

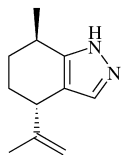
$[\alpha]_D^{29} = +33.6$ (c 0.10, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*)

Eva Tur, Guillaume Vives, Gwénaél Rapenne, Jeanne Crassous,*
Nicolas Vanthuylne, Christian Roussel, Rosina Lombardi,
Teresa Freedman and Laurence Nafie

Tetrahedron: Asymmetry 18 (2007) 1911



$C_{11}H_{16}N_2$

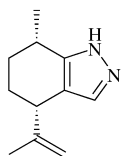
4-Isopropylidene-7-methyl-4,5,6,7-tetrahydro-2(1)*H*-indazole

$[\alpha]_D^{23} = -29.5$ (c 0.49, CH_2Cl_2)

Absolute configuration: (4*S*,7*R*)

Eva Tur, Guillaume Vives, Gwénaél Rapenne, Jeanne Crassous,*
Nicolas Vanthuylne, Christian Roussel, Rosina Lombardi,
Teresa Freedman and Laurence Nafie

Tetrahedron: Asymmetry 18 (2007) 1911



$C_{11}H_{16}N_2$

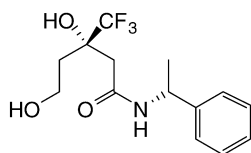
4-Isopropylidene-7-methyl-4,5,6,7-tetrahydro-2(1)*H*-indazole

$[\alpha]_D^{23} = +15.8$ (c 0.51, CH_2Cl_2)

Absolute configuration: (4*S*,7*S*)

Ivan S. Kondratov,* Igor I. Gerus, Valery P. Kukhar and
Olga V. Manoilenko

Tetrahedron: Asymmetry 18 (2007) 1918



$C_{14}H_{18}F_3NO_3$

(3*S*)-3,5-Dihydroxy-*N*-[(1*S*)-1-phenylethyl]-3-(trifluoromethyl)pentanamide

Ee >98% (by NMR)

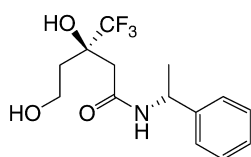
$[\alpha]_D^{25} = -39.4$ (c 1.3, $CHCl_3$)

Source of chirality: chiral resolution

Absolute configuration: (3*S*)

Ivan S. Kondratov,* Igor I. Gerus, Valery P. Kukhar and
Olga V. Manoilenko

Tetrahedron: Asymmetry 18 (2007) 1918



$C_{14}H_{18}F_3NO_3$

(3*R*)-3,5-Dihydroxy-*N*-[(1*S*)-1-phenylethyl]-3-(trifluoromethyl)pentanamide

Ee >98% (by NMR)

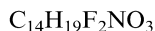
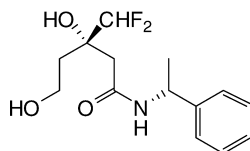
$[\alpha]_D^{25} = -54.0$ (c 0.6, $CHCl_3$)

Source of chirality: chiral resolution

Absolute configuration: (3*R*)

Ivan S. Kondratov,* Igor I. Gerus, Valery P. Kukhar and Olga V. Manoilenko

Tetrahedron: Asymmetry 18 (2007) 1918



(3*S*)-3-(Difluoromethyl)-3,5-dihydroxy-*N*-((1*S*)-1-phenylethyl)pentanamide

Ee >98% (by NMR)

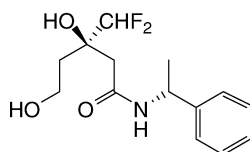
$[\alpha]_D^{25} = -33.2$ (*c* 0.7, $CHCl_3$)

Source of chirality: chiral resolution

Absolute configuration: (3*S*)

Ivan S. Kondratov,* Igor I. Gerus, Valery P. Kukhar and Olga V. Manoilenko

Tetrahedron: Asymmetry 18 (2007) 1918



(3*R*)-3-(Difluoromethyl)-3,5-dihydroxy-*N*-((1*S*)-1-phenylethyl)pentanamide

Ee >98% (by NMR)

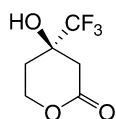
$[\alpha]_D^{25} = -45.5$ (*c* 0.7, $CHCl_3$)

Source of chirality: chiral resolution

Absolute configuration: (3*R*)

Ivan S. Kondratov,* Igor I. Gerus, Valery P. Kukhar and Olga V. Manoilenko

Tetrahedron: Asymmetry 18 (2007) 1918



(4*R*)-4-Hydroxy-4-(trifluoromethyl)tetrahydro-2*H*-pyran-2-one

Ee = 100%

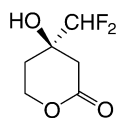
$[\alpha]_D^{25} = -17.0$ (*c* 0.8, $CHCl_3$)

Source of chirality: corresponding phenylethylamide

Absolute configuration: (4*R*)

Ivan S. Kondratov,* Igor I. Gerus, Valery P. Kukhar and Olga V. Manoilenko

Tetrahedron: Asymmetry 18 (2007) 1918



(4*R*)-4-Tetrahydro-4-(difluoromethyl)-4-hydroxy-2*H*-pyran-2-one

Ee = 100%

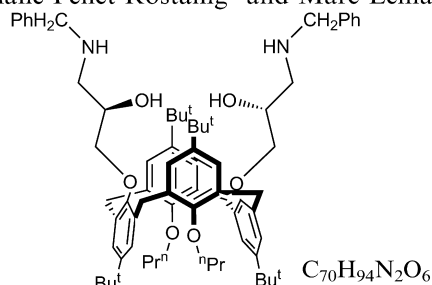
$[\alpha]_D^{25} = -10.5$ (*c* 0.7, $CHCl_3$)

Source of chirality: corresponding phenylethylamide

Absolute configuration: (4*R*)

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926

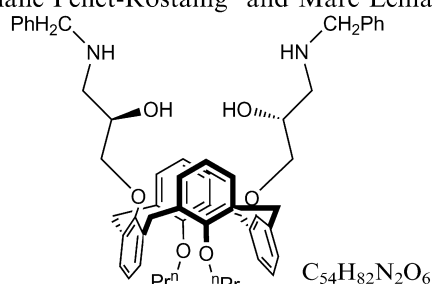


Ee = 99%
 $[\alpha]_D^{25} = +3.4$ (c 0.75, CHCl₃)
 Source of chirality: asymmetric synthesis
 Absolute configuration: (R,R)

5,11,17,23-Tetra-*tert*-butyl-25,27-tris-(propoxy)-26,28-bis(((2*R*)-3-benzylamino-2-hydroxy)propoxy)calix[4]arene

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926

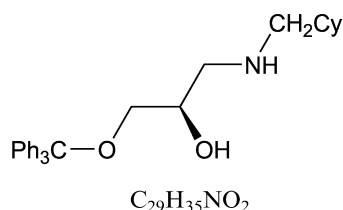


Ee = 99%
 $[\alpha]_D^{25} = -36.3$ (c 0.885, CHCl₃)
 Source of chirality: asymmetric synthesis
 Absolute configuration: (R,R)

25,27-Dipropoxy-26,28-bis(((2*R*)-3-benzylamino-2-hydroxy)propoxy)calix[4]arene

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926

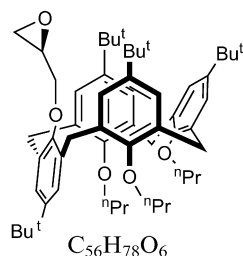


Ee = 99%
 $[\alpha]_D^{25} = +10.6$ (c 1, CHCl₃)
 Source of chirality: asymmetric synthesis
 Absolute configuration: (R)

(2*R*)-1-(Trityloxymethyl)-3-cyclohexanemethylaminopropan-2-ol

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926

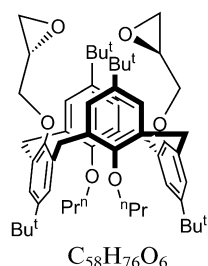


Ee = 99%
 $[\alpha]_D^{25} = -2.2$ (c 1.135, CHCl₃)
 Source of chirality: asymmetric synthesis
 Absolute configuration: (R)

(*R*)-5,11,17,23-Tetra-*tert*-butyl-25,26,27-tris-(propoxy)-28-glycidylcalix[4]arene

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926



(*R,R*)-5,11,17,23-Tetra-*tert*-butyl-25,27-dipropoxy-26,28-bis(glycidyl)calix[4]arene

Ee = 99%

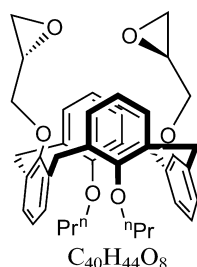
$[\alpha]_D^{25} = -6.2$ (*c* 0.975, CHCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,R*)

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926



(*R,R*)-25,27-Dipropoxy-26,28-bisglycidylcalix[4]arene

Ee = 99%

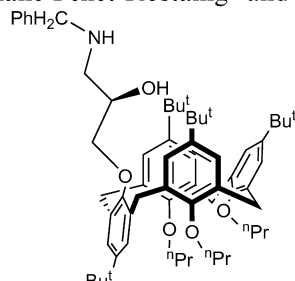
$[\alpha]_D^{25} = -8.5$ (*c* 1.015, CHCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R,R*)

Adrien Quintard, Ulrich Darbost, Francis Vocanson,*
Stéphane Pellet-Rostaing* and Marc Lemaire

Tetrahedron: Asymmetry 18 (2007) 1926



5,11,17,23-Tetra-*tert*-butyl-25,26,27-tris-(propoxy)-28-(((2*R*)-3-benzylamino-2-hydroxy)propoxy)calix[4]arene

Ee = 99%

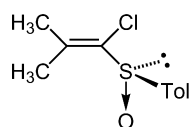
$[\alpha]_D^{25} = -2.5$ (*c* 0.91, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



(*R*)-1-Chloro-2-methyl-1-(*p*-tolylsulfinyl)-1-propene

Ee = 99%

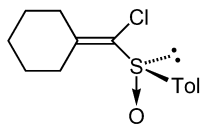
$[\alpha]_D^{24} = +156.2$ (*c* 1.0, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{14}H_{17}ClOS$

(*R*)-[Chloro-(*p*-tolylsulfinyl)methylidene]cyclohexane

Ee = 99%

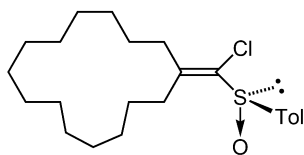
$[\alpha]_D^{25} = +213.0$ (*c* 1.0, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{22}H_{35}ClOS$

(*R*)-[Chloro-(*p*-tolylsulfinyl)methylidene]cyclopentadecane

Ee = 99%

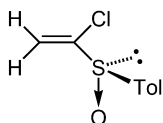
$[\alpha]_D^{24} = +120.7$ (*c* 1.3, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



C_9H_9ClOS

(*R*)-1-Chloroethenyl *p*-tolyl sulfoxide

Ee = 99%

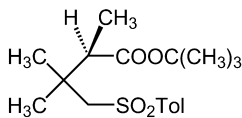
$[\alpha]_D^{25} = +151.4$ (*c* 0.8, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{18}H_{28}O_4S$

(2*R*)-(-)-*tert*-Butyl 2,3,3-trimethyl-4-(*p*-tolylsulfonyl)butanoate

Ee = 96%

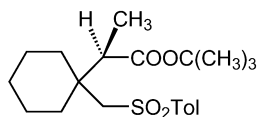
$[\alpha]_D^{30} = -14.3$ (*c* 1.2, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{21}H_{32}O_4S$

(2*R*)-(-)-*tert*-Butyl 2-[1-[(*p*-tolylsulfonyl)methyl]cyclohexyl]propionate

Ee = 97%

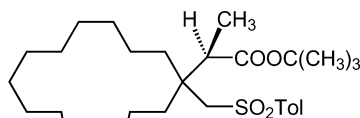
$[\alpha]_D^{26} = -5.3$ (*c* 1.8, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{30}H_{50}O_4S$

(2*R*)-(-)-*tert*-Butyl 2-[1-[(*p*-tolylsulfonyl)methyl]cyclopentadecyl]propionate

Ee = 97%

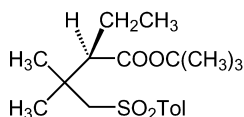
$[\alpha]_D^{24} = -4.3$ (*c* 0.9, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{19}H_{30}O_4S$

(2*R*)-(-)-*tert*-Butyl 2-ethyl-3,3-dimethyl-4-(*p*-tolylsulfonyl)butanoate

Ee = 93%

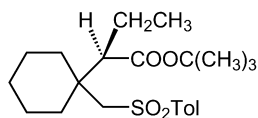
$[\alpha]_D^{26} = -3.0$ (*c* 1.7, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{22}H_{34}O_4S$

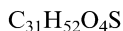
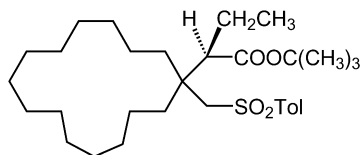
(2*R*)-(-)-*tert*-Butyl 2-[1-[(*p*-tolylsulfonyl)methyl]cyclohexyl]butanoate

Ee = 99%

$[\alpha]_D^{26} = -4.9$ (*c* 1.8, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)



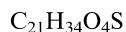
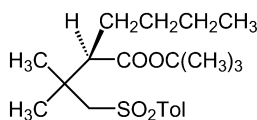
(2*R*)-(-)-*tert*-Butyl 2-{1-[(*p*-tolylsulfonyl)methyl]cyclopentadecyl}butanoate

Ee = 97%

$[\alpha]_{\text{D}}^{26} = -1.7$ (*c* 0.9, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)



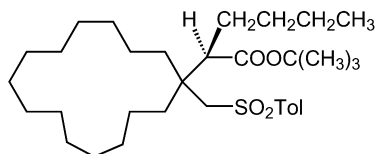
(2*R*)-(-)-*tert*-Butyl 2-[1,1-dimethyl-2-(*p*-tolylsulfonyl)ethyl]hexanoate

Ee = 96%

$[\alpha]_{\text{D}}^{28} = -0.5$ (*c* 2.8, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)



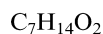
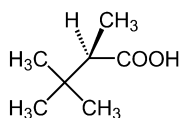
(2*R*)-(-)-*tert*-Butyl 2-{1-[(*p*-tolylsulfonyl)methyl]cyclopentadecyl}hexanoate

Ee = 97%

$[\alpha]_{\text{D}}^{27} = -1.9$ (*c* 0.9, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)



(*R*)-(-)-2,3,3-Trimethylbutyric acid

Ee = 96%

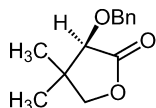
$[\alpha]_{\text{D}}^{28} = -20.8$ (*c* 0.7, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



(*R*)-(+)-3-Benzyloxy-4,4-dimethyldihydrofuran-2-one

Ee = 99%

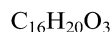
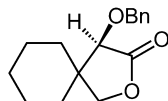
$[\alpha]_D^{28} = +112.5$ (c 0.22, $CHCl_3$)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



(*R*)-(+)-4-Benzyloxy-2-oxaspiro[4.5]decan-3-one

Ee = 97%

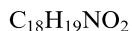
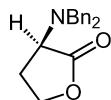
$[\alpha]_D^{27} = +101.2$ (c 0.91, $CHCl_3$)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



(*R*)-(+)-3-Dibenzylaminodihydrofuran-2-one

Ee = 87%

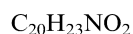
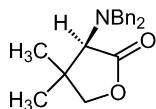
$[\alpha]_D^{28} = +26.5$ (c 0.22, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



(*R*)-(+)-3-Dibenzylamino-4,4-dimethyldihydrofuran-2-one

Ee = 99%

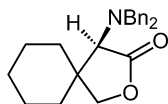
$[\alpha]_D^{29} = +137$ (c 0.47, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

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Tetrahedron: Asymmetry 18 (2007) 1934



$C_{23}H_{27}NO_2$

(*R*)-(+)-4-Dibenzylamino-2-oxaspiro[4.5]decan-3-one

Ee = 99%

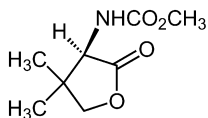
$[\alpha]_D^{27} = +91.5$ (*c* 1.0, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_8H_{13}NO_4$

(*R*)-(-)-(4,4-Dimethyl-2-oxotetrahydrofuran-3-yl)carbamic acid methyl ester

Ee = 99%

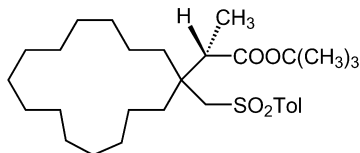
$[\alpha]_D^{28} = -8.2$ (*c* 1.0, $CHCl_3$)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*R*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{30}H_{50}O_4S$

(2*S*)-(+)-*tert*-Butyl 2-[1-[(*p*-tolylsulfonyl)methyl]cyclopentadecyl]propionate

Ee = 99%

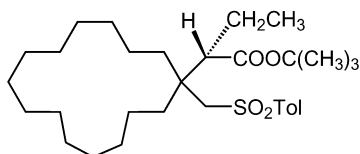
$[\alpha]_D^{23} = +5.05$ (*c* 1.34, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*S*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



$C_{31}H_{52}O_4S$

(2*S*)-(+)-*tert*-Butyl 2-[1-[(*p*-tolylsulfonyl)methyl]cyclopentadecyl]butanoate

Ee = 99%

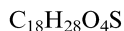
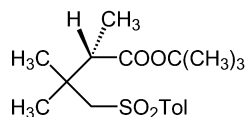
$[\alpha]_D^{25} = +1.75$ (*c* 0.45, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfoxide

Absolute configuration: (*S*)

Masahiro Kido, Shimpei Sugiyama and Tsuyoshi Satoh*

Tetrahedron: Asymmetry 18 (2007) 1934



(2*S*)-(+)-*tert*-Butyl 2,3,3-trimethyl-4-(*p*-tolysulfonyl)butanoate

Ee = 80%

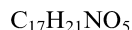
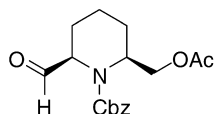
$[\alpha]_D^{28} = +9.8$ (*c* 0.84, ethanol)

Source of chirality: (*R*)-(-)-chloromethyl *p*-tolyl sulfide

Absolute configuration: (*S*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni, Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



(2*S*,6*R*)-2-Acetoxymethyl-6-formyl-piperidine-1-carboxylic acid benzyl ester

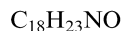
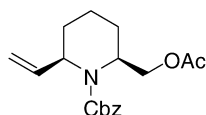
$[\alpha]_D^{25} = -20.9$ (*c* 1, $CHCl_3$)

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (2*S*,6*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni, Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



(2*S*,6*R*)-2-Acetoxymethyl-6-vinyl-piperidine-1-carboxylic acid benzyl ester

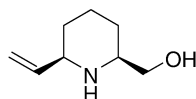
$[\alpha]_D^{25} = -2.3$ (*c* 1, $CHCl_3$)

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (2*S*,6*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni, Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



((2*S*,6*R*)-6-Vinyl-piperidin-2-yl)-methanol

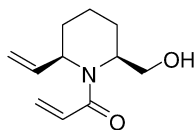
$[\alpha]_D^{25} = -3.3$ (*c* 1, $CHCl_3$)

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (2*S*,6*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



$C_{11}H_{17}NO_2$

1-((2*S*,6*R*)-2-Hydroxymethyl-6-vinyl-piperidin-1-yl)-propenone

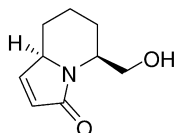
$$[\alpha]_D^{25} = +10.4 \text{ (} c \text{ 1, CHCl}_3 \text{)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (2*S*,6*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



$C_9H_{13}NO_2$

(5*S*,8*aR*)-5-Hydroxymethyl-6,7,8,8*a*-tetrahydro-5*H*-indolizin-3-one

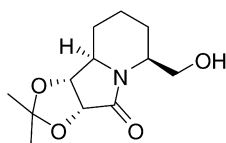
$$[\alpha]_D^{25} = -4.5 \text{ (} c \text{ 1, CHCl}_3 \text{)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (5*S*,8*aR*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



$C_{12}H_{19}NO_4$

(3*aR*,6*S*,9*aR*,9*bR*)-6-Hydroxymethyl-2,2-dimethyl-hexahydro-[1,3]dioxolo[4,5-*a*]indolizin-4-one

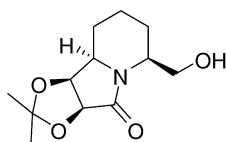
$$[\alpha]_D^{25} = +6.4 \text{ (} c \text{ 1, CHCl}_3 \text{)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (3*aR*,6*S*,9*aR*,9*bR*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



$C_{12}H_{19}NO_4$

(3*aS*,6*S*,9*aR*,9*bS*)-6-Hydroxymethyl-2,2-dimethyl-hexahydro-[1,3]dioxolo[4,5-*a*]indolizin-4-one

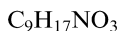
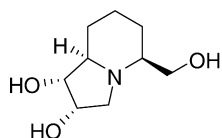
$$[\alpha]_D^{25} = -2.0 \text{ (} c \text{ 1, CHCl}_3 \text{)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (3*aS*,6*S*,9*aR*,9*bS*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



((3a*S*,6*S*,9a*R*,9b*R*)-2,2-Dimethyl-octahydro-[1,3]dioxolo[4,5-*a*]indolizin-6-yl)-methanol

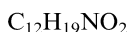
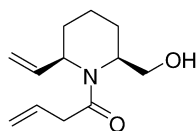
$$[\alpha]_D^{25} = -5.1 \text{ (} c \text{ 1, MeOH)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (3a*S*,6*S*,9a*R*,9b*S*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



1-((2*S*,6*R*)-2-Hydroxymethyl-6-vinyl-piperidin-1-yl)-but-3-en-1-one

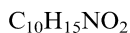
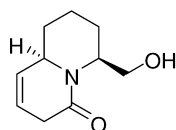
$$[\alpha]_D^{25} = -2.5 \text{ (} c \text{ 1, CHCl}_3)$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (2*S*,6*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



(6*S*,9a*R*)-6-Hydroxymethyl-3,6,7,8,9,9a-hexahydro-quinolizin-4-one

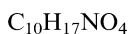
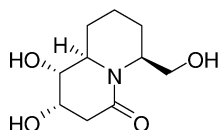
$$[\alpha]_D^{25} = -4.5 \text{ (} c \text{ 1, CHCl}_3)$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (6*S*,9a*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



(1*R*,2*S*,6*S*,9a*R*)-1,2-Dihydroxy-6-hydroxymethyl-octahydro-quinolizin-4-one

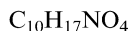
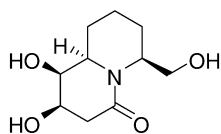
$$[\alpha]_D^{25} = +8.6 \text{ (} c \text{ 1, MeOH)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (1*R*,2*S*,6*S*,9a*R*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



(1*S*,2*R*,6*S*,9*aR*)-1,2-Dihydroxy-6-hydroxymethyl-octahydro-quinolizin-4-one

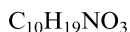
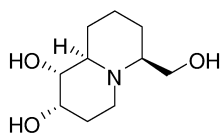
$$[\alpha]_D^{25} = -6.6 \text{ (} c \text{ 1, MeOH)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (1*S*,2*R*,6*S*,9*aR*)

Giordano Lesma,* Alessia Colombo, Nicola Landoni,
Alessandro Sacchetti and Alessandra Silvani*

Tetrahedron: Asymmetry 18 (2007) 1948



(1*R*,2*S*,6*S*,9*aR*)-6-Hydroxymethyl-octahydro-quinolizine-1,2-diol

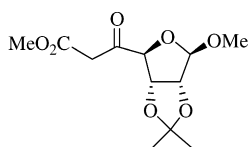
$$[\alpha]_D^{25} = -7.9 \text{ (} c \text{ 1, MeOH)}$$

Source of chirality: lipase-catalyzed transesterification

Absolute configuration: (1*R*,2*S*,6*S*,9*aR*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and
Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (methyl 6-deoxy-2,3-*O*-isopropylidene-5-oxo- β -D-*ribo*-heptafuranosid)uronate

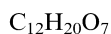
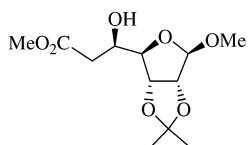
$$[\alpha]_D^{25} = -119 \text{ (} c \text{ 1.1, CH}_2\text{Cl}_2)$$

Source of chirality: D-ribose

Absolute configuration: (1*S*,2*R*,3*R*,4*S*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and
Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (methyl 6-deoxy-2,3-*O*-isopropylidene- β -D-*allo*-heptafuranosid)uronate

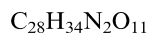
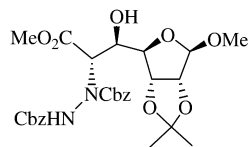
$$[\alpha]_D^{25} = -45 \text{ (} c \text{ 1.0, CH}_2\text{Cl}_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (methyl 6-deoxy-6-*N,N'*-dibenzoyloxycarbonylhydrazino-2,3-*O*-isopropylidene-*D*-glycero- β -*D*-allo-heptafuranosid)uronate

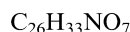
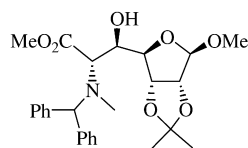
$$[\alpha]_{\text{D}}^{25} = -10 \text{ (} c \text{ 1.0, CH}_2\text{Cl}_2 \text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*,6*S*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (methyl 6-deoxy-2,3-*O*-isopropylidene-6-[(*N*-benzhydryl-*N*-methyl)amino]-*D*-glycero- β -*D*-allo-heptafuranosid)uronate

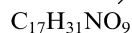
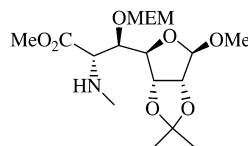
$$[\alpha]_{\text{D}}^{25} = -105 \text{ (} c \text{ 1.2, MeOH)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*,6*S*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (methyl 6-deoxy-2,3-*O*-isopropylidene-5-*O*-(2-methoxyethoxymethyl)-6-*N*-methylamino-*D*-glycero- β -*D*-allo-heptafuranosid)uronate

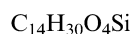
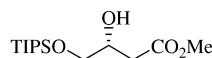
$$[\alpha]_{\text{D}}^{25} = +1 \text{ (} c \text{ 0.9, CH}_2\text{Cl}_2 \text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*,6*S*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (3*R*)-3-hydroxy-4-(triisopropylsilyloxy)butanoate

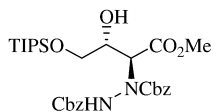
$$[\alpha]_{\text{D}}^{25} = +16 \text{ (} c \text{ 1.3, EtOH)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*)

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (2*S*,3*R*)-2-*N,N'*-dibenzoyloxycarbonylhydrazino-3-hydroxy-4-(triisopropylsilyloxy)butanoate

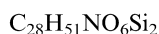
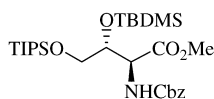
$$[\alpha]_D^{25} = +2 \text{ (} c \text{ 1.7, EtOH)}$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



Methyl (2*S*,3*R*)-2-*N*-benzyloxycarbonylamino-4-triisopropylsilyloxy-3-(*tert*-butyldimethylsilyloxy)butanoate

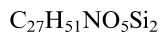
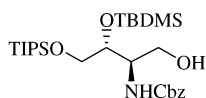
$$[\alpha]_D^{25} = +24 \text{ (} c \text{ 2.1, CH}_2\text{Cl}_2)$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



(2*R*,3*R*)-2-*N*-Benzyloxycarbonylamino-3-*O*-*tert*-butyldimethylsilyl-4-*O*-(triisopropylsilyl)butane-1,3,4-triol

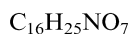
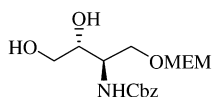
$$[\alpha]_D^{25} = +7 \text{ (} c \text{ 2.1, CH}_2\text{Cl}_2)$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



(2*R*,3*R*)-2-*N*-Benzyloxycarbonylamino-1-*O*-(2-methoxyethoxymethyl)butane-1,3,4-triol

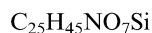
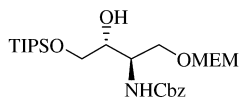
$$[\alpha]_D^{25} = -2 \text{ (} c \text{ 2.6, CH}_2\text{Cl}_2)$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



(2*R*,3*R*)-2-*N*-Benzyloxycarbonylamino-1-*O*-(2-methoxyethoxymethyl)-4-*O*-(triisopropylsilyl)butane-1,3,4-triol

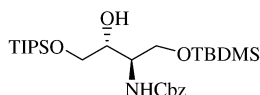
$$[\alpha]_D^{25} = -11 \text{ (} c \text{ 2.1, CH}_2\text{Cl}_2 \text{)}$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



(2*R*,3*R*)-1-*O*-*tert*-Butyldimethylsilyl-2-*N*-benzyloxycarbonylamino-4-*O*-(triisopropylsilyl)butane-1,3,4-triol

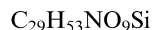
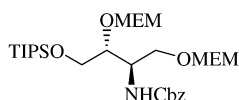
$$[\alpha]_D^{25} = +11 \text{ (} c \text{ 1.3, EtOH)}$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



(2*R*,3*R*)-2-*N*-Benzyloxycarbonylamino-1,3-*O*-bis(2-methoxyethoxymethyl)-4-*O*-(triisopropylsilyl)butane-1,3,4-triol

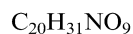
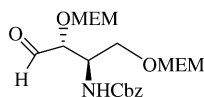
$$[\alpha]_D^{25} = +18 \text{ (} c \text{ 1.2, CH}_2\text{Cl}_2 \text{)}$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



(2*R*,3*R*)-3-*N*-Benzyloxycarbonylamino-2,4-bis(2-methoxyethoxymethoxy)butanal

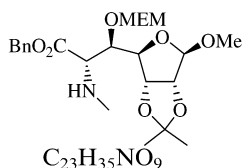
$$[\alpha]_D^{25} = +14 \text{ (} c \text{ 1.3, EtOH)}$$

Source of chirality: asymmetric synthesis

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

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



$$[\alpha]_{\text{D}}^{25} = -19 \text{ (} c \text{ 1.3, CH}_2\text{Cl}_2 \text{)}$$

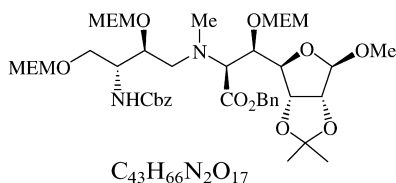
Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*,6*S*)

Benzyl (methyl 6-deoxy-2,3-*O*-isopropylidene-5-*O*-(2-methoxyethoxymethyl)-6-*N*-methylamino-*D*-glycero- β -*D*-allo-heptafuluranosid)uronate

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



$$[\alpha]_{\text{D}}^{25} = -16 \text{ (} c \text{ 0.5, CH}_2\text{Cl}_2 \text{)}$$

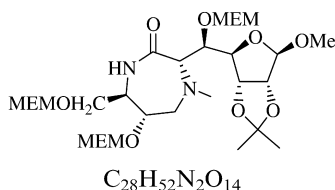
Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*,6*S*,2'*S*,3'*R*)

Benzyl (methyl 6-deoxy-2,3-*O*-isopropylidene-5-*O*-(2-methoxyethoxymethyl)-6-*N,N*-{methyl[(2'*S*,3'*R*)-3'-*N*-benzyloxycarbonylamino-2'-(2-methoxyethoxymethoxy)-4'-(2-methoxyethoxymethoxy)butyl]amino}-*D*-glycero- β -*D*-allo-heptafuluranosid)uronate

Bruno Drouillat, Yann Bourdreux, Delphine Perdon and Christine Greck*

Tetrahedron: Asymmetry 18 (2007) 1955



$$[\alpha]_{\text{D}}^{25} = -10 \text{ (} c \text{ 0.6, CH}_2\text{Cl}_2 \text{)}$$

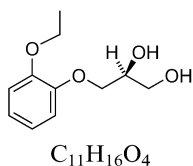
Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*R*,2'*S*,5'*S*,6'*S*)

Methyl (5*R*)-5-*O*-(2-methoxyethoxymethyl)-5-*C*-[(2'*S*,5'*S*,6'*S*)-6'-(2-methoxyethoxymethoxy)-5'-(2-methoxyethoxymethoxymethyl)-1'-methyl-3'-oxo-1',4'-diazepan-2'-yl]-2,3-*O*-isopropylidene- β -*D*-ribofuranoside

Alexander A. Bredikhin,* Zemfira A. Bredikhina, Dmitry V. Zakharychev and Larisa V. Konoshenko

Tetrahedron: Asymmetry 18 (2007) 1964



Ee = 99.2% [chiral HPLC]

$$[\alpha]_{\text{D}}^{20} = +8.8 \text{ (} c \text{ 1, hexane/EtOH 4:1),}$$

$$[\alpha]_{\text{D}}^{20} = +11.7 \text{ (} c \text{ 1, EtOH)}$$

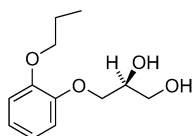
Source of chirality: (*S*)-3-chloro-1,2-propanediol

Absolute configuration: (*S*)

(*S*)-3-(2-Ethoxyphenoxy)-propane-1,2-diol

Alexander A. Bredikhin,* Zemfira A. Bredikhina, Dmitry V. Zakharychev and Larisa V. Konoshenko

Tetrahedron: Asymmetry 18 (2007) 1964



$C_{12}H_{18}O_4$

(S)-3-(2-n-Propoxyphenoxy)-propane-1,2-diol

Ee = 99.8% [chiral HPLC]

$[\alpha]_D^{20} = +3.1$ (c 1, hexane/EtOH 4:1)

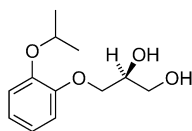
$[\alpha]_D^{20} = +6.8$ (c 1, EtOH)

Source of chirality: (S)-3-chloro-1,2-propanediol

Absolute configuration: (S)

Alexander A. Bredikhin,* Zemfira A. Bredikhina, Dmitry V. Zakharychev and Larisa V. Konoshenko

Tetrahedron: Asymmetry 18 (2007) 1964



$C_{12}H_{18}O_4$

(S)-3-(2-Isopropoxyphenoxy)-propane-1,2-diol

Ee = 99.3% [chiral HPLC]

$[\alpha]_D^{20} = +6.6$ (c 1, hexane/EtOH 4:1)

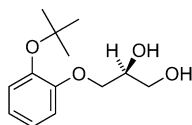
$[\alpha]_D^{20} = +7.8$ (c 1, EtOH)

Source of chirality: (S)-3-chloro-1,2-propanediol

Absolute configuration: (S)

Alexander A. Bredikhin,* Zemfira A. Bredikhina, Dmitry V. Zakharychev and Larisa V. Konoshenko

Tetrahedron: Asymmetry 18 (2007) 1964



$C_{13}H_{20}O_4$

(S)-3-(2-tert-Butoxyphenoxy)-propane-1,2-diol

Ee = 87.8% [chiral HPLC]

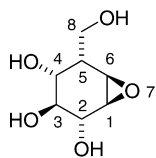
$[\alpha]_D^{20} = +8.8$ (c 1, EtOH)

Source of chirality: (S)-3-chloro-1,2-propanediol

Absolute configuration: (S)

Pedro Serrano, Meritxell Egidio-Gabás, Amadeu Llebaria and Antonio Delgado*

Tetrahedron: Asymmetry 18 (2007) 1971



$C_7H_{12}O_5$

(+)-5-*epi*-Cyclophellitol; 5-hydroxymethyl-7-oxabicyclo[4.1.0]heptane-2,3,4-triol

Ee = 100%

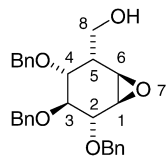
$[\alpha]_D = +65.95$ (c 0.4, H₂O)

Source of chirality: stereoselective reduction from chiral pool

Absolute configuration: (1S,2R,3S,4R,5S,6R)

Pedro Serrano, Meritxell Egido-Gabás, Amadeu Llebaria and Antonio Delgado*

Tetrahedron: Asymmetry 18 (2007) 1971



$C_{28}H_{30}O_5$

2,3,4-Tri-*O*-benzyl-5-*epi*-cyclophellitol; 2,3,4-tri-*O*-benzyl-5-hydroxymethyl-7-oxabicyclo[4.1.0]heptane-2,3,4-triol

Ee = 100%

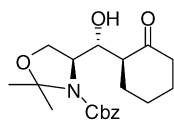
$[\alpha]_D^{25} = +4.0$ (*c* 1, $CHCl_3$)

Source of chirality: stereoselective reduction from chiral pool

Absolute configuration: (1*S*,2*R*,3*S*,4*R*,5*S*,6*R*)

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{20}H_{27}NO_5$

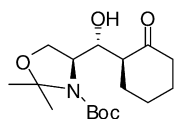
(*S*)-Benzyl 4-((*R*)-hydroxy-((*S*)-2-oxocyclohexyl)methyl)-2,2-dimethyloxazolidine-3-carboxylate

$[\alpha]_D^{25} = -70.8$ (*c* 1, $CHCl_3$)

Source of chirality: L-serine

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{17}H_{29}NO_5$

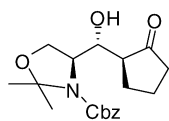
(*S*)-*tert*-Butyl 4-((*R*)-hydroxy((*S*)-2-oxocyclohexyl)methyl)-2,2-dimethyloxazolidine-3-carboxylate

$[\alpha]_D^{25} = -119.7$ (*c* 0.85, $CHCl_3$)

Source of chirality: L-serine

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{19}H_{25}NO_5$

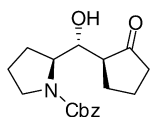
(*S*)-Benzyl 4-((*R*)-hydroxy-((*S*)-2-oxocyclopentyl)methyl)-2,2-dimethyloxazolidine-3-carboxylate

$[\alpha]_D^{25} = -66.5$ (*c* 1, $CHCl_3$)

Source of chirality: L-serine

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{18}H_{23}NO_4$

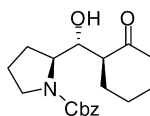
(*S*)-Benzyl 2-((*R*)-hydroxy-((*S*)-2-oxocyclopentyl)methyl)pyrrolidine-1-carboxylate

$[\alpha]_D^{25} = -99.5$ (*c* 1, $CHCl_3$)

Source of chirality: L-proline

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{19}H_{25}NO_4$

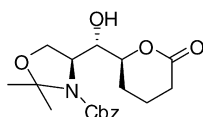
(*S*)-Benzyl 2-((*R*)-hydroxy-((*S*)-2-oxocyclohexyl)methyl)pyrrolidine-1-carboxylate

$[\alpha]_D^{25} = -90.9$ (*c* 1, $CHCl_3$)

Source of chirality: L-proline

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{19}H_{25}NO_6$

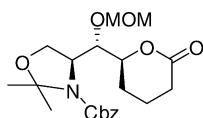
(*S*)-Benzyl 4-((*S*)-hydroxy((*S*)-6-oxotetrahydro-2*H*-2-pyran-2-yl)methyl)-2,2-dimethyloxazolidin-3-carboxylate

$[\alpha]_D^{25} = -14.2$ (*c* 0.7, $CHCl_3$)

Source of chirality: L-serine

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{21}H_{29}NO_7$

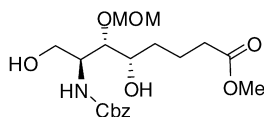
(*S*)-Benzyl 4-((*S*)-(methoxymethoxy)((*S*)-6-oxotetrahydro-2*H*-2-pyran-2-yl)methyl)-2,2-dimethyloxazolidin-3-carboxylate

$[\alpha]_D^{25} = -5.85$ (*c* 0.6, $CHCl_3$)

Source of chirality: L-serine

Indresh Kumar and C. V. Rode*

Tetrahedron: Asymmetry 18 (2007) 1975



$C_{19}H_{29}NO_8$

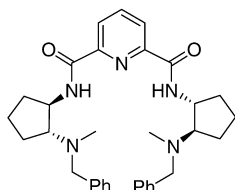
(5S,6S,7S)-Methyl 7-(benzyloxycarbonylamino)-5,8-dihydroxy-6-(methoxymethoxy)octanoate

$[\alpha]_D^{25} = -6.6$ (*c* 0.7, $CHCl_3$)

Source of chirality: L-serine

Carmen Peña, Javier González-Sabín, Ignacio Alfonso,* Francisca Rebolledo* and Vicente Gotor*

Tetrahedron: Asymmetry 18 (2007) 1981



$C_{33}H_{41}N_5O_2$

(1'R,1''R,2'R,2''R)-N,N'-Bis-{2-[(N-benzyl-N-methyl)amino]cyclopentyl}pyridine-2,6-dicarboxamide

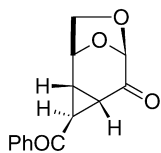
Ee >99%

$[\alpha]_D^{20} = -146.9$ (*c* 0.85, $CHCl_3$)

Source of chirality: enzymatic resolution

Alexander V. Samet,* Anatolly M. Shestopalov, Dmitriy N. Lutov, Lyudmila A. Rodinovskaya, Alexander A. Shestopalov and Victor V. Semenov

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$C_{14}H_{12}O_4$

(1S,2S,3S,4S,6R)-3-Benzoyl-7,9-dioxatricyclo[4.2.1.0^{2,4}]-nonane-5-one

Ee = 100%

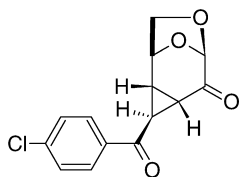
$[\alpha]_D^{22} = -55.1$ (*c* 1.0, $CHCl_3$)

Source of chirality: levoglucosenone

Absolute configuration: (1S,2S,3S,4S,6R)

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$C_{14}H_{11}ClO_4$

(1S,2S,3S,4S,6R)-3-(4-Chlorobenzoyl)-7,9-dioxatricyclo[4.2.1.0^{2,4}]-nonane-5-one

Ee = 100%

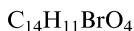
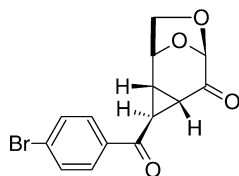
$[\alpha]_D^{22} = -69.8$ (*c* 1.0, $CHCl_3$)

Source of chirality: levoglucosenone

Absolute configuration: (1S,2S,3S,4S,6R)

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(1*S*,2*S*,3*S*,4*S*,6*R*)-3-(4-Bromobenzoyl)-7,9-dioxatricyclo[4.2.1.0^{2,4}]-nonane-5-one

Ee = 100%

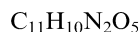
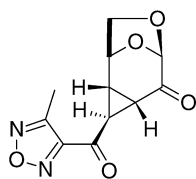
$[\alpha]_D^{23} = -58.6$ (*c* 1.0, CHCl₃)

Source of chirality: levoglucosenone

Absolute configuration: (1*S*,2*S*,3*S*,4*S*,6*R*)

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(1*S*,2*S*,3*S*,4*S*,6*R*)-3-(5-Methylfurazane-4-yl)carbonyl-7,9-dioxatricyclo[4.2.1.0^{2,4}]-nonane-5-one

Ee = 100%

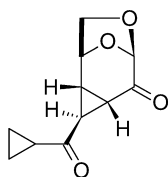
$[\alpha]_D^{24} = -4.8$ (*c* 1.0, DMSO)

Source of chirality: levoglucosenone

Absolute configuration: (1*S*,2*S*,3*S*,4*S*,6*R*)

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(1*S*,2*S*,3*S*,4*S*,6*R*)-3-(Cyclopropyl)carbonyl-7,9-dioxatricyclo[4.2.1.0^{2,4}]-nonane-5-one

Ee = 100%

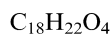
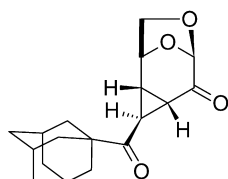
$[\alpha]_D^{23} = +37.3$ (*c* 1.0, CHCl₃)

Source of chirality: levoglucosenone

Absolute configuration: (1*S*,2*S*,3*S*,4*S*,6*R*)

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(1*S*,2*S*,3*S*,4*S*,6*R*)-3-(1-Adamantoyl)-7,9-dioxatricyclo[4.2.1.0^{2,4}]-nonane-5-one

Ee = 100%

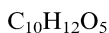
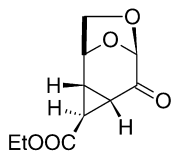
$[\alpha]_D^{22} = -13.3$ (*c* 1.0, CHCl₃)

Source of chirality: levoglucosenone

Absolute configuration: (1*S*,2*S*,3*S*,4*S*,6*R*)

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Ethyl (1*S*,2*R*,3*S*,4*S*,6*R*)-5-oxo-7,9-dioxatricyclo[4.2.1.0^{2,4}]nonane-3-carboxylate

Ee = 100%

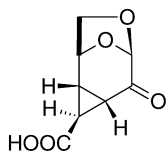
$[\alpha]_D^{23} = -24.2$ (*c* 1.0, CHCl₃)

Source of chirality: levoglucosenone

Absolute configuration: (1*S*,2*R*,3*S*,4*S*,6*R*)

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(1*S*,2*R*,3*S*,4*S*,6*R*)-5-Oxo-7,9-dioxatricyclo[4.2.1.0^{2,4}]nonane-3-carboxylic acid

Ee = 100%

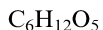
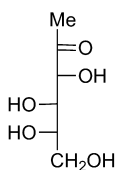
$[\alpha]_D^{24} = -30.1$ (*c* 1.0, DMSO)

Source of chirality: levoglucosenone

Absolute configuration: (1*S*,2*R*,3*S*,4*S*,6*R*)

Pushpakiran Gullapalli, Takayuki Shiji, Devendar Rao,
Akihide Yoshihara, Kenji Morimoto, Goro Takata,
George W. J. Fleet and Ken Izumori*

Tetrahedron: Asymmetry 18 (2007) 1995



1-Deoxy-L-fructose

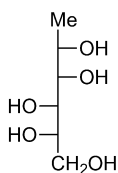
Ee = 100%

$[\alpha]_D^{20} = +85.5$ (*c* 1.4, H₂O)

Source of chirality: L-rhamnose as starting material

Pushpakiran Gullapalli, Takayuki Shiji, Devendar Rao,
Akihide Yoshihara, Kenji Morimoto, Goro Takata,
George W. J. Fleet and Ken Izumori*

Tetrahedron: Asymmetry 18 (2007) 1995



1-Deoxy-L-mannitol [rhamnitol]

Ee = 100%

$[\alpha]_D^{20} = +1.4$ (*c* 1.4, H₂O)

Source of chirality: L-rhamnose as starting material