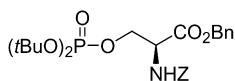


Stereochemistry abstracts

Amira Khaled, Christine Gravier-Pelletier* and Yves Le Merrer*

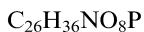
Tetrahedron: Asymmetry 18 (2007) 2121



De >95% (by ^1H NMR)

$[\alpha]_D^{20} = -6$ (*c* 1.0, CH_2Cl_2)

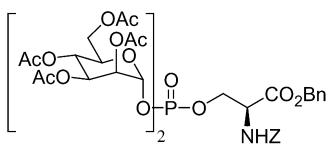
Source of chirality: *N*-benzyloxycarbonyl L-serine benzyl ester



2(*S*)-2-Benzylloxycarbonylamino-3-(di-*tert*-butoxy-phosphoryloxy)-propionic acid benzyl ester

Amira Khaled, Christine Gravier-Pelletier* and Yves Le Merrer*

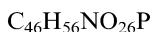
Tetrahedron: Asymmetry 18 (2007) 2121



De >95% (by ^1H NMR)

$[\alpha]_D^{20} = +45$ (*c* 1.0, CH_2Cl_2)

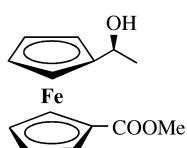
Source of chirality: *N*-benzyloxycarbonyl L-serine benzyl ester and 2,3,4,6-tetra-*O*-acetyl- α -D-mannopyranosyl bromide



2(*S*)-2-Benzylloxycarbonylamino-3-[bis-(2,3,4,6-tetra-*O*-acetyl- α -D-mannopyranosyloxy)phosphoryloxy]-propionic acid benzyl ester

M. Čakić Semenčić, L. Barać and V. Rapić*

Tetrahedron: Asymmetry 18 (2007) 2125



Ee = 90%

$[\alpha]_D^{22} = +30.4$ (*c* 1.0, CHCl_3)

Source of chirality: kinetic resolution with lipase B from *Candida antarctica*

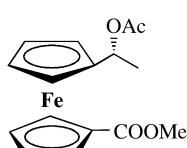
Absolute configuration: (*S*)



Methyl 1'-(1-hydroxyethyl)ferrocene-1-carboxylate

M. Čakić Semenčić, L. Barać and V. Rapić*

Tetrahedron: Asymmetry 18 (2007) 2125



Ee = 99%

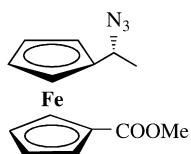
$[\alpha]_D^{22} = -46$ (*c* 0.79, CHCl_3)

Source of chirality: kinetic resolution with lipase B from *Candida antarctica*

Absolute configuration: (*R*)



Methyl 1'-(1-acetoxyethyl)ferrocene-1-carboxylate

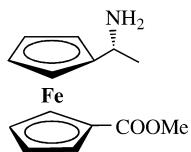


$C_{14}H_{15}O_2N_3Fe$
Methyl 1'-(1-azidoethyl)ferrocene-1-carboxylate

Ee = 99%

 $[\alpha]_D^{22} = -81.2$ (*c* 1.0, CHCl₃)

Source of chirality: enantiopure starting material

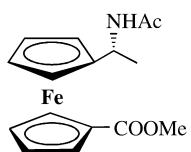
Absolute configuration: (*R*)

$C_{14}H_{17}O_2NFe$
Methyl 1'-(1-aminoethyl)ferrocene-1-carboxylate

Ee = n.d.

 $[\alpha]_D^{22} = -8.3$ (*c* 0.5, CHCl₃)

Source of chirality: enantiopure starting material

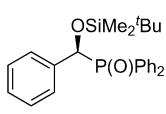
Absolute configuration: (*R*)

$C_{16}H_{19}O_3NFe$
Methyl 1'-(1-acetamidoethyl)ferrocene-1-carboxylate

Ee = 98%

 $[\alpha]_D^{22} = +99$ (*c* 1.0, benzene)

Source of chirality: enantiopure starting material

Absolute configuration: (*R*)

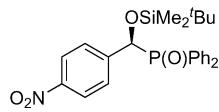
$C_{25}H_{31}O_2PSi$
(*S*)-1-*tert*-Butyldimethylsilyloxy-1-phenylmethyldiphenylphosphine oxide

Ee = 80%

 $[\alpha]_D = +33.2$ (*c* 0.5, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)



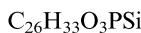
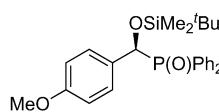
(S)-1-*tert*-Butyldimethylsilyloxy-1-(4'-nitrophenyl)methyldiphenylphosphine oxide

Ee = 82%

[α]_D = +59.1 (c 0.5, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)



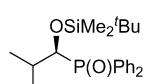
(S)-1-*tert*-Butyldimethylsilyloxy-1-(4'-methoxyphenyl)methyldiphenylphosphine oxide

Ee = 32%

[α]_D = +5.3 (c 0.1, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)



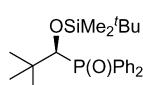
(S)-1-*tert*-Butyldimethylsilyloxy-2-methylpropylphosphine oxide

Ee = 72%

[α]_D = -55.3 (c 0.2, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)



(S)-1-*tert*-Butyldimethylsilyloxy-2,2-dimethylpropylphosphine oxide

Ee = 68%

[α]_D = +33.0 (c 0.1, CHCl₃)

Source of chirality: asymmetric synthesis

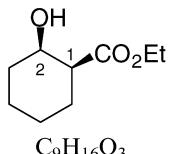
Absolute configuration: (S)

Ee = 80%

$[\alpha]_D = -27.5$ (c 0.6, CHCl₃)

Source of chirality: enzymatic reduction

Absolute configuration: (1S,2R)



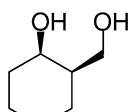
cis-(1S,2R) Ethyl 2-hydroxycyclohexanecarboxylate

Ee = 80%

$[\alpha]_D = -32.1$ (c 0.24, H₂O)

Source of chirality: prior enzymatic reduction

Absolute configuration: (1R,2R)



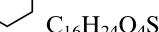
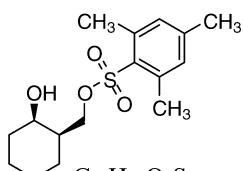
(1R,2R)-2-(Hydroxymethyl)-cyclohexanol

Ee = 80%

$[\alpha]_D = -9.5$ (c 1.0, CHCl₃)

Source of chirality: prior enzymatic reduction

Absolute configuration: (1R,2R)



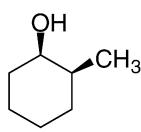
((1R,2R)-2-Hydroxycyclohexyl)methyl 2,4,6-trimethyl-benzenesulfonate

Ee = 80%

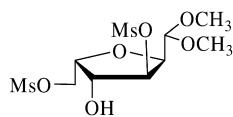
$[\alpha]_D = -16.2$ (c 2.12, CHCl₃)

Source of chirality: prior enzymatic reduction

Absolute configuration: (1R,2S)



(1R,2S)-2-Methyl-cyclohexanol

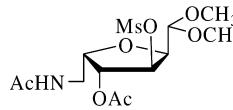


$[\alpha]_D^{25} = +10.1$ (*c* 0.16, MeOH)

Source of chirality: L-idofuranose

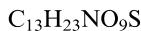


3,6-Di-*O*-methanesulfonyl-2,5-anhydro-L-idofuranose dimethylacetal

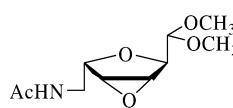


$[\alpha]_D^{25} = -5.5$ (*c* 0.42, MeOH)

Source of chirality: L-idofuranose

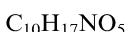


3-*O*-Methanesulfonyl-4-*O*-acetyl-6-deoxy-6-acetylamino-2,5-anhydro-L-idofuranose dimethylacetal

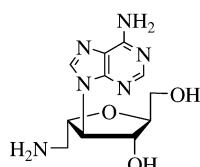


$[\alpha]_D^{25} = +34.6$ (*c* 0.47, MeOH)

Source of chirality: L-talose

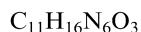


6-Deoxy-6-acetylamino-2,5:3,4-dianhydro-L-talose dimethylacetal

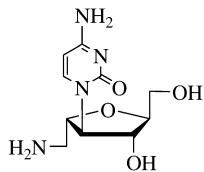


$[\alpha]_D^{25} = -11.0$ (*c* 0.07, MeOH)

Source of chirality: L-mannitol

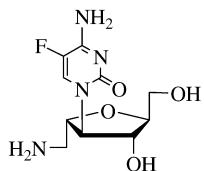


4,6-Dideoxy-4-(adenin-9-yl)-6-amino-2,5-anhydro-L-mannitol



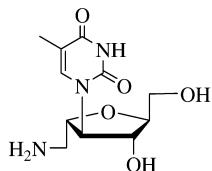
$[\alpha]_D^{25} = -6.4$ (*c* 0.20, MeOH)
Source of chirality: L-mannitol

$C_{10}H_{16}N_4O_4$
4,6-Dideoxy-4-(cytosin-1-yl)-6-amino-2,5-anhydro-L-mannitol



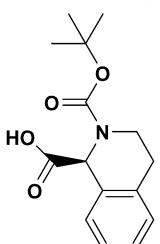
$[\alpha]_D^{25} = -15.0$ (*c* 0.08, MeOH)
Source of chirality: L-mannitol

$C_{10}H_{15}FN_4O_4$
4,6-Dideoxy-4-(5-fluorocytosin-1-yl)-6-amino-2,5-anhydro-L-mannitol



$[\alpha]_D^{25} = -10.0$ (*c* 0.07, MeOH)
Source of chirality: L-mannitol

$C_{11}H_{17}N_3O_5$
4,6-Dideoxy-4-(thymin-1-yl)-6-amino-2,5-anhydro-L-mannitol

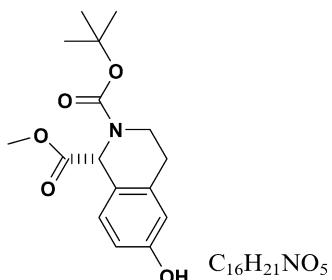


Ee >99.8%
 $[\alpha]_D^{20} = -19.2$ (*c* 0.2, methanol)

$C_{15}H_{19}NO_5$
(1S)-N-tBoc-6-Hydroxy-3,4-dihydro-1H-isoquinoline-1-carboxylic acid

Iqbal S. Gill, Ellen Kick, Kate Richlin-Zack, Wu Yang, Yufeng Wang and Ramesh N. Patel*

Tetrahedron: Asymmetry 18 (2007) 2147



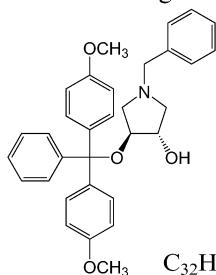
Methyl (1*R*)-*N*-*t*Boc-6-hydroxy-3,4-dihydro-1*H*-isoquinoline-1-carboxylate

Ee >99.5%

$[\alpha]_D^{20} = +18.2$ (*c* 0.2, methanol)

Dominik Rejman,* Petr Kočalka, Miloš Buděšínský, Ivan Barvík, Jr. and Ivan Rosenberg*

Tetrahedron: Asymmetry 18 (2007) 2165



(3*S*,4*S*)-1-N-Benzyl-3-dimethoxytrityloxy-4-hydroxypyrrolidine

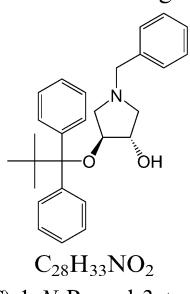
$[\alpha]_D^{20} = +35.8$ (*c* 0.396, ethanol)

Source of chirality: 3,4-dihydroxypyrrolidine

Absolute configuration: (3*S*,4*S*)

Dominik Rejman,* Petr Kočalka, Miloš Buděšínský, Ivan Barvík, Jr. and Ivan Rosenberg*

Tetrahedron: Asymmetry 18 (2007) 2165



(3*S*,4*S*)-1-N-Benzyl-3-tert-butyldiphenylsilyloxy-4-hydroxypyrrolidine

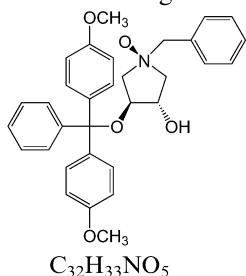
$[\alpha]_D^{20} = +27.8$ (*c* 0.416, ethanol)

Source of chirality: 3,4-dihydroxypyrrolidine

Absolute configuration: (3*S*,4*S*)

Dominik Rejman,* Petr Kočalka, Miloš Buděšínský, Ivan Barvík, Jr. and Ivan Rosenberg*

Tetrahedron: Asymmetry 18 (2007) 2165

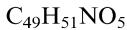
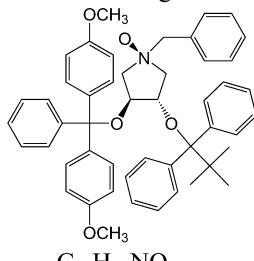


(1*S*,3*S*,4*S*)-1-N-Benzyl-3-dimethoxytrityloxy-4-hydroxy-1-N-oxidopyrrolidine

$[\alpha]_D^{20} = +31.3$ (*c* 0.419, ethanol)

Source of chirality: 1-benzyl-3,4-dihydroxypyrrolidine-*N*-oxide

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

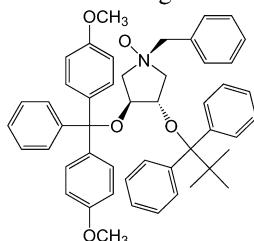


(1S,3S,4S)-1-N-Benzyl-4-tert-butylidiphenylsilyloxy-3-dimethoxytrityloxy-1-N-oxidopyrrolidine

$[\alpha]_D^{20} = +53.1$ (*c* 0.199, ethanol)

Source of chirality: 1-benzyl-3,4-dihydroxypyrrolidine-*N*-oxide

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

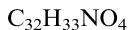
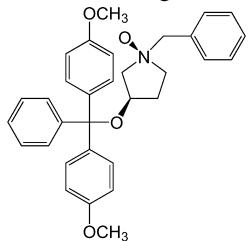


(1*R*,3*S*,4*S*)-1-N-Benzyl-4-tert-butylidiphenylsilyloxy-3-dimethoxytrityloxy-1-N-oxidopyrrolidine

$[\alpha]_D^{20} = +37.6$ (*c* 0.507, ethanol)

Source of chirality: 1-benzyl-3,4-dihydroxypyrrolidine-*N*-oxide

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

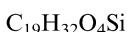
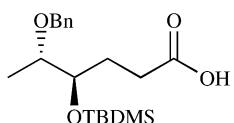


(1*R*,3*R*)-1-N-Benzyl-3-dimethoxytrityloxy-1-N-oxidopyrrolidine

$[\alpha]_D^{20} = -20.1$ (*c* 0.384, ethanol)

Source of chirality: 1-benzyl-3-hydroxypyrrolidine-*N*-oxide

Absolute configuration: (1*R*,3*R*)

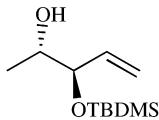


(4*R*,5*S*)-5-(Benzylxy)-4-[1-(tert-butyl)-1,1-dimethylsilyl]oxyhexanoic acid

$[\alpha]_D = +22.0$ (*c* 0.2, CHCl₃)

Source of chirality: asymmetric synthesis

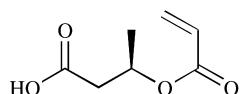
Absolute configuration: (4*R*,5*S*)



$C_{11}H_{24}O_2Si$
(2*S*,3*R*)-3-[1-(*tert*-Butyl)-1,1-dimethylsilyl]oxy-4-penten-2-ol

$[\alpha]_D = +51.7$ (*c* 0.25, $CHCl_3$)

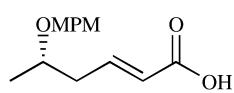
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,3*R*)



$C_7H_{10}O_4$
(3*R*)-3-Acryloyloxybutanoic acid

$[\alpha]_D = +10.3$ (*c* 0.2, $CHCl_3$)

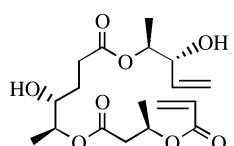
Source of chirality: (*S*)-malic acid
Absolute configuration: (3*R*)



$C_{14}H_{18}O_4$
(*E*,5*S*)-5-[(4-Methoxybenzyl)oxy]-2-hexenoic acid

$[\alpha]_D = +58.1$ (*c* 0.25, $CHCl_3$)

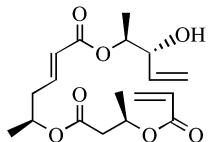
Source of chirality: asymmetric synthesis
Absolute configuration: (5*S*)



$C_{18}H_{28}O_8$
(1*R*)-3-[((1*S*,2*R*)-2-Hydroxy-5-[(1*S*,2*R*)-2-hydroxy-1-methyl-3-but enyl]oxy-1-methyl-5-oxopentyl)oxy]-1-methyl-3-oxopropyl acrylate

$[\alpha]_D = +1.3$ (*c* 0.5, $CHCl_3$)

Source of chirality: asymmetric synthesis
Absolute configuration: (1*R*,1*aS*,2*aR*,1*bS*,2*bR*)

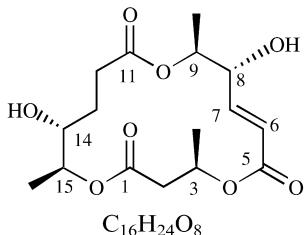


$C_{18}H_{26}O_7$
(1*S*,2*R*)-2-Hydroxy-1-methyl-3-but enyl (*E*,5*S*)-5-[(3*R*)-3-(acryloyloxy)butanoyl]oxy-2-hexenoate

$[\alpha]_D = -23.7$ (*c* 0.1, CHCl₃)

Source of chirality: asymmetric synthesis

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

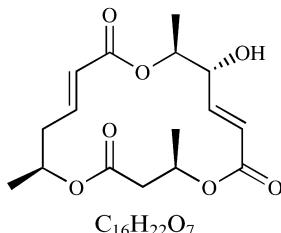


Macrosphelide I (1)

$[\alpha]_D = +9.6$ (*c* 0.15, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*,8*R*,9*S*,14*R*,15*S*)

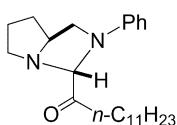


Macrosphelide G (2)

$[\alpha]_D = +54.3$ (*c* 0.1, CHCl₃)

Source of chirality: asymmetric synthesis

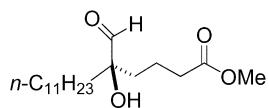
Absolute configuration: (3*R*,8*R*,9*S*,15*S*)



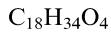
$C_{24}H_{38}N_2O$
(2*R*,5*S*)-2-Dodecanoyl-3-phenyl-1,3-diazabicyclo-[3,3,0]-octane

$[\alpha]_D^{23} = -29.3$ (*c* 1.0, CHCl₃)

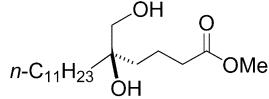
Absolute configuration: (2*R*,5*S*)


 $[\alpha]_D^{24} = +5.9$ (c 1.0, CHCl₃)

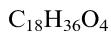
Absolute configuration: (R)



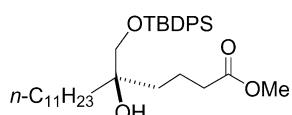
Methyl (R)-4-formyl-4-hydroxyhexadecanoate


 $[\alpha]_D^{24} = -1.1$ (c 1.0, CHCl₃)

Absolute configuration: (R)



Methyl (R)-4-hydroxy-4-hydroxymethylhexadecanoate



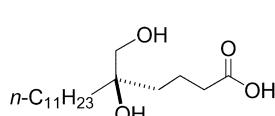
Ee >99%

 $[\alpha]_D^{28} = -2.7$ (c 0.25, CHCl₃)

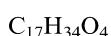
Absolute configuration: (R)



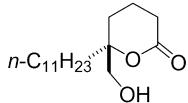
Methyl (R)-5-tert-butyldiphenylsiloxyethyl-5-hydroxyhexadecanoate


 $[\alpha]_D^{27} = -0.8$ (c 1.0, CHCl₃)

Absolute configuration: (R)

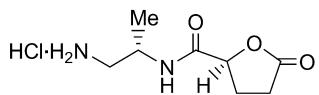


(R)-4-Hydroxy-4-hydroxymethylhexadecanoic acid



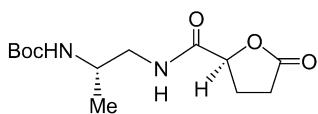
$C_{17}H_{32}O_3$
(+)-Tanikolide

Ee >99%
 $[\alpha]_D^{23} = +2.85$ (*c* 0.65, $CHCl_3$)
 Absolute configuration: (*R*)



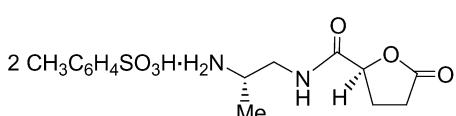
$C_8H_{14}N_2O_3 \cdot HCl$
N-(1'-Amino-(*S*)-2'-propyl)-5-oxo-(*S*)-2-tetrahydrofurancarboxyamide hydrochloride

Ee = 100%
 $[\alpha]_D^{24} = +40.0$ (*c* 1.0, DMSO)
 Source of chirality: L-alanine and L-glutamic acid



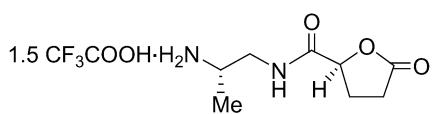
$C_{13}H_{22}N_2O_5$
N-[*(S*)-2'-*N*-(*tert*-Butoxycarbonyl)amino-1'-propyl]-5-oxo-(*S*)-2-tetrahydrofuran carboxyamide

Ee = 100%
 $[\alpha]_D^{24} = -17.2$ (*c* 1, $CHCl_3$)
 Source of chirality: L-alanine and L-glutamic acid



$C_8H_{14}N_2O_3 \cdot 2CH_3C_6H_4SO_3H$
N-[*(S*)-2'-Amino-1'-propyl]-5-oxo-(*S*)-2-tetrahydrofurancarboxyamide *p*-toluenesulfonate

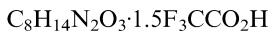
Ee = 100%
 $[\alpha]_D^{24} = +10.6$ (*c* 0.6, DMSO)
 Source of chirality: L-alanine and L-glutamic acid



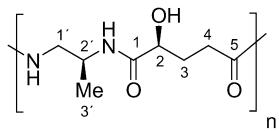
Ee = 100%

 $[\alpha]_D^{24} = +5.8$ (c 1, DMSO)

Source of chirality: L-alanine and L-glutamic acid



N-[(S)-2'-Amino-1'-propyl]-5-oxo-(S)-2-tetrahydrofurancarboxyamide trifluoroacetate



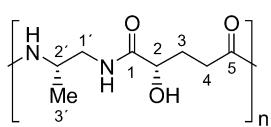
Ee = 100%

 $[\alpha]_D^{24} = -27.4$ (c 1, DMSO)

Source of chirality: L-alanine and L-glutamic acid



Poly[N-(1'-amino-(S)-2'-propyl)-carboxyamido-(S)-2-hydroxypentan-5-oic acid]



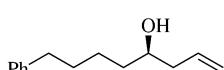
Ee = 100%

 $[\alpha]_D^{24} = -15.0$ (c 0.5, DMSO)

Source of chirality: L-alanine and L-glutamic acid

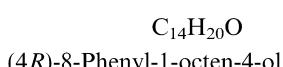


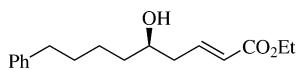
Poly[N-(S)-2'-amino-1'-propyl]-carboxyamido-(S)-2-hydroxypentan-5-oic acid]

 $[\alpha]_D = +53.8$ (c 0.35, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (4R)



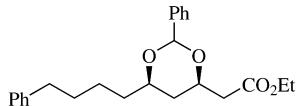


$C_{17}H_{24}O_3$
Ethyl (E,5R)-5-hydroxy-9-phenyl-2-nonenoate

$[\alpha]_D = -13.1$ (*c* 0.93, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (5*R*)

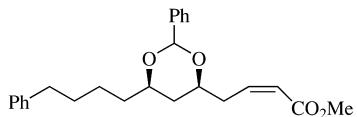


$C_{24}H_{30}O_4$
Ethyl 2-[(4*R*,6*R*)-2-phenyl-6-(4-phenylbutyl)-1,3-dioxan-4-yl]acetate

$[\alpha]_D = -3.6$ (*c* 0.76, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (4*R*,6*R*)

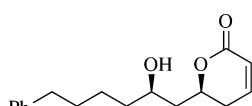


$C_{25}H_{30}O_4$
Methyl (Z)-4-[(4*S*,6*R*)-2-phenyl-6-(4-phenylbutyl)-1,3-dioxan-4-yl]-2-butenoate

$[\alpha]_D = -11.65$ (*c* 0.46, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: (4*S*,6*R*)

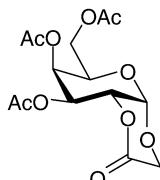


$C_{17}H_{22}O_3$
(6*S*)-5,6-Dihydro-6-[(2*R*)-2-hydroxy-6-phenylhexyl]-2*H*-pyran-2-one

$[\alpha]_D = -66.5$ (*c* 0.81, CHCl₃)

Source of chirality: asymmetric synthesis

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

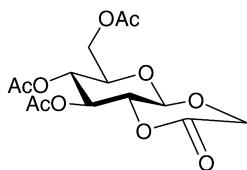


Carboxymethyl-3,4,6-tri-*O*-acetyl- α -D-galactopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +113$ (*c* 0.9, $CHCl_3$)

Source of chirality: allyl- α -D-galactopyranoside

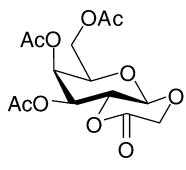


Carboxymethyl-3,4,6-tri-*O*-acetyl- β -D-glucopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +93$ (*c* 1, CH_2Cl_2)

Source of chirality: allyl- β -D-glucopyranoside

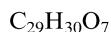
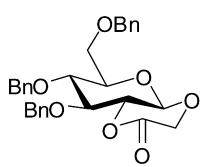


Carboxymethyl-3,4,6-tri-*O*-acetyl- β -D-galactopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +85$ (*c* 1, $CHCl_3$)

Source of chirality: allyl- β -D-galactopyranoside

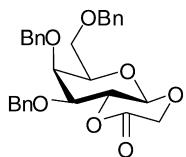


Carboxymethyl-3,4,6-tri-*O*-benzyl- β -D-glucopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = -21$ (*c* 1, $CHCl_3$)

Source of chirality: allyl- β -D-glucopyranoside

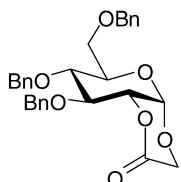


$C_{29}H_{30}O_7$
Carboxymethyl-3,4,6-tri-*O*-benzyl- β -D-galactopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +51$ (*c* 0.2, CHCl₃)

Source of chirality: allyl- β -D-galactopyranoside

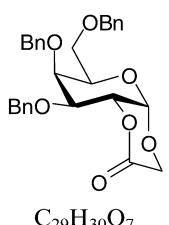


$C_{29}H_{30}O_7$
Carboxymethyl-3,4,6-tri-*O*-benzyl- α -D-glucopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +88$ (*c* 0.8, CHCl₃)

Source of chirality: allyl- α -D-glucopyranoside

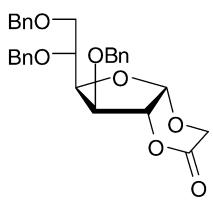


$C_{29}H_{30}O_7$
Carboxymethyl-3,4,6-tri-*O*-benzyl- α -D-galactopyranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +71$ (*c* 0.8, CHCl₃)

Source of chirality: allyl- α -D-galactopyranoside

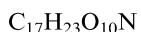
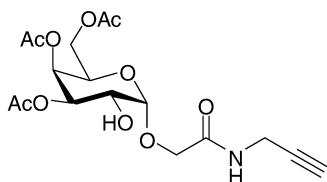


$C_{29}H_{30}O_7$
Carboxymethyl-3,5,6-tri-*O*-benzyl- α -D-glucofuranoside-2-*O*-lactone

Ee = 100%

$[\alpha]_D = +19$ (*c* 0.7, CHCl₃)

Source of chirality: allyl- α -D-glucofuranoside

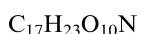
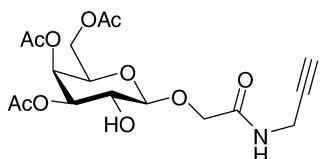


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-acetyl- α -D-galactopyranoside

Ee = 100%

$[\alpha]_D = +122 (c 0.6, CHCl_3)$

Source of chirality: carboxymethyl-3,4,6-tri-*O*-acetyl- α -D-galactopyranoside-2-*O*-lactone

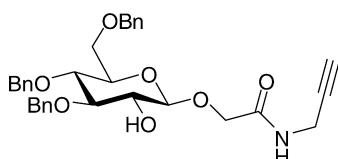


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-acetyl- β -D-galactopyranoside

Ee = 100%

$[\alpha]_D = -2 (c 0.6, CHCl_3)$

Source of chirality: carboxymethyl-3,4,6-tri-*O*-acetyl- β -D-galactopyranoside-2-*O*-lactone

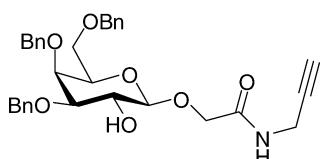


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-benzyl- β -D-glucopyranoside

Ee = 100%

$[\alpha]_D = +5 (c 0.3, CHCl_3)$

Source of chirality: carboxymethyl-3,4,6-tri-*O*-benzyl- β -D-glucopyranoside-2-*O*-lactone

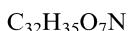
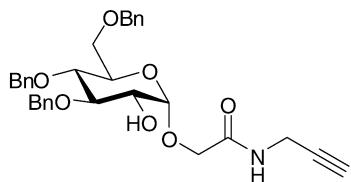


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-benzyl- α -D-galactopyranoside

Ee = 100%

$[\alpha]_D = +3 (c 1, CHCl_3)$

Source of chirality: carboxymethyl-3,4,6-tri-*O*-benzyl- β -D-galactopyranoside-2-*O*-lactone

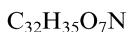
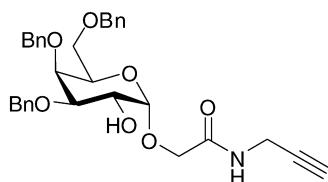


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-benzyl- α -D-glucopyranoside

Ee = 100%

[α]_D = +88 (c 0.5, CHCl₃)

Source of chirality: carboxymethyl-3,4,6-tri-*O*-benzyl- α -D-glucopyranoside-2-*O*-lactone

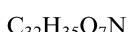
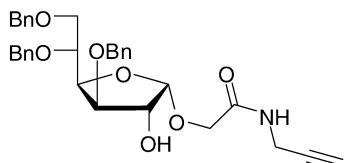


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-benzyl- α -D-galactopyranoside

Ee = 100%

[α]_D = +84 (c 0.6, CHCl₃)

Source of chirality: carboxymethyl-3,4,6-tri-*O*-benzyl- α -D-galactopyranoside-2-*O*-lactone

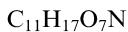
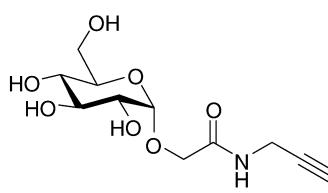


(*N*-Propargylcarbamoyl)methyl-3,4,6-tri-*O*-benzyl- α -D-glucofuranoside

Ee = 100%

[α]_D = +10 (c 0.9, CHCl₃)

Source of chirality: carboxymethyl-3,5,6-tri-*O*-benzyl- α -D-glucofuranoside-2-*O*-lactone

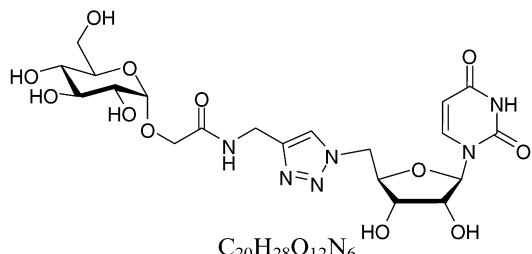


(*N*-Propargylcarbamoyl)methyl- α -D-glucopyranoside

Ee = 100%

[α]_D = +188 (c 1, H₂O)

Source of chirality: (*N*-propargylcarbamoyl)methyl-3,4,6-tri-*O*-acetyl- α -D-glucopyranoside

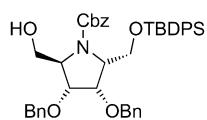


N-Methyl[-4-[1-(5'-deoxyuridin)-1,2,3-triazole]carbamoylmethyl- α -D-glucopyranoside

Ee = 100%

$[\alpha]_D = +89$ (*c* 1, H_2O)

Source of chirality: (*N*-propargylcarbamoyl)methyl- α -D-glucopyranoside

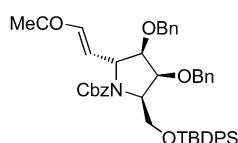


$C_{44}H_{49}NO_6Si$
(2*R*,3*S*,4*R*,5*R*)-3,4-Dibenzylxyloxy-*N*-benzyloxycarbonyl-2'-*O*-*tert*-butyldiphenylsilyl-2,5-bis(hydroxymethyl)pyrrolidine

$[\alpha]_D^{25} = +6$, $[\alpha]_{405}^{26} = +21$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (2*R*,3*S*,4*R*,5*R*) (assigned by NMR spectroscopy and chemical correlation)

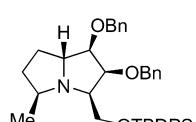


$C_{47}H_{51}NO_6Si$
4-[(3*E*,2*R*,3*R*,4*S*,5*R*)-3',4'-Dibenzylxyloxy-*N*-benzyloxycarbonyl-5'-*tert*-butyldiphenylsilyloxyethylpyrrolidin-2'-yl]but-3-en-2-one

$[\alpha]_D^{26} = +18$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (3*E*,2*R*,3*R*,4*S*,5*R*) (assigned by NMR spectroscopy and chemical correlation)

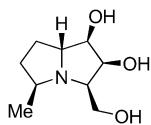


$C_{39}H_{47}NO_3Si$
(1*R*,2*S*,3*R*,5*S*,7*aR*)-1,2-Dibenzylxyloxy-3-*tert*-butyldiphenylsilyloxyethyl-5-methylpyrrolizidine

$[\alpha]_D^{25} = +31$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

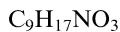
Absolute configuration: (1*R*,2*S*,3*R*,5*S*,7*aR*) (assigned by NMR spectroscopy and chemical correlation)



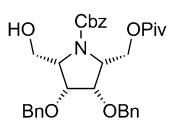
$[\alpha]_D^{28} = +12, [\alpha]_{405}^{28} = -30$ (*c* 1, methanol)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (1*R*,2*S*,3*R*,5*S*,7*aR*) (assigned by NMR spectroscopy and chemical correlation)



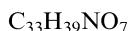
(1*R*,2*S*,3*R*,5*S*,7*aR*)-1,2-Dihydroxy-3-hydroxymethyl-5-methylpyrrolizidine



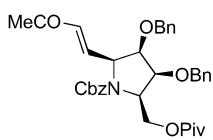
$[\alpha]_D^{23} = +22$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (2*R*,3*S*,4*R*,5*S*) (assigned by NMR spectroscopy and chemical correlation)



(2*R*,3*S*,4*R*,5*S*)-3,4-Dibenzylxyloxy-N-benzyloxycarbonyl-2,5-bis(hydroxymethyl)-2'-O-pivaloylpyrrolidine

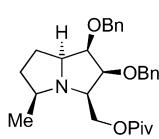


$[\alpha]_D^{26} = -1, [\alpha]_{405}^{26} = -116$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (3*E*,2*S*,3*R*,4*S*,5*R*) (assigned by NMR spectroscopy and chemical correlation)

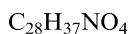
4-[(3*E*,2*S*,3*R*,4*S*,5*R*)-3',4'-Dibenzylxyloxy-N-benzyloxycarbonyl-5'-O-pivaloyloxymethylpyrrolidin-2'-yl]but-3-en-2-one



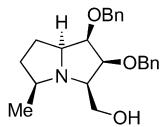
$[\alpha]_D^{25} = -27$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (1*R*,2*S*,3*R*,5*S*,7*aS*) (assigned by NMR spectroscopy and chemical correlation)



(1*R*,2*S*,3*R*,5*S*,7*aS*)-1,2-Dibenzylxyloxy-5-methyl-3-pivaloyloxymethylpyrrolizidine

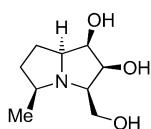


$C_{23}H_{29}NO_3$
(1*R*,2*S*,3*R*,5*S*,7*aS*)-1,2-Dibenzyloxy-3-hydroxymethyl-5-methylpyrrolizidine

$[\alpha]_D^{26} = -26$ (*c* 1, chloroform)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (1*R*,2*S*,3*R*,5*S*,7*aS*) (assigned by NMR spectroscopy and chemical correlation)

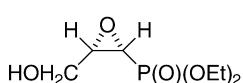


$C_9H_{17}NO_3$
(1*R*,2*S*,3*R*,5*S*,7*aS*)-1,2-Dihydroxy-3-hydroxymethyl-5-methylpyrrolizidine

$[\alpha]_D^{27} = +10$ (*c* 1, methanol)

Source of chirality: D-fructose and stereoselective synthesis

Absolute configuration: (1*R*,2*S*,3*R*,5*S*,7*aS*) (assigned by NMR spectroscopy and chemical correlation)



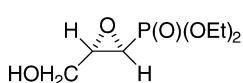
$C_7H_{15}O_5P$
Diethyl (1*R*,2*S*)-1,2-epoxy-3-hydroxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = +11.7$ (*c* 0.8, $CHCl_3$)

Source of chirality: D-mannitol

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



$C_7H_{15}O_5P$
Diethyl (1*S*,2*S*)-1,2-epoxy-3-hydroxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = -24.7$ (*c* 0.8, $CHCl_3$)

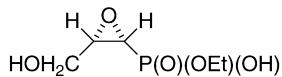
Source of chirality: D-mannitol

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

Ee = 100%

 $[\alpha]_D^{20} = +12.2$ (*c* 0.08, H₂O)

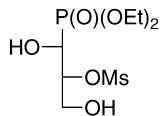
Source of chirality: D-mannitol

Absolute configuration: (1*R*,2*S*)O-Ethyl (1*R*,2*S*)-1,2-epoxy-3-trityloxypropylphosphonate

Ee = 100%

 $[\alpha]_D^{20} = +4.7$ (*c* 0.97, CH₃OH)

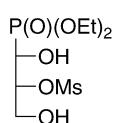
Source of chirality: D-mannitol

Absolute configuration: (1*R*,2*R*)Diethyl (1*R*,2*R*)-1,3-dihydroxy-2-mesyloxypropylphosphonate

Ee = 100%

 $[\alpha]_D^{20} = +10.9$ (*c* 1.0, CHCl₃)

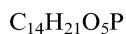
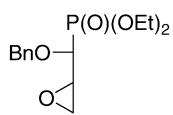
Source of chirality: D-mannitol

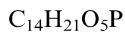
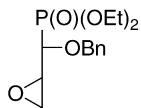
Absolute configuration: (1*S*,2*R*)Diethyl (1*S*,2*R*)-1,3-dihydroxy-2-mesyloxypropylphosphonate

Ee = 100%

 $[\alpha]_D^{20} = -19.7$ (*c* 1.0, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (1*R*,2*S*)Diethyl (1*R*,2*S*)-2,3-epoxy-1-benzyloxypropylphosphonate



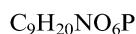
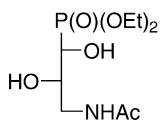
Diethyl (1S,2S)-2,3-epoxy-1-benzyloxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = -20.6$ (c 4.0, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (1S,2S)



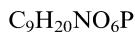
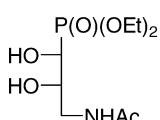
Diethyl (1S,2S)-3-acetamido-1,2-dihydroxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = -16.4$ (c 1.45, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (1S,2S)



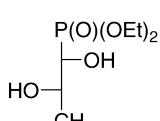
Diethyl (1R,2S)-3-acetamido-1,2-dihydroxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = +72.2$ (c 1.1, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (1R,2S)



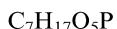
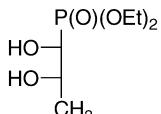
Diethyl (1S,2S)-1,2-dihydroxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = +10.3$ (c 1.4, CHCl₃)

Source of chirality: D-mannitol

Absolute configuration: (1S,2S)



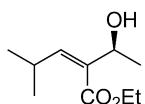
Diethyl (1*R*,2*S*)-1,2-dihydroxypropylphosphonate

Ee = 100%

$[\alpha]_D^{20} = -4.4$ (*c* 1.4, CHCl₃)

Source of chirality: D-mannitol

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



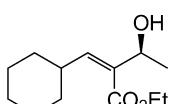
(3*S*)-Ethyl 3-hydroxy-2(1'-isopropyl-methylidene)-butyrate

Ee >99%

$[\alpha]_D^{25} = -11.0$ (*c* 1.0, CHCl₃)

Source of chirality: lipase catalyzed kinetic resolution

Absolute configuration: (S)



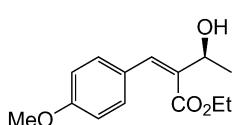
(3*S*)-Ethyl 3-hydroxy-2(1'-cyclohexyl-methylidene)-butyrate

Ee = 88%

$[\alpha]_D^{25} = -8.7$ (*c* 1.0, CHCl₃)

Source of chirality: lipase catalyzed kinetic resolution

Absolute configuration: (S)



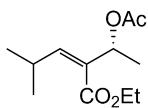
(3*S*)-Ethyl 3-hydroxy-2[1'(4-methoxy-phenyl)-methylidene]-butyrate

Ee >99%

$[\alpha]_D^{25} = -4.0$ (*c* 1.0, CHCl₃)

Source of chirality: lipase catalyzed kinetic resolution

Absolute configuration: (S)



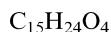
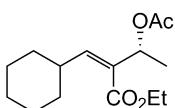
(3*R*)-Ethyl 3-acetoxy-2(1'-isopropyl-methylidene)-butyrate

Ee >99%

[α]_D²⁵ = +36.5 (c 1.0, CHCl₃)

Source of chirality: lipase catalyzed kinetic resolution

Absolute configuration: (R)



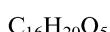
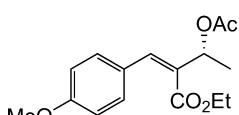
(3*R*)-Ethyl 3-acetoxy-2(1'-cyclohexyl-methylidene)-butyrate

Ee >99%

[α]_D²⁵ = +27.2 (c 1.0, CHCl₃)

Source of chirality: lipase catalyzed kinetic resolution

Absolute configuration: (R)



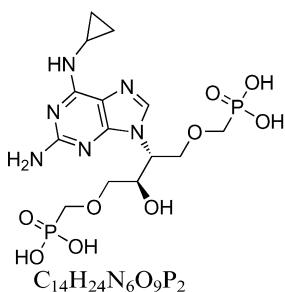
(3*R*)-Ethyl 3-acetoxy-2[1'(4-methoxy-phenyl)-methylidene]-butyrate

Ee >99%

[α]_D²⁵ = +44.3 (c 1.0, CHCl₃)

Source of chirality: lipase catalyzed kinetic resolution

Absolute configuration: (R)



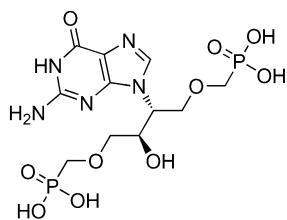
(2*R*,3*R*)-2-Amino-6-(cyclopropyl)amino-9-{3-(hydroxy)-1,4-[bis(phosphono)methoxy]butan-2-yl}purine

Ee >99.8%

[α]_D²⁰ = +12.9 (c 0.25, H₂O)

Source of chirality: asymmetric synthesis

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



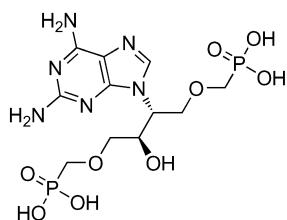
$C_{11}H_{19}N_5O_{10}P_2$
(2R,3R)-9-{3-(hydroxy)-1,4-[bis(phosphonomethoxy)]butan-2-yl}guanine

Ee > 99.8%

 $[\alpha]_D^{20} = +10.9$ (c 0.23, H₂O)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R,3R)



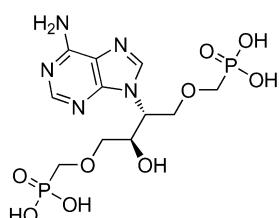
$C_{11}H_{20}N_6O_9P_2$
(2R,3R)-2,6-Diamino-9-{3-(hydroxy)-1,4-[bis(phosphonomethoxy)]butan-2-yl}purine

Ee > 99.8%

 $[\alpha]_D^{20} = +19.2$ (c 0.34, H₂O)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R,3R)



$C_{11}H_{19}N_5O_9P_2$
(2R,3R)-9-{3-(hydroxy)-1,4-[bis(phosphonomethoxy)]butan-2-yl}adenine

Ee > 99.8%

 $[\alpha]_D^{20} = +12.2$ (c 0.26, H₂O)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R,3R)