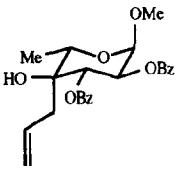
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = -175.2 (c = 0.22, DMF)

Source of chirality: natural and stereoselective synthesis

$C_{24}H_{26}O_7$



Methyl 2,3-di-*O*-benzoyl-4-(prop-2'-en-1'-yl)-6-deoxy-β-L-glucopyranoside

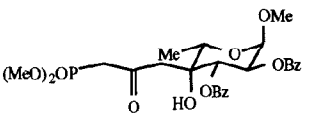
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = -119.0 (c = 0.2, DMF)

Source of chirality: natural and stereoselective synthesis

$C_{26}H_{31}O_{11}P$



Methyl 2,3-di-*O*-benzoyl-4-(3'-dimethylphosphono-2'-oxo-propan-1'-yl)-6-deoxy-β-L-galactopyranoside

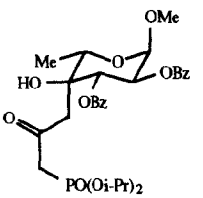
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = -100.8. (c = 0.4, DMF)

Source of chirality: natural and stereoselective synthesis

$C_{30}H_{39}O_{11}P$



Methyl 2,3-di-*O*-benzoyl-4-(3'-diisopropylphosphono-2'-oxo-propan-1'-yl)-6-deoxy-β-L-glucopyranoside

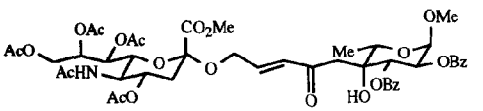
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = -64.7 (c = 0.21, DMF)

Source of chirality: natural and stereoselective synthesis

$C_{46}H_{55}NO_{21}$



Methyl 5-acetamido-2-[5"-(methyl 2',3'-di-*O*-benzoyl-6'-deoxy-β-L-galactopyranoside-4'-yl)-4"-oxo-pent-2"-en-1-yl]-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-*D*-glycero-α-*D*-galacto-2-nonulosonate

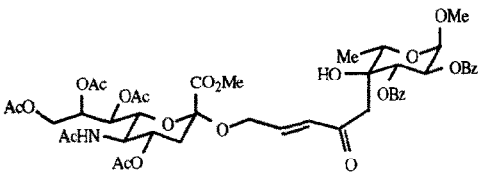
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = -53.3 (c = 0.15, DMF)

Source of chirality: natural

$C_{46}H_{55}NO_{21}$



Methyl 5-acetamido-2-[5"-(methyl 2',3'-di-*O*-benzoyl-6'-deoxy-β-L-glucopyranoside-4'-yl)-4"-oxo-pent-2"-en-1-yl]-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-*D*-glycero-α-*D*-galacto-2-nonulosonate

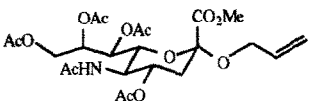
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = +9.7 (c = 0.25, DMF)

Source of chirality: natural

$C_{23}H_{33}NO_{13}$



Methyl 2-allyl-5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-D-glycero-α-D-galacto-2-nonulosonate

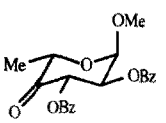
N. M. Allanson, A. H. Davidson, C. D. Floyd, F. M. Martin

Tetrahedron: Asymmetry **1994,** *5,* 2061

$[\alpha]_D^{24}$ = -113.1. (c = 2.8, DMF)

Source of chirality: natural

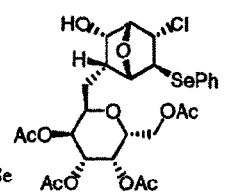
$C_{21}H_{20}O_7$



Methyl 2,3-di-*O*-benzoyl-4-oxo-β-L-fucopyranoside

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994,** *5,* 2077



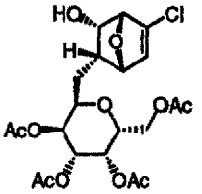
$C_{27}H_{33}ClO_{11}Se$

D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{27}$ = +41.2 (c =0.92, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1R,2S,3R,4S,5S,6S), α-D-Gal (by synthesis)

(+)-(1R,2S,3R,4S,5S,6S)-5-*exo*-Benzeneselenyl-6-*endo*-chloro-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]--7-oxabicyclo[2.2.1]heptan-2-*endo*-ol

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



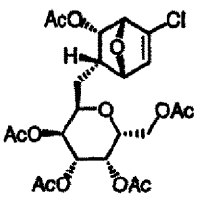
D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{27}$ = +61 (c = 1.3, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1R,2S,3R,4S), α-D-Gal
(by synthesis)

$C_{21}H_{27}ClO_{11}$

(+)-(1R,2S,3R,4S)-6-Chloro-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-7-oxabicyclo[2.2.1]hept-5-en-2-*endo*-ol

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



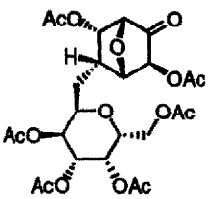
D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{24}$ = +47 (c = 1.07, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1R,2S,3R,4S), α-D-Gal
(by synthesis)

$C_{23}H_{29}ClO_{12}$

(+)-(1R,2S,3R,4S)-6-Chloro-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-7-oxabicyclo[2.2.1]hept-5-en-2-*endo*-yl Acetate

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



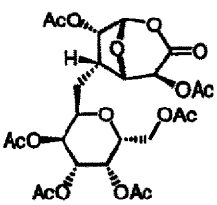
D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{24}$ = +28.3 (c = 1.1, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1R,2S,3S,4S,5S), α-D-Gal
(by synthesis)

$C_{25}H_{32}O_{15}$

(+)-(1R,2S,3S,4S,5S)-6-oxo-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-7-oxabicyclo[2.2.1]hept-5-en-2-*endo*,5-*exo*-diyl Diacetate

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



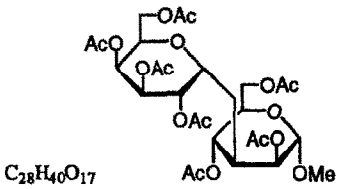
D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{24}$ = -20.3 (c = 1.4, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1S,4S,5S,6S,7S), α-D-Gal
(by synthesis)

$C_{25}H_{32}O_{16}$

(-)-(1S,4S,5S,6S,7S)-3-oxo-6-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-2,8-dioxabicyclo[3.2.1]octa-4-*exo*,7-*endo*-diyl Diacetate

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



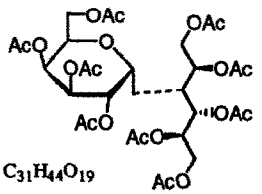
$C_{28}H_{40}O_{17}$

D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{25} = +62$ (c = 1.35, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: α-D-Gal, α-D-Man
(by synthesis)

(+)-Methyl 3-Deoxy-3-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-2,4,6-tri-O-acetyl-α-D-mannopyranoside

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



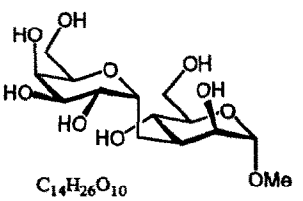
$C_{31}H_{44}O_{19}$

D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{24} = +66.5$ (c = 1.0, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: α-D-Gal, D-Man
(by synthesis)

(+)-3-Deoxy-3-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-1,2,4,5,6-penta-O-acetyl-D-mannitol

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



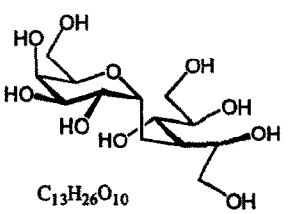
$C_{14}H_{26}O_{10}$

D.e. >98% (by 600 MHz ^{1}H-NMR)
$[\alpha]_D^{23} = +49.6$ (c = 0.75, MeOH)
Source of chirality: natural (D-Gal)
Absolute configuration α-D-Gal*p*(1→3)-CH_2-α-D-Man*p*-OMe
(assigned by synthesis using D-Gal and (-)-(1S,4S)-7-oxabicyclo[2.2.1]hept-
-5-en-2-one)

(+)-Methyl 3-Deoxy-3-[(α-D-galactopyranosyl)methyl]-α-D-mannopyranoside

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



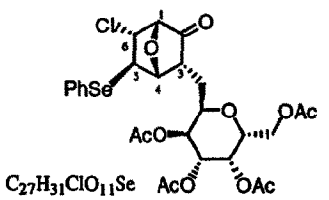
$C_{13}H_{26}O_{10}$

D.e. >98% (by ^{1}H-NMR of synthetic precursor)
$[\alpha]_D^{25} = +33$ (c = 0.9, MeOH)
Source of chirality: natural (D-Gal)
Absolute configuration: by synthesis

(+)-3-Deoxy-3-[(α-D-galactopyranosyl)methyl]-D-mannitol

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



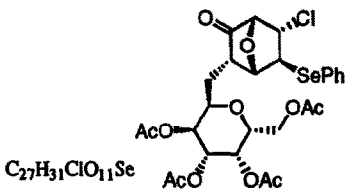
$C_{27}H_{31}ClO_{11}Se$

D.e. >98% (by 400 MHz ^{1}H-NMR, ^{13}CH satellites)
$[\alpha]_D^{26}$ = +24 (c =1.0, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1S,3S,4R,5R,6R), α-D-Gal
(by synthesis starting with (+)-(1R,4R)-7-oxabicyclo[2.2.1]hept-5-en-2-one and D-Gal)

(+)-(1S,3S,4R,5R,6R)-5-*exo*-Benzeneselenyl-6-*endo*-chloro-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-7-oxabicyclo[2.2.1]heptan-2-one

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



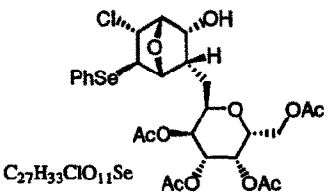
$C_{27}H_{31}ClO_{11}Se$

D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{26}$ = +41 (c =1.0, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1R,3R,4S,5S,6S), α-D-Gal
(by synthesis)

(+)-(1R,3R,4S,5S,6S)-5-*exo*-Benzeneselenyl-6-*endo*-chloro-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-7-oxabicyclo[2.2.1]heptan-2-one

R. Ferritto, P. Vogel

Tetrahedron: Asymmetry **1994**, *5*, 2077



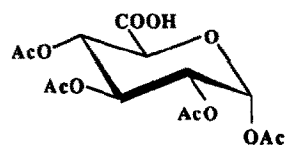
$C_{27}H_{33}ClO_{11}Se$

D.e. >98% (by 400 MHz ^{1}H-NMR)
$[\alpha]_D^{27}$ = +37.7 (c =1.2, $CHCl_3$)
Source of chirality: natural (D-Gal)
Absolute configuration: (1S,2R,3S,4R,5R,6R), α-D-Gal
(by synthesis)

(+)-(1S,2R,3S,4R,5R,6R)-5-*exo*-Benzeneselenyl-6-*endo*-chloro-3-*endo*-[(2',3',4',6'-tetra-O-acetyl-α-D-galactopyranosyl)methyl]-7-oxabicyclo[2.2.1]heptan-2-*endo*-ol

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994**, *5*, 2123

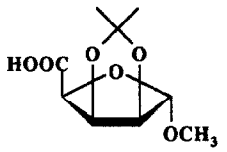


$[\alpha]_D$= + 92 (c=1; $CHCl_3$)
Mp 74-76°C (CH_2Cl_2-hexane)

$C_{14}H_{18}O_{11}$
1,2:3,4-Tetra-*O*-acetyl-*α*-*D*-glucopyranuronic acid

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



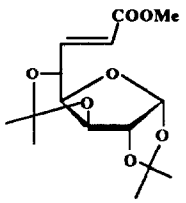
$[\alpha]_D$= + 19.9 (c= 2.47; $CHCl_3$)

$C_{29}H_{14}O_6$

Methyl-2,3-*O*-isopropylidene-*α*-*D*-lyxo-furanosiduronic acid

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



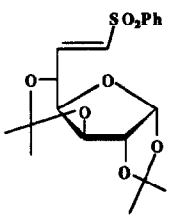
$[\alpha]_D$= +27 (c= 1.44; $CHCl_3$)

$C_{15}H_{22}O_7$

Methyl 6,7-dideoxy-1,2:3,5-di-*O*-isopropylidene-*α*-*D*-gluco-6-ene-octofuranuronate

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



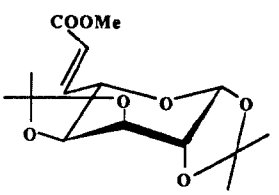
$[\alpha]_D$= +42 (c = 0.5; $CHCl_3$).
Mp 145-146°C (ether-pentane)

$C_{29}H_{24}O_7S$

6,7-Dideoxy-1,2:3,5-di-*O*-isopropylidene-7-phenylsulphonyl-*α*-*D*-gluco-6-ene-heptofuranose

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



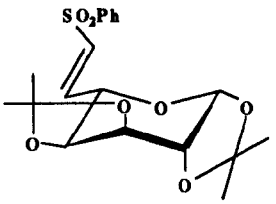
$[\alpha]_D$= -93 (c=2.4; $CHCl_3$)

$C_{15}H_{22}O_7$

Methyl 6,7-dideoxy-1,2:3,4-di-*O*-isopropylidene-6-ene-*α*-*L*-galacto-octopyranuronate

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



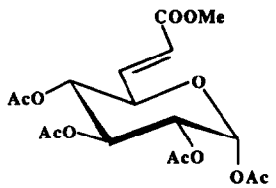
$[\alpha]_D$= -102 (c= 1.47; $CHCl_3$)

$C_{19}H_{24}O_7S$

6,7-Dideoxy-1,2:3,4-di-*O*-isopropylidene-7-phenylsulphonyl-α-*L*-galacto-6-ene-heptopyranose

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



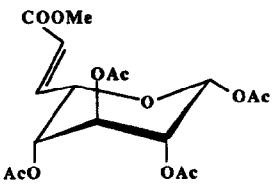
$[\alpha]_D$= +100 (c = 1; $CHCl_3$)
Mp 190-192°C (chloroform-hexane)

$C_{17}H_{22}O_{11}$

Methyl 6,7-dideoxy-1,2:3,4-tetra-*O*-acetyl-7-α-*D*-gluco-6-ene-octopyranuronate

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



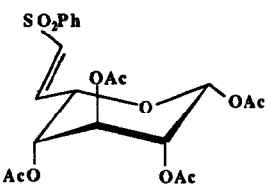
$[\alpha]_D$= +12 (c = 0.5; $CHCl_3$)
Mp 132-134°C (ether-pentane)

$C_{17}H_{22}O_{11}$

Methyl 6,7-dideoxy-1,2:3,4-tetra-*O*-acetyl-7-α-*L*-ido-6-ene-octopyranuronate

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



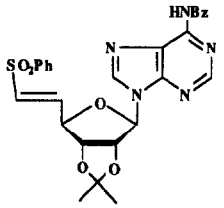
$[\alpha]_D$= +9 (c= 0.5, $CHCl_3$)
Mp 73-75°C (ether-pentane)

$C_{21}H_{24}NO_{11}S$

6,7-Dideoxy-1,2:3,4-tetra-*O*-acetyl-7-phenylsulphonyl-7-α-*L*-ido-6-ene-heptopyranose

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



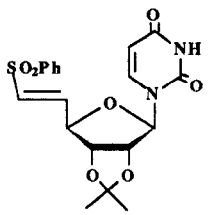
$[\alpha]_D$= + 94 (c= 0.5; $CHCl_3$)
Mp 115-118°C (CH_2Cl_2)

$C_{27}H_{25}N_5O_6S$

(5',6'-Dideoxy-2',3'-O-isopropylidene-6'-phenylsulphonyl-β–D-ribo-5'-ene-hexofuranosyl)-9-N^6-Benzoyl-adenine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



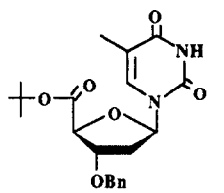
$[\alpha]_D$= + 64 (c= 0.5; $CHCl_3$)
Mp 111-114°C (CH_2Cl_2-hexane)

$C_{19}H_{20}N_2O_7S$

(5',6'-Dideoxy-2',3'-*O*-isopropylidene-6'-phenylsulphonyl-*β–D*-ribo-6'-ene-hexofuranosyl)-1-Uracil

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



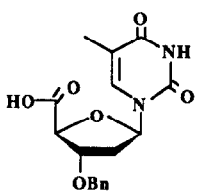
$[\alpha]_D$= + 38 (c= 1; $CHCl_3$)
Mp 156-158°C (CH_2Cl_2-hexane)

$C_{21}H_{26}N_2O_6$

(tert-Butyl-3'-*O*-benzyl-3'-deoxy-*β-D*-ribo-furanuronate)-1-thymine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123



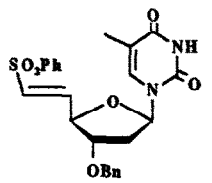
$[\alpha]_D$= +28 (c= 1; DMF)
Mp 238-240°C (methanol)

$C_{17}H_{18}N_2O_6$

(3'-*O*-Benzyl-3'-deoxy-*β-D*-ribo-furanuronic acid)-1-thymine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994**, *5*, 2123



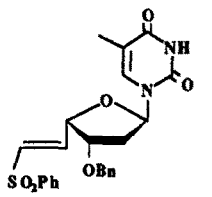
$[\alpha]_D$= +81 (c= 0.5; $CHCl_3$)
Mp 161-163°C (CH_2Cl_2-ether)

$C_{24}H_{24}N_2O_6S$

(3'-*O*-Benzyloxy-6'-phenylsulphonyl-2',5',6'-trideoxy-*β*-*D*-ribo-5'-ene-hexofuranosyl)-1-thymine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994**, *5*, 2123



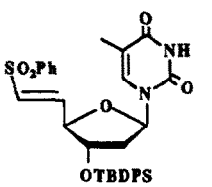
$[\alpha]_D$= +15 (c= 0.5; DMF)
Mp 84-86°C (CH_2Cl_2-pentane)

$C_{24}H_{24}N_2O_6S$

(3'-*O*-Benzyloxy-6'-phenylsulphonyl-2',5',6'-trideoxy-*β*-*L*-ribo-5'-ene-hexo-furanosyl)-1-thymine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994**, *5*, 2123



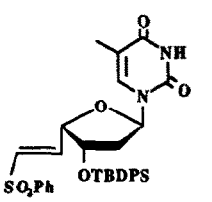
$[\alpha]_D$= +44 (c= 0.5; $CHCl_3$)
Mp 92-96°C (ether-pentane)

$C_{33}H_{36}N_2O_6S$ Si

(3'-O-tert-Butyldiphenylsilyl-6'-phenylsulphonyl-2',5',6'-trideoxy-*β*-*D*-ribo-5'-ene-hexofuranosyl)-1-thymine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994**, *5*, 2123



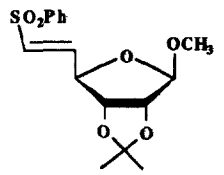
$[\alpha]_D$= +17 (c= 1; $CHCl_3$)
Mp 118-120°C (CH_2Cl_2-hexane)

$C_{33}H_{36}N_2O_6S$ Si.

(3'-*O*-tert-Butyldiphenylsilyl-6'-phenylsulphonyl-2',5',6'-trideoxy-*β*-*L*-ribo-5'-ene-hexo-furanosyl)-1-thymine

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123

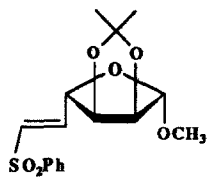


$[\alpha]_D$= +2.4 (c= 0.5; $CHCl_3$)
Mp 118-120°C (ether-pentane)

$C_{16}H_{20}O_6S$.
Methyl 5,6-dideoxy-2,3-isopropylidene-6-phenylsulphonyl-*β*–*D*- ribo-5-ene-hexo-furanoside

D.H.R. Barton, S.D. Géro, B. Quiclet-Sire, M. Samadi

Tetrahedron: Asymmetry **1994,** *5,* 2123

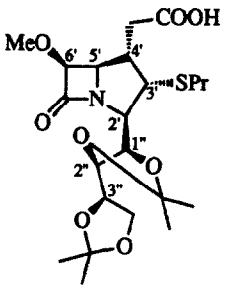


$[\alpha]_D$= -2,4 (c= 0.5; $CHCl_3$)
Mp 118-120°C (ether-pentane)

$C_{16}H_{20}O_6S$.
Methyl 5,6-dideoxy-2,3-isopropylidene-6-phenylsulphonyl-α–*L*-*lyxo*-5-ene-hexo-furanoside

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

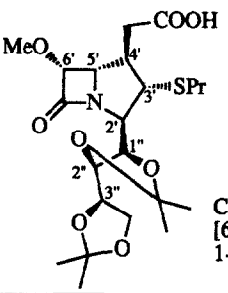


$[\alpha]_D$= – ($CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 4'*S*, 5'*R*, 6'*S*, 1"*R*, 2"*S*, 3"*R*

$C_{22}H_{35}NO_8S$
[6-Methoxy-7-oxo-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]hept-4-yl] acetic acid.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

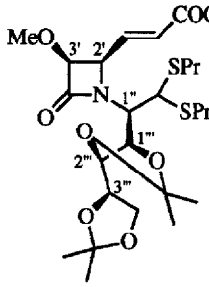


$[\alpha]_D$= + ($CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 4'*R*, 5'*S*, 6'*R*, 1"*R*, 2"*S*, 3"*R*

$C_{22}H_{35}NO_8S$
[6-Methoxy-7-oxo-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]hept-4-yl] acetic acid.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994**, *5*, 2137

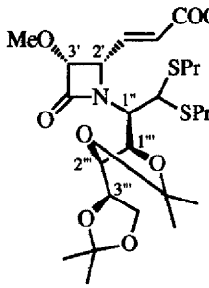


$[\alpha]_D$= –94 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 1"*R*, 1'"*R*, 2'"*S*, 3'"*R*

$C_{27}H_{45}NO_8S_2$
3-{1-[2,2-Bis-propylsulfanyl-1-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-ethyl]-3-methoxy-4-oxo-azetidin-2-yl}acrylic acid ethyl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994**, *5*, 2137

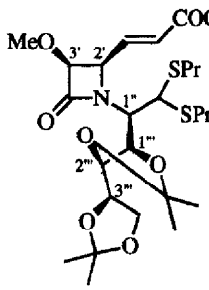


$[\alpha]_D$= +17 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*S*, 3'*R*, 1"*R*, 1'"*R*, 2'"*S*, 3'"*R*

$C_{27}H_{45}NO_8S_2$
3-{1-[2,2-Bis-propylsulfanyl-1-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-ethyl]-3-methoxy-4-oxo-azetidin-2-yl}acrylic acid ethyl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994**, *5*, 2137

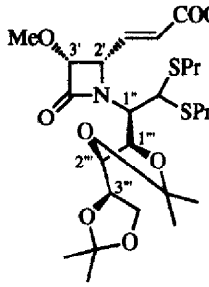


$[\alpha]_D$= -102 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 1"*R*, 1'"*R*, 2'"*S*, 3'"*R*

$C_{32}H_{47}NO_8S_2$
3-{1-[2,2-Bis-propylsulfanyl-1-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-ethyl]-3-methoxy-4-oxo-azetidin-2-yl}acrylic acid benzyl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994**, *5*, 2137

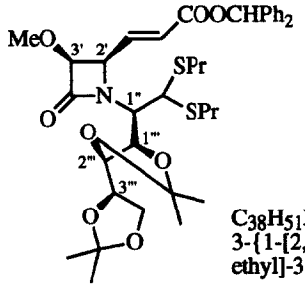


$[\alpha]_D$= +15 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*S*, 3'*R*, 1"*R*, 1'"*R*, 2'"*S*, 3'"*R*

$C_{32}H_{47}NO_8S_2$
3-{1-[2,2-Bis-propylsulfanyl-1-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-ethyl]-3-methoxy-4-oxo-azetidin-2-yl}acrylic acid benzyl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

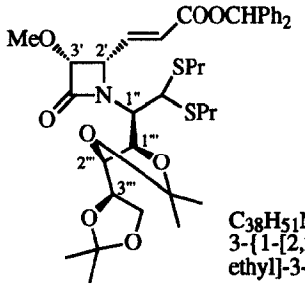


$[\alpha]_D$= -83 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 1"*R*, 1'''*R*, 2'''*S*, 3'''*R*

$C_{38}H_{51}NO_8S_2$
3-{1-[2,2-Bis-propylsulfanyl-1-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-ethyl]-3-methoxy-4-oxo-azetidin-2-yl}acrylic acid benzhydryl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

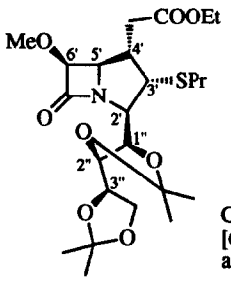


$[\alpha]_D$= +28 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*S*, 3'*R*, 1"*R*, 1'''*R*, 2'''*S*, 3'''*R*

$C_{38}H_{51}NO_8S_2$
3-{1-[2,2-Bis-propylsulfanyl-1-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-ethyl]-3-methoxy-4-oxo-azetidin-2-yl}acrylic acid benzhydryl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

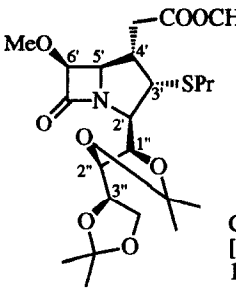


$[\alpha]_D$= -16 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 4'*S*, 5'*R*, 6'*S*, 1"*R*, 2"*S*, 3"*R*

$C_{24}H_{39}NO_8S$
[6-Methoxy-7-oxo-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]hept-4-yl] acetic acid ethyl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

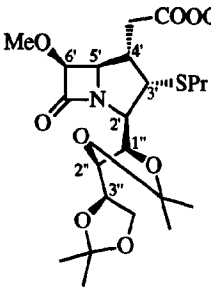


$[\alpha]_D$= -8 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 4'*S*, 5'*R*, 6'*S*, 1"*R*, 2"*S*, 3"*R*

$C_{29}H_{41}NO_8S$
[6-Methoxy-7-oxo-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]hept-4-yl] acetic acid benzyl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

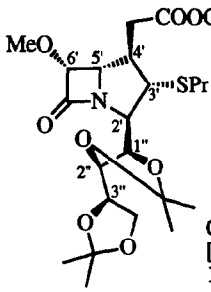


$[\alpha]_D$= -11 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 4'*S*, 5'*R*, 6'*S*, 1"*R*, 2"*S*, 3"*R*

$C_{35}H_{45}NO_8S$
[6-Methoxy-7-oxo-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]hept-4-yl] acetic acid benzhydryl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

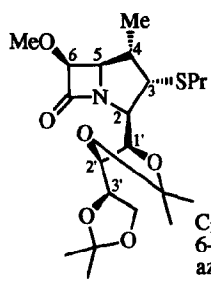


$[\alpha]_D$= +30 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2'*R*, 3'*S*, 4'*R*, 5'*S*, 6'*R*, 1"*R*, 2"*S*, 3"*R*

$C_{35}H_{45}NO_8S$
[6-Methoxy-7-oxo-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]hept-4-yl] acetic acid benzhydryl ester.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

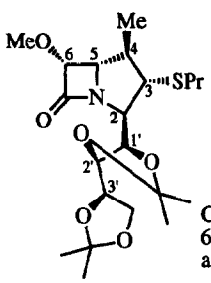


$[\alpha]_D$= -35 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2*R*, 3*S*, 4*S*, 5*R*, 6*S*, 1'*R*, 2'*S*, 3'*R*

$C_{21}H_{35}NO_6S$
6-Methoxy-4-methyl-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]heptan-7-one.

J.Anaya, D.H.R. Barton, M.C. Caballero, S.D. Gero, M. Grande, N.M. Laso and J.I.M. Hernando.

Tetrahedron: Asymmetry **1994,** *5,* 2137

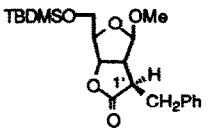


$[\alpha]_D$= +41 (c 1, $CHCl_3$)
Source of chirality: *D*-Glucosamine.
Absolute configuration: 2*R*, 3*S*, 4*R*, 5*S*, 6*R*, 1'*R*, 2'*S*, 3'*R*

$C_{21}H_{35}NO_6S$
6-Methoxy-4-methyl-3-propylsulfanyl-2-(1,2;3,4-di-*O*-isopropylidene-1,2;3,4-tetrahydroxybutyl)-1-aza-bicyclo[3.2.0]heptan-7-one.

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{21}H_{32}O_5Si$

Methyl 5-*O*-(*t*-butyldimethylsilyl)-2-*C*-[(*R*)carboxybenzylmethyl]-2-deoxy-3,2-γ-lactone-β-D-ribofuranoside

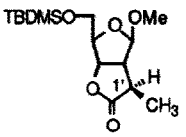
$[\alpha]_D^{25} = -2.0$ (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 5-*O*-(*t*-butyldimethylsilyl)-3-*O*-cinnamoyl-2-*O*-(imidazol-1-yl)thiocarbonyl-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{15}H_{28}O_5Si$

Methyl 5-*O*-(*t*-butyldimethylsilyl)-2-*C*-[(*R*)carboxymethylmethyl]-2-deoxy-3,2-γ-lactone-β-D-ribofuranoside

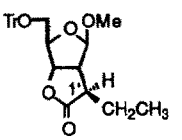
$[\alpha]_D^{25} = -30.0$ (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 3-*O*-acryloyl-5-*O*-(*t*-butyldimethylsilyl)-2-*O*-(imidazol-1-yl)thiocarbonyl-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{29}H_{30}O_5$

Methyl 2-*C*-[(*R*)carboxyethylmethyl]-2-deoxy-5-*O*-trityl-3,2-γ-lactone-β-D-ribofuranoside

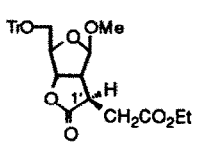
$[\alpha]_D^{25} = -11.8$ (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 3-*O*-crotonyl-2-*O*-(imidazol-1-yl) thiocarbonyl-5-*O*-trityl-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{31}H_{32}O_7$

Methyl 2-*C*-[(*R*)carboxy(etoxycarbonyl)methyl]-2-deoxy-5-*O*-trityl-3,2-γ-lactone-β-D-ribofuranoside

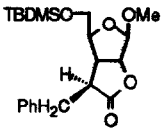
$[\alpha]_D^{25} = -1.4$ (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 3-*O*-ethylfumaroyl-2-*O*-(imidazol-1-yl)thiocarbonyl-5-*O*-trityl-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{21}H_{32}O_5Si$

Methyl 5-*O*-(*t*-butyldimethylsilyl)-3-*C*-[(*S*)carboxybenzylmethyl]-3-deoxy-5-*O*-trityl-2,3-γ-lactone-β-D-ribofuranoside

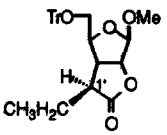
$[\alpha]_D^{25}$ = - 85.2 (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 5-*O*-(*t*-butyldimethylsilyl)-2-*O*-cinnamoyl-3-*O*-(imidazol-1-yl)thiocarbonyl-β-D-ribofuranoside

Absolute configuration: 1' S

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{29}H_{30}O_5$

Methyl 3-*C*-[(*S*)carboxyethylmethyl]-3-deoxy-5-*O*-trityl-2,3-γ-lactone-β-D-ribofuranoside

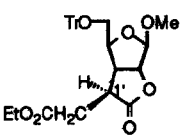
$[\alpha]_D^{25}$ = - 49.4 (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 2-*O*-crotonyl-3-*O*-(imidazol-1-yl)thiocarbonyl-5-*O*-trityl-β-D-ribofuranoside

Absolute configuration: 1' S

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{31}H_{32}O_7$

Methyl 3-*C*-[(*S*)carboxy(etoxycarbonylmethyl)methyl]-3-deoxy-5-*O*-trityl-2,3-γ-lactone-β-D-ribofuranoside

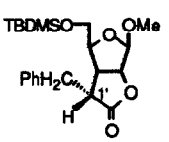
$[\alpha]_D^{25}$ = - 54.5 (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 2-*O*-ethylfumaroyl-3-*O*-(imidazol-1-yl)thiocarbonyl-5-*O*-trityl-β-D-ribofuranoside

Absolute configuration: 1' S

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{21}H_{32}O_5Si$

Methyl 5-*O*-(*t*-butyldimethylsilyl)-3-*C*-[(*R*)carboxybenzylmethyl]-3-deoxy-5-*O*-trityl-2,3-γ-lactone-β-D-ribofuranoside

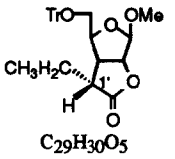
$[\alpha]_D^{25}$ = - 105.6 (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 5-*O*-(*t*-butyldimethylsilyl)-2-*O*-cinnamoyl-3-*O*-(imidazol-1-yl)thiocarbonyl-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{29}H_{30}O_5$

Methyl 3-*C*-[(*R*)carboxyethylmethyl]-3-deoxy-5-*O*-trityl-2,3-γ-lactone-β-D-ribofuranoside

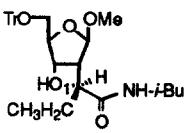
$[\alpha]_D^{25}$ = - 40.4 (c 1, $CHCl_3$)

Source of Chirality: Asymmetric synthesis (radical cyclization) from methyl 2-*O*-crotonyl-3-*O*-(imidazol-1-yl)thiocarbonyl-5-*O*-trityl-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{33}H_{41}NO_5$

Methyl 2-deoxy-2-*C*-[1'-(*N*-isobutyl)carbamoyl-1'(*R*)propyl]-5-*O*-trityl-β-D-ribofuranoside

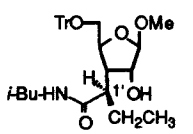
$[\alpha]_D^{25}$ = - 17.2 (c 1, $CHCl_3$)

Source of Chirality: γ-lactone-ring opening of methyl 2-*C*-[(*R*)carboxyethylmethyl]-2-deoxy-5-*O*-trityl-3,2-γ-lactone-β-D-ribofuranoside

Absolute configuration: 1' R

Sonsoles Velázquez and María José Camarasa

Tetrahedron: Asymmetry **1994,** *5,* 2141



$C_{33}H_{41}NO_5$

Methyl 3-deoxy-3-*C*-[1'-(*N*-isobutyl)carbamoyl-1'(*S*)-propyl]-5-*O*-trityl-β-D-ribofuranoside

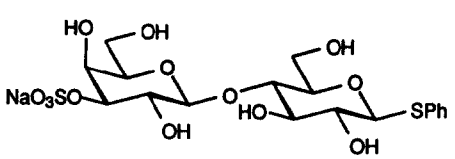
$[\alpha]_D^{25}$ = - 0.4 (c 1, $CHCl_3$)

Source of Chirality: γ-lactone-ring opening of methyl 3-*C*-[(*S*)carboxyethylmethyl]-3-deoxy-5-*O*-trityl-2,3-γ-lactone-β-D-ribofuranoside

Absolute configuration: 1' S

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994,** *5,* 2163

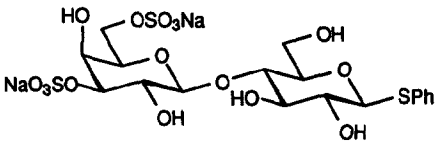


Phenyl 1-deoxy-4-*O*-(3'-*O*-sulfo-β-D-galactopyranosyl)-1-thio-β-D-glucopyranoside, sodium salt

$[\alpha]^{24}_D$ -26.2 (*c* 4.8 in MeOH)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994**, *5*, 2163

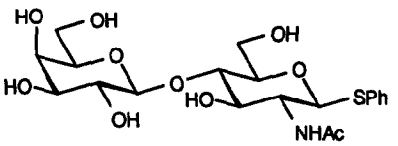


Phenyl 1-deoxy-4-*O*-(3',6'-di-*O*-sulfo-β-D-galacto pyranosyl)-1-thio-β-D-glucopyranoside, disodium salt

$[\alpha]^{24}_D$ -29.9 (*c* 1.5 in MeOH)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994**, *5*, 2163

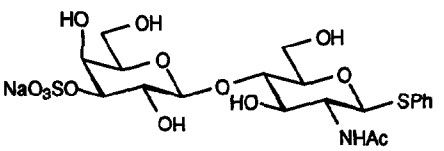


Phenyl 2-acetamido-1,2-di-deoxy-4-*O*-(β-D-galactopyranosyl) -1-thio-β-D-glucopyranoside

$[\alpha]^{23}_D$ +8.3 (*c* 0.9 in H_2O)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994**, *5*, 2163

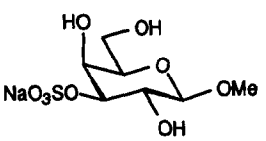


Phenyl 2-acetamido-1,2-di-deoxy-4-*O*-(3'-*O*-sulfo-β-D-galactopyranosyl)-1-thio-β-D-glucopyranoside, sodium salt

$[\alpha]^{24}_D$ -13.0 (*c* 2.9 in MeOH)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994**, *5*, 2163

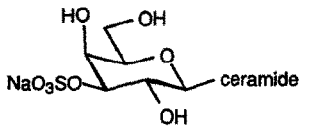


Methyl 3-*O*-sulfo-β-D-galactopyranoside, sodium salt

$[\alpha]^{23}_D$ +8.3 (*c* 3.6 in MeOH)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994,** *5,* 2163

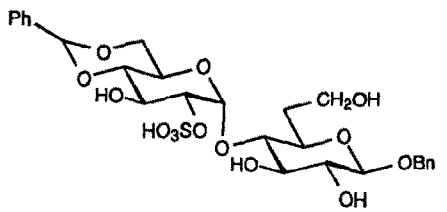


3-*O*-Sulfo-β-D-galactosylceramide, sodium salt

$[\alpha]^{23}_D$ +2.6 (*c* 1.0 in MeOH)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994,** *5,* 2163

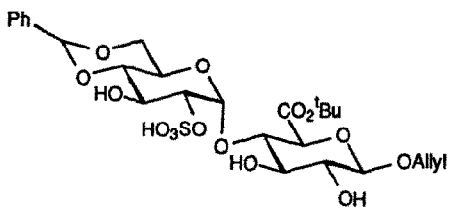


Benzyl 4-*O*-(4',6'-*O*-benzylidene-2'-*O*-sulfo-α-D-glucopyranosyl)-β-D-glucopyranoside

$[\alpha]^{23}_D$ +26.0 (*c* 1.0 in MeOH)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994,** *5,* 2163

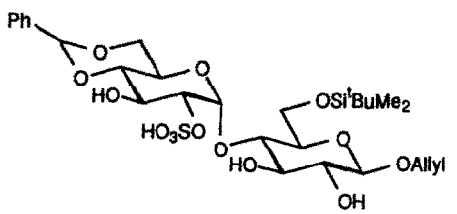


tert Butyl [allyl 4-*O*-(4',6'-*O*-benzylidene-2'-*O*-sulfo-α-D-glucopyranosyl)-β-D-glucopyranosid]uronate

$[\alpha]^{23}_D$ +29.2 (*c* 1.17 in methanol)

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch

Tetrahedron: Asymmetry **1994,** *5,* 2163

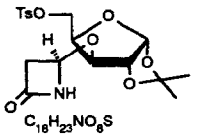


Allyl 4-*O*-(4',6'-*O*-benzylidene-2'-*O*-sulfo-α-D-gluco pyranosyl)-6-*O*-tert-butyldimethylsilyl-β-D-glucopyranoside

$[\alpha]^{25}_D$ +32.2 (*c* 1.03 in MeOH)

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179

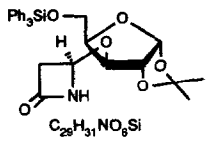


$[\alpha]_D$= -24.5 (*c* 0.3, CH_2Cl_2)
Source of chirality: D-glucose

(R) 3-*O*-(azetidin-2'-onyl-4')-1,2-*O*-isopropylidene-5-*O*-tosyl-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179

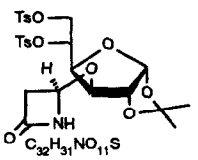


D.e. > 99%
$[\alpha]_D$= -25.6 (*c* 1, CH_2Cl_2)
Source of chirality: D-glucose

(R) 3-*O*-(azetidin-2'-onyl-4')-1,2-*O*-isopropylidene-5-*O*-triphenylsilyl-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179

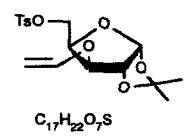


D.e. > 99%
$[\alpha]_D$= -22.9 (*c* 0.6, CH_2Cl_2)
Source of chirality: D-glucose

(R) 3-*O*-(azetidin-2'-onyl-4')-1,2-*O*-isopropylidene-5,6-di-O-tosyl-α-D-glucofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179

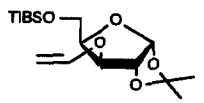


$[\alpha]_D$= -19.9 (*c* 1.2, CH_2Cl_2)
Source of chirality: D-glucose

1,2-*O*-isopropylidene-5-*O*-tosyl-3-*O*-vinyl-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179



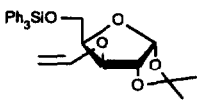
$C_{25}H_{38}O_7S$

$[\alpha]_D$= -11.6 (*c* 2.2, CH_2Cl_2)
Source of chirality: D-glucose

1,2-*O*-isopropylidene-5-*O*-triisopropylbenzenesulfonyl-3-*O*-vinyl-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179



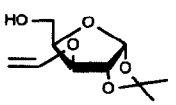
$C_{26}H_{30}O_5Si$

$[\alpha]_D$= -42.5 (*c* 0.1, CH_2Cl_2)
Source of chirality: D-glucose

1,2-*O*-isopropylidene-5-*O*-triphenylsilyl-3-*O*-vinyl-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179



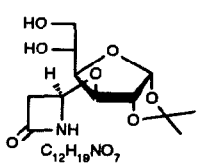
$C_{10}H_{16}O_5$

$[\alpha]_D$= -47.0 (*c* 0.3, CH_2Cl_2)
Source of chirality: D-glucose

1,2-*O*-isopropylidene-3-*O*-vinyl-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994,** *5,* 2179



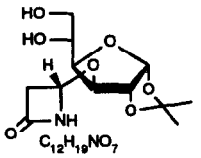
$C_{12}H_{19}NO_7$

D.e. 66.7%
$[\alpha]_D$= -5.7 (*c* 1, CH_2Cl_2)
Source of chirality: D-glucose

(4'R) 3-*O*-(azetidin-2'-onyl-4')-1,2-*O*-isopropylidene-α-D-glucofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994**, *5*, 2179



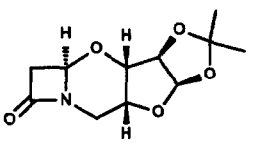
$C_{12}H_{19}NO_7$

$[\alpha]_D$= -13.6 (*c* 0.14, CH_2Cl_2)
Source of chirality: D-glucose

(4'S) 3-*O*-(azetidin-2'-onyl-4')-1,2-*O*-isopropylidene-α-D-glucofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994**, *5*, 2179



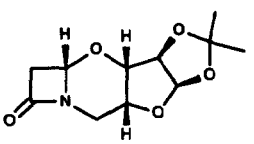
$C_{11}H_{13}O_5N$

D.e. 3.3%
$[\alpha]_D$= 121.1 (*c* 0.9, CH_2Cl_2)
Source of chirality: D-glucose

(4'R) 5-amino-5-deoxy-1,2-*O*-isopropylidene-3-*O*:5-*N*-(azetidin-2'-onyl-4')-α-D-xylofuranose.

Zbigniew Kałuża, Bartłomiej Furman, Madhumeeta Patel and Marek Chmielewski.

Tetrahedron: Asymmetry **1994**, *5*, 2179



$C_{11}H_{13}O_5N$

$[\alpha]_D$= -29.8 (*c* 0.8, CH_2Cl_2)
Source of chirality: D-glucose

(4'S) 5-amino-5-deoxy-1,2-*O*-isopropylidene-3-*O*:5-*N*-(azetidin-2'-onyl-4')-α-D-xylofuranose.

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994**, *5*, 2187

$C_{20}H_{25}O_8NS$

$[\alpha]_D$ = -24 (c 1.0, $CHCl_3$)

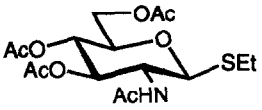
m.p = 210-212°C

Source of chirality: 2-Amino-2-deoxy-D-glucose

Phenyl 2-Acetamido-3,4,6-tri-O-acetyl-2-deoxy-1-thio-β-D-glucopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994,** *5,* 2187



$[\alpha]_D$ = -42 (c 1.0, $CHCl_3$)

m.p = 194-196°C

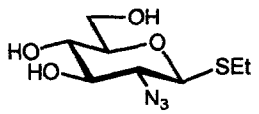
Source of chirality: 2-Amino-2-deoxy-D-glucose

$C_{16}H_{25}O_8NS$

Ethyl 2-Acetamido-3,4,6-tri-O-acetyl-2-deoxy-1-thio-β-D-glucopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994,** *5,* 2187



$[\alpha]_D$ = -68 (c 1.0, MeOH)

m.p = 103-104°C

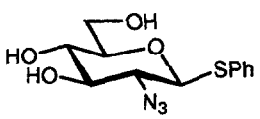
Source of chirality: 2-Amino-2-deoxy-D-glucose

$C_8H_{15}O_4N_3S$

Ethyl 2-Azido-2-deoxy-1-thio-β-D-glucopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994,** *5,* 2187



$[\alpha]_D$ = -29 (c 1.0, MeOH)

m.p = 112-114°C

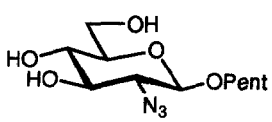
Source of chirality: 2-Amino-2-deoxy-D-glucose

$C_{12}H_{15}O_4N_3S$

Phenyl 2-Azido-2-deoxy-1-thio-β-D-glucopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994,** *5,* 2187



$[\alpha]_D$ = -10 (c 1.0, MeOH)

Source of chirality: 2-Amino-2-deoxy-D-glucose

$C_{19}H_{29}O_9N$

4-Pentenyl 2-Azido-2-deoxy-β-D-glucopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994**, *5*, 2187

$C_{19}H_{29}O_9N$

$[\alpha]_D$ = -15 (c 1.1, $CHCl_3$)

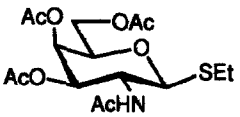
m.p = 133-134°C

Source of chirality: 2-Amino-2-deoxy-D-glucose

4-Pentenyl 2-Acetamido-3,4,6-tri-O-acetyl-2-deoxy-β-D-glucopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994**, *5*, 2187



$C_{16}H_{25}O_8NS$

$[\alpha]_D$ = -34 (c 1.0, MeOH)

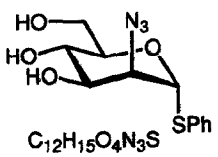
m.p = 191-194°C

Source of chirality: 2-Amino-2-deoxy-D-galactose

Ethyl 2-Acetamido-3,4,6-tri-O-acetyl-2-deoxy-β-D-galactopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994**, *5*, 2187



$C_{12}H_{15}O_4N_3S$

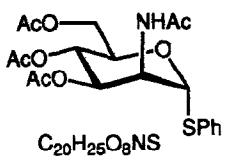
$[\alpha]_D$ = 113 (c 1.0, MeOH)

Source of chirality: 2-Amino-2-deoxy-D-mannose

Phenyl 2-Azido-2-deoxy-1-thio-α-D-mannopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994**, *5*, 2187



$C_{20}H_{25}O_8NS$

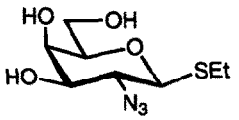
$[\alpha]_D$ = 86 (c 1.0, $CHCl_3$)

Source of chirality: 2-Amino-2-deoxy-D-mannose

Phenyl 2-Acetamido-3,4,6-tri-O-acetyl-2-deoxy-1-thio-α-D-mannopyranoside

Therese Buskas, Per J. Garegg, Peter Konradsson, and Jean-Luc Maloisel

Tetrahedron: Asymmetry **1994,** *5,* 2187



$C_8H_{15}O_4N_3S$

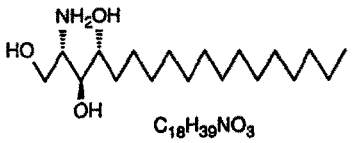
Ethyl 2-Azido-2-deoxy-β-D-galactopyranoside

$[\alpha]_D = -15$ (c 1.0, MeOH)

Source of chirality: 2-Amino-2-deoxy-D-galactose

Robert Wild and Richard R. Schmidt

Tetrahedron: Asymmetry **1994,** *5,* 2195



$C_{18}H_{39}NO_3$

(2S,3S,4R)-2-Amino-1,3,4-octadecanetriol

E.e. = 100 %

$[\alpha]_D^{20}$ = +7.7 (c = 1, pyridine)

Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard or reduction)

Absolute configuration: 2S,3S,4R

(identical with natural phytosphingosine)

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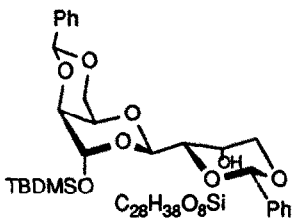
Tetrahedron: Asymmetry **1994,** *5,* 2195



$C_{28}H_{38}O_8Si$

1-O-tert-Butyldimethylsilyl-bis-(2,4-O-benzylidene-D-threose)-1,1':3,1'-acetal

E.e. = 100 %

$[\alpha]_D^{23}$ = +25 (c = 1, $CHCl_3$)

Source of chirality: natural (D-galactose), asymm. induction (acetalization)

Absolute configuration: 1R,2S,3R,1'R,2'S,3'R

(natural configuration; assigned by NMR-spectroscopy)

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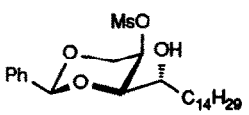
Tetrahedron: Asymmetry **1994,** *5,* 2195



$C_{26}H_{44}O_6S$

1,3-O-Benzylidene-2-O-methanesulfonyl-D-arabino-1,2,3,4-octadecanetetrol

E.e. = 100 %

Source of chirality: natural (D-galactose), asymm. synth. (Grignard or reduction)

Absolute configuration: 2R,3R,4R

(2R,3R: natural configuration; 4R assigned by NMR-spectroscopy)

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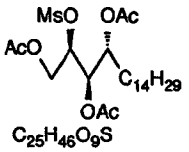
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{25}H_{46}O_9S$

(2R,3R,4R)-1,3,4-Tri-O-acetyl-2-O-methanesulfonyl-1,3,4-octadecanetriol

E.e. = 100 %
$[\alpha]_D^{20}$ = +25 (c = 1, $CHCl_3$)
Source of chirality: natural (D-galactose), asymm. synth. (Grignard or reduction)
Absolute configuration: 2R,3R,4R
(2R,3R: natural configuration; 4R: assigned by NMR-spectroscopy)

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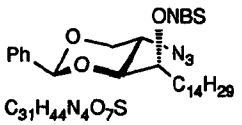
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{31}H_{44}N_4O_7S$

(2S,3S,4R)-2-Azido-1,3-O-benzylidene-4-(4-nitrobenzenesulfonyloxy)-1,3-octadecanediol

E.e. = 100 %
$[\alpha]_D^{20}$ = +31.8 (c = 2, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard or reduction)
Absolute configuration: 2S,3S,4R
(2S: inverted natural configuration; 3S natural configuration, 4R: assigned by NMR-spectroscopy of derivatives)

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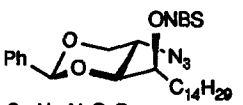
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{31}H_{44}N_4O_7S$

(2S,3S,4S)-2-Azido-1,3-O-benzylidene-4-(4-nitrobenzenesulfonyloxy)-1,3-octadecanediol

E.e. = 100 %
$[\alpha]_D^{20}$ = +2.1 (c = 0.76, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard)
Absolute configuration: 2S,3S,4S
(2S: inverted natural configuration; 3S natural configuration, 4S: assigned by NMR-spectroscopy of derivatives)

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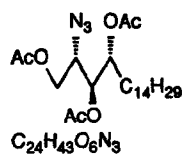
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{24}H_{43}O_6N_3$

(2S,3S,4R)-1,3,4-Tri-O-acetyl-2-azido-1,3,4-octadecanetriol

E.e. = 100 %
$[\alpha]_D^{20}$ = +16 (c = 1, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard or reduction)
Absolute configuration: 2S,3S,4R
(2S: inverted natural configuration; 3S natural configuration, 4R: assigned by NMR-spectroscopy of derivatives)

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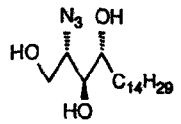
Tetrahedron: Asymmetry **1994,** *5,* 2195



$C_{18}H_{37}N_3O_3$

(2S,3S,4R)-2-Azido-1,3,4-octadecanetriol

E.e. = 100 %
$[\alpha]_D^{20}$ = +17 (c = 0.25, $CHCl_3$/MeOH 1:1)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard or reduction)
Absolute configuration: 2S,3S,4R
(2S: inverted natural configuration; 3S natural configuration, 4R: assigned by NMR-spectroscopy of derivatives)

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Tetrahedron: Asymmetry **1994,** *5,* 2195

(2S,3R,4E)-2-Azido-1,3-O-benzylidene-4-octadecene-1,3-diol

E.e. = 100 %
$[\alpha]_D^{20}$ = +11.7 (c = 3, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2),
Absolute configuration: 2S,3R
(2S: inverted natural configuration; 3R natural configuration,

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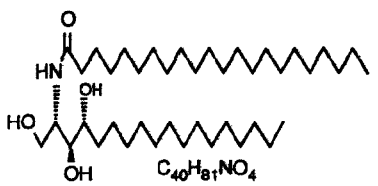
Tetrahedron: Asymmetry **1994,** *5,* 2195



(2S,3S,4R)-2-Docosanoylamino-1,3,4-octadecanetriol

E.e. = 100 %
$[\alpha]_D^{20}$ = +7.2 (c = 0.25, $CHCl_3$/MeOH 1:1)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard or reduction)
Absolute configuration: 2S,3S,4R
(from natural compound)

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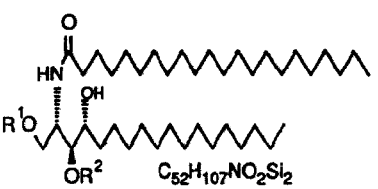
Tetrahedron: Asymmetry **1994,** *5,* 2195



(2S,3S,4R)-2-Docosanoylamino-1,3-O-(1,1,3,3-tetraisopropyl disiloxan-1,3-diyl)-1,3,4-octadecanetriol

E.e. = 100 %
$[\alpha]_D^{20}$ = +9.3 (c = 1, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (Grignard or reduction)
Absolute configuration: 2S,3S,4R
(from natural compound)

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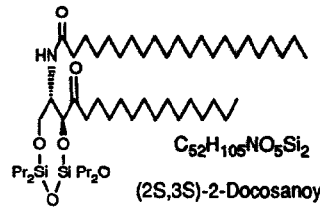
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{52}H_{105}NO_5Si_2$

E.e. = 100 %
$[\alpha]_D^{20}$ = +9 (c = 1, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2),

Absolute configuration: 2S,3S
(from natural compound)

(2S,3S)-2-Docosanoylamino-1,3-O-(1,1,3,3-tetraisopropyldisiloxan-1,3-diyl)-1,3-octadecanediol-4-one

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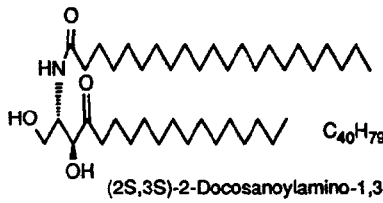
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{40}H_{79}NO_4$

E.e. = 100 %
$[\alpha]_D^{20}$ = +18 (c = 0.25, $CHCl_3$/MeOH 1:1)
Source of chirality: natural (D-galactose), inversion (C-2),

Absolute configuration: 2S,3S
(from natural compound)

(2S,3S)-2-Docosanoylamino-1,3-octadecanediol-4-one

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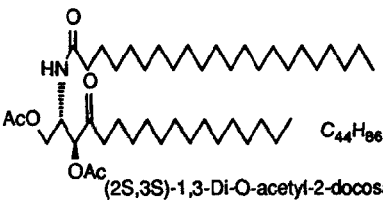
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{44}H_{86}NO_6$

E.e. = 100 %
$[\alpha]_D^{20}$ = +3.4 (c = 0.5, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2),

Absolute configuration: 2S,3S
(from natural compound)

(2S,3S)-1,3-Di-O-acetyl-2-docosanoylamino-1,3-octadecanediol-4-one

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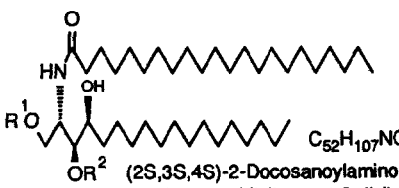
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{52}H_{107}NO_5Si_2$

E.e. = 100 %
$[\alpha]_D^{20}$ = -4 (c = 1, $CHCl_3$)
Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (reduction)
Absolute configuration: 2S,3S,4S
(2S,3S: from natural compound, 4S: assigned by NMR-spectroscopy of derivatives)

(2S,3S,4S)-2-Docosanoylamino-1,3-(1,1,3,3-tetraisopropyldisiloxan-1,3-diyl)-1,3,4-octadecanetriol

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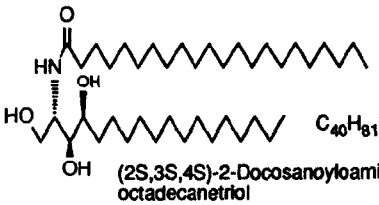
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{40}H_{81}NO_4$

(2S,3S,4S)-2-Docosanoyloamino-1,3,4-octadecanetriol

E.e. = 100 %

$[\alpha]_D^{20}$ = +7.6 (c = 0.25, $CHCl_3$/MeOH 1:1)

Source of chirality: natural (D-galactose), inversion (C-2), asymm. synth. (reduction)

Absolute configuration: 2S,3S,4S

(2S,3S: from natural compound, 4S: assigned by NMR-spectroscopy of derivatives)

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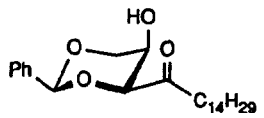
Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{25}H_{40}O_4$

(2R,3R)-1,3,O-Benzylidene-1,2,3,-octadecanetriol-4-one

E.e. = 100 %

$[\alpha]_D^{20}$ = -55 (c = 2, $CHCl_3$)

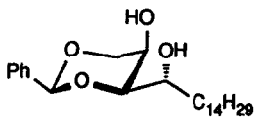
Source of chirality: natural (D-galactose)

Absolute configuration 2R,3R

(natural configuration)

Robert Wild and Richard R. Schmidt

Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{25}H_{42}O_4$

(2R,3R,4R)-1,3,O-Benzylidene-1,2,3,4-octadecanetetrol

E.e. = 100 %

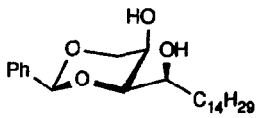
Source of chirality: natural (D-galactose)

Absolute configuration 2R,3R,4R

(2R,3R: natural configuration, 4R: assigned by NMR-spectroscopy of derivatives)

Robert Wild and Richard R. Schmidt

Tetrahedron: Asymmetry **1994**, *5*, 2195



$C_{25}H_{42}O_4$

(2R,3R,4S)-1,3,O-Benzylidene-1,2,3,4-octadecanetetrol

E.e. = 100 %

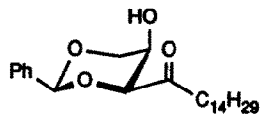
Source of chirality: natural (D-galactose)

Absolute configuration 2R,3R,4S

(2R,3R: natural configuration, 4S: assigned by NMR-spectroscopy of derivatives)

Robert Wild and Richard R. Schmidt

Tetrahedron: Asymmetry **1994,** *5,* 2195



$C_{25}H_{40}O_4$

(2R,3R)-1,3,O-Benzylidene-1,2,3,-octadecanetriol-4-one

E.e. = 100 %

$[\alpha]_D^{20}$ = -55 (c = 2, $CHCl_3$)

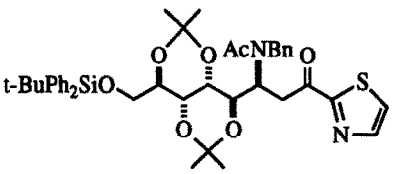
Source of chirality: natural (D-galactose)

Absolute configuration 2R,3R

(natural configuration)

A. Dondoni, A. Boscarato, A. Marra

Tetrahedron: Asymmetry **1994,** *5,* 2209



$C_{42}H_{52}N_2O_6SSi$

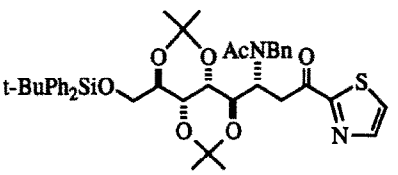
$[\alpha]_D^{20}$ = -60 (*c* = 0.7, $CHCl_3$)

Source of chirality: D-mannose

Absolute configuration: 3*S*,4*R*,5*R*,6*R*,7*R*

A. Dondoni, A. Boscarato, A. Marra

Tetrahedron: Asymmetry **1994,** *5,* 2209



$C_{42}H_{52}N_2O_6SSi$

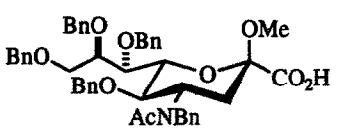
$[\alpha]_D^{20}$ = +46 (*c* = 0.6, $CHCl_3$)

Source of chirality: D-mannose

Absolute configuration: 3*R*,4*R*,5*R*,6*R*,7*R*

A. Dondoni, A. Boscarato, A. Marra

Tetrahedron: Asymmetry **1994,** *5,* 2209



$C_{47}H_{51}NO_8$

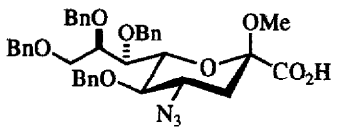
$[\alpha]_D^{20}$ = -26 (*c* = 0.5, $CHCl_3$)

Source of chirality: D-mannose

Absolute configuration: 2*S*,4*S*,5*R*,6*R*,7*R*,8*R*

A. Dondoni, A. Boscarato, A. Marra

Tetrahedron: Asymmetry **1994,** *5,* 2209



$C_{38}H_{41}N_3O_8$

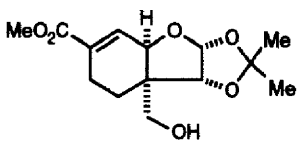
$[\alpha]_D^{20} = -52$ (c = 1.3, $CHCl_3$)

Source of chirality: D-mannose

Absolute configuration: 2*S*,4*S*,5*R*,6*R*,7*R*,8*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{14}H_{20}O_6$

8-(Hydroxymethyl)-5-(methoxycarbonyl)-11,11-dimethyl-2,10,12-trioxatricyclo[7.3.0.0^{3,8}]dodec-4-ene

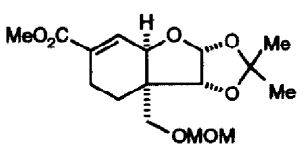
$[\alpha]^{24}_D$ +62.4 (c 1.33, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 3*R*, 8*R*, 9*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{16}H_{24}O_7$

5-(Methoxycarbonyl)-8-[(methoxymethoxy)methyl]-11,11-dimethyl-2,10,12-trioxatricyclo[7.3.0.0^{3,8}]dodec-4-ene

mp 123.0-124.0 °C

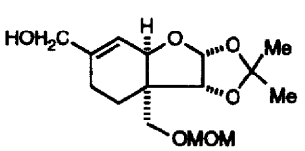
$[\alpha]^{29}_D$ +43.7 (c 1.10, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 3*R*, 8*R*, 9*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{15}H_{24}O_6$

5-(Hydroxymethyl)-8-[(methoxymethoxy)methyl]-11,11-dimethyl-2,10,12-trioxatricyclo[7.3.0.0^{3,8}]dodec-4-ene

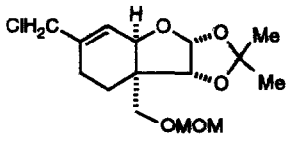
$[\alpha]^{24}_D$ +55.7 (c 1.11, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 3*R*, 8*R*, 9*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{15}H_{23}O_5Cl$

5-(Chloromethyl)-8-[(methoxymethoxy)methyl]-11,11-dimethyl-2,10,12-trioxatricyclo[7.3.0.0^{3,8}]dodec-4-ene

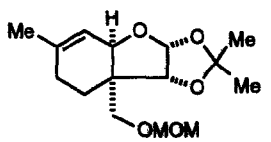
$[\alpha]^{24}_D$ +49.8 (*c* 1.03, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 3*R*, 8*R*, 9*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{15}H_{24}O_5$

8-[(Methoxymethoxy)methyl]-5,11,11-trimethyl-2,10,12-trioxatricyclo[7.3.0.0^{3,8}]dodec-4-ene

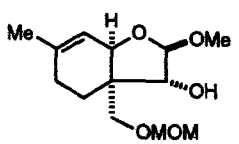
$[\alpha]^{24}_D$ +28.1 (*c* 0.67, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 3*R*, 8*R*, 9*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{13}H_{22}O_5$

7-Hydroxy-8-methoxy-6-[(methoxymethoxy)methyl]-3-methyl-9-oxabicyclo[4.3.0]non-2-ene

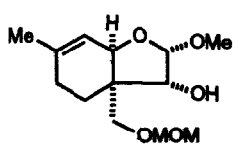
$[\alpha]^{21}_D$ -71.2 (*c* 1.33, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*, 8*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{13}H_{22}O_5$

7-Hydroxy-8-methoxy-6-[(methoxymethoxy)methyl]-3-methyl-9-oxabicyclo[4.3.0]non-2-ene

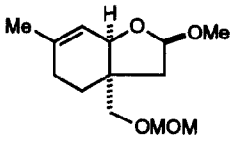
$[\alpha]^{20}_D$ +65.6 (*c* 1.47, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*, 8*S*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{13}H_{22}O_4$

8-Methoxy-6-[(methoxymethoxy)methyl]-3-methyl-9-oxabicyclo[4.3.0]non-2-ene

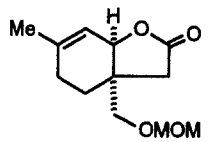
$[\alpha]^{23}_D$ -90.6 (*c* 0.57, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 8*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{12}H_{18}O_4$

6-[(Methoxymethoxy)methyl]-3-methyl-9-oxabicyclo[4.3.0]non-2-en-8-one

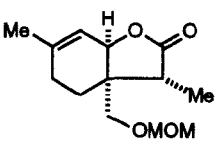
$[\alpha]^{23}_D$ -10.6 (*c* 1.19, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{13}H_{20}O_4$

6-[(Methoxymethoxy)methyl]-3,7-dimethyl-9-oxabicyclo[4.3.0]non-2-en-8-one

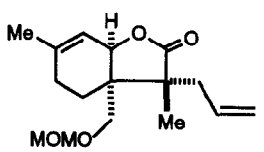
$[\alpha]^{23}_D$ +15.9 (*c* 1.02, $CHCl_3$)
(containing ca. 6% of the 7*S* isomer)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{16}H_{24}O_4$

7-Allyl-6-[(methoxymethoxy)methyl]-3,7-methyl-9-oxabicyclo[4.3.0]non-2-en-8-one

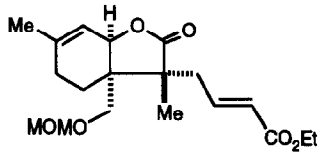
$[\alpha]^{21}_D$ +2.5 (*c* 0.61, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{19}H_{28}O_6$

7-[(2*E*)-3-(Ethoxycarbonyl)-2-propenyl]-6-[(methoxymethoxy)-methyl]-3,7-methyl-9-oxabicyclo[4.3.0]non-2-en-8-one

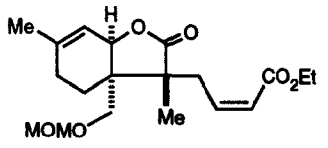
$[\alpha]^{26}_D$ +25.8 (*c* 0.72, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{19}H_{28}O_6$

7-[(2*Z*)-3-(Ethoxycarbonyl)-2-propenyl]-6-[(methoxymethoxy)-methyl]-3,7-methyl-9-oxabicyclo[4.3.0]non-2-en-8-one

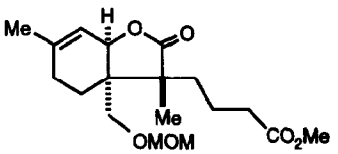
$[\alpha]^{26}_D$ +3.6 (*c* 0.77, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,* and Seiichiro Ogawa

Tetrahedron: Asymmetry **1994,** *5,* 2217



$C_{18}H_{28}O_6$

7-[3-(Methoxycarbonyl)propyl]-6-[(methoxymethoxy)-methyl]-3,7-methyl-9-oxabicyclo[4.3.0]non-2-en-8-one

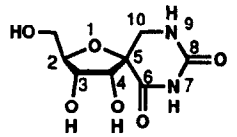
$[\alpha]^{26}_D$ -4.5 (*c* 0.54, $CHCl_3$)

Source of chirality : D-glucose

Absolute configuration : 1*R*, 6*R*, 7*R*

Hiromi Sano, Shigeru Mio, Junko Kitagawa, and Soji Sugai

Tetrahedron: Asymmetry **1994,** *5,* 2233



$C_8H_{12}N_2O_6$

(2R,3R,4R,5S)-3,4-dihydroxymethyl-2-hydroxymethyl-1-oxa-7,9-diazaspiro[4.5]decane-6,8-dione

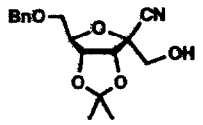
$[\alpha]_D^{25}$ +63.8 (c 0.98, MeOH)

Source of chirality: natural and diastereoselective *C*glycosidation

Absolute configuration 2R, 3R, 4R, 5S

Hiromi Sano, Shigeru Mio, Junko Kitagawa, and Soji Sugai

Tetrahedron: Asymmetry **1994,** *5,* 2233



$C_{17}H_{21}NO_5$

6-*O*-Benzyl-3,4-*O*-isopropylidene-β-D-psicofuranosyl cyanide

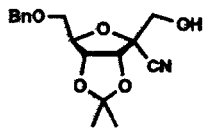
$[\alpha]_D^{25}$ -29.7 (c 1.72, $CHCl_3$)

Source of chirality: natural and diastereoselective *C*glycosidation

Absolute configuration 2R, 3R, 4R, 5R

Hiromi Sano, Shigeru Mio, Junko Kitagawa, and Soji Sugai

Tetrahedron: Asymmetry **1994,** *5,* 2233



$C_{17}H_{21}NO_5$

6-*O*-Benzyl-3,4-*O*-isopropylidene-α-D-psicofuranosyl cyanide

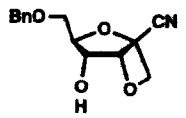
$[\alpha]_D^{25}$ -13.1 (c 1.22, MeOH)

Source of chirality: natural and diastereoselective *C*glycosidation

Absolute configuration 2S, 3R, 4R, 5R

Hiromi Sano, Shigeru Mio, Junko Kitagawa, and Soji Sugai

Tetrahedron: Asymmetry **1994,** *5,* 2233



$C_{14}H_{15}NO_4$

1,3-Anhydro-6-*O*-benzyl-β-D-psicofuranose cyanide

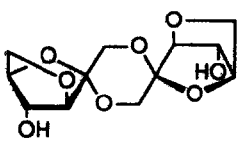
$[\alpha]_D^{25}$ +74.5 (c 1.10, MeOH)

Source of chirality: natural and diastereoselective *C*glycosidation

Absolute configuration 2R, 3R, 4R, 5R

Jacques Defaye and José M. García Fernández

Tetrahedron: Asymmetry **1994,** *5,* 2241



E.e. = 100%

$[\alpha]_D$ = +77 (*c* 1, H_2O)

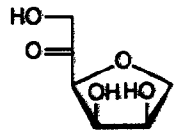
3,6-Anhydro-α-D-fructofuranose 3,6-Anhydro-β-D-fructofuranose 1,2':2,1'-dianhydride

$C_{12}H_{16}O_8$

Source of chirality: D-fructose as starting material

Jacques Defaye and José M. García Fernández

Tetrahedron: Asymmetry **1994**, *5*, 2241



E.e. = 100%

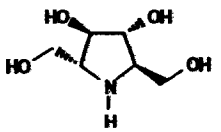
$[\alpha]_D$ = -49 (*c* 1.1, H_2O)

3,6-Anhydro-*keto*-D-fructose
$C_6H_{10}O_5$

Source of chirality: D-fructose as starting material

M. S. Chorghade, C. T. Cseke and P. S. Liu

Tetrahedron: Asymmetry **1994**, *5*, 2251



$[\alpha]_D$ +56.4 (c, 7.0, H_2O)

Source of chirality: natural and asymm. synth

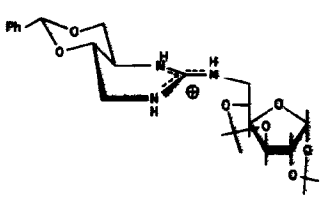
Absolute configuration 2R, 5R, 3R, 4R

$C_6H_{13}NO_4$

2R, 5R-Dihydroxymethyl-3R, 4R-dihydroxypyrrolidine

J. Lehmann* and B. Rob

Tetrahedron: Asymmetry **1994**, *5*, 2255



E.e. = 100%
$[\alpha]_D^{23}$ = +74.8 (*c*, 1.0 in MeOH)

(4R,5S)-2-[N-(6-Deoxy-1,2:3,5-di-*O*-isopropylidene-α-D-glucofuranosyl)amino]-benzylidene-5-oxy-4-oxymethyl-1,4,5,6-tetrahydropyrimidine
$C_{24}H_{33}N_3O_7$
Source of chirality: D-glucose and L-arabinose as starting material

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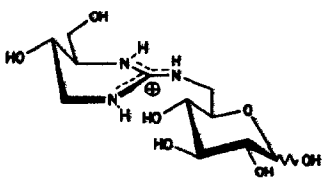
J. Lehmann* and B. Rob

Tetrahedron: Asymmetry **1994**, *5*, 2255

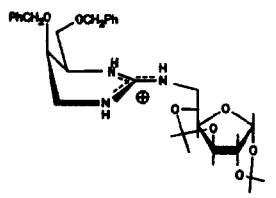


E.e. = 100%
$[\alpha]_D^{23}$ = +38.7(*c*, 1.60 in H_2O)

(4R,5S)-2-[N-(6-Deoxy-α/ß-D-glucopyranosyl)amino]-5-hydroxy-4-hydroxymethyl-1,4,5,6-tetrahydropyrimidine
$C_{11}H_{22}N_3O_7$
Source of chirality: D-glucose and L-arabinose as starting material

J. Lehmann* and B. Rob

Tetrahedron: Asymmetry **1994,** *5,* 2255

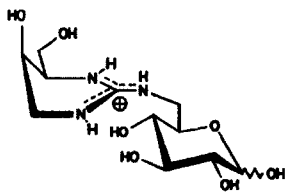


E.e. = 100%
$[\alpha]_D^{23}$ = -5.0(*c*, 2.00 in EtOH)

(4R,5R)-2-[N-(6-Deoxy-1,2:3,5-di-*O*-isopropylidene-α-D-glucofuranosyl)amino]-5-*O*-benzyl-4-*O*-benzylmethyl-1,4,5,6-tetrahydropyrimidine
$C_{31}H_{41}N_3O_7$
Source of chirality: D-glucose as starting material

J. Lehmann* and B. Rob

Tetrahedron: Asymmetry **1994,** *5,* 2255

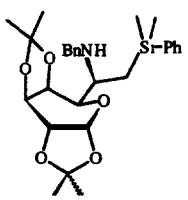


E.e. = 100%
$[\alpha]_D^{23}$ = +7.9(*c*, 2.28 in H_2O)

(4R,5R)-2-[N-(6-Deoxy-α/ß-D-glucopyranosyl)amino]-5-hydroxy-4-hydroxymethyl-1,4,5,6-tetrahydropyrimidine
$C_{11}H_{22}N_3O_7$
Source of chirality: D-glucose as starting material

F.L. van Delft, M. de Kort, G.A. van der Marel and J.H. van Boom

Tetrahedron: Asymmetry **1994,** *5,* 2261



$C_{28}H_{39}NO_5Si$

D.e. = >97% (by 300 MHz ^{1}H NMR spectroscopy)

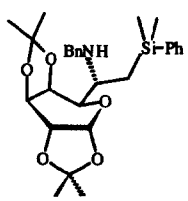
$[\alpha]_D^{20}$ -50.2 (c 1.0, $CHCl_3$)

Source of chirality: natural and asymm. synth. (nucleophilic addition)

Absolute configuration: 2*R*, 3*S*, 4*S*, 5*R*, 6*R*
(assigned *via* chemical conversion)

F.L. van Delft, M. de Kort, G.A. van der Marel and J.H. van Boom

Tetrahedron: Asymmetry **1994,** *5,* 2261



$C_{28}H_{39}NO_5Si$

D.e. = >97% (by 300 MHz ^{1}H NMR spectroscopy)

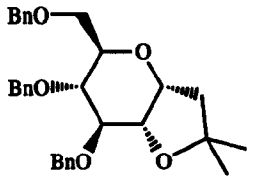
$[\alpha]_D^{20}$ -34.0 (c 1.0, $CHCl_3$)

Source of chirality: natural and asymm. synth. (nucleophilic addition)

Absolute configuration: 2*R*, 3*S*, 4*S*, 5*R*, 6*S*
(assigned *via* chemical conversion)

Daniel E. Levy,* Falguni Dasgupta, and Peng Cho Tang

Tetrahedron: Asymmetry **1994**, *5*, 2265



$C_{31}H_{36}O_5$

E.e. = 100% (by ^1H NMR)

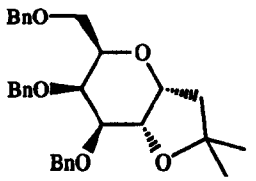
$[\alpha]_D$ = +46.8 (c = 5.49, $CHCl_3$)

Source of chirality: D-glucose

Absolute configuration: 1R,2S,3R,4R,5R

Daniel E. Levy,* Falguni Dasgupta, and Peng Cho Tang

Tetrahedron: Asymmetry **1994**, *5*, 2265



$C_{31}H_{36}O_5$

E.e. = 100% (by ^1H NMR)

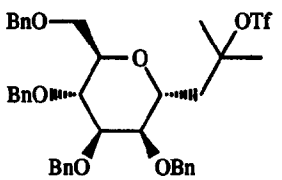
$[\alpha]_D$ = +24.6 (c = 5.95, $CHCl_3$)

Source of chirality: D-galactose

Absolute configuration: 1R,2S,3R,4S,5R

Daniel E. Levy,* Falguni Dasgupta, and Peng Cho Tang

Tetrahedron: Asymmetry **1994**, *5*, 2265



$C_{39}H_{43}SF_3O_7$

E.e. = 100% (by ^1H NMR)

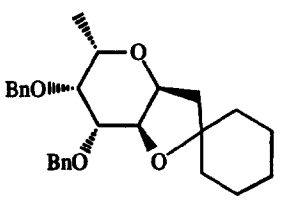
$[\alpha]_D$ = +21.3 (c = 6.16, $CHCl_3$)

Source of chirality: D-mannose

Absolute configuration: 1R,2R,3R,4R,5R

Daniel E. Levy,* Falguni Dasgupta, and Peng Cho Tang

Tetrahedron: Asymmetry **1994**, *5*, 2265



$C_{27}H_{34}O_4$

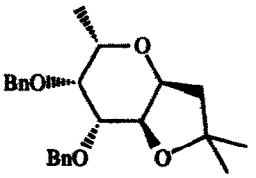
E.e. = 100% (by ^1H NMR)

$[\alpha]_D$ = -22.6 (c = 7.20, $CHCl_3$)

Source of chirality: L-fucose

Absolute configuration: 1S,2R,3R,4R,5S

Daniel E. Levy,* Falguni Dasgupta, and Peng Cho Tang | *Tetrahedron: Asymmetry* **1994,** *5,* 2265



$C_{24}H_{30}O_4$

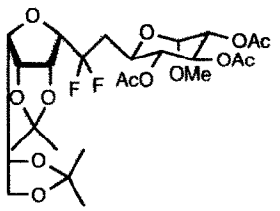
E.e. = 100% (by ^{1}H NMR)

$[\alpha]_D$ = -16.8 (c = 6.48, $CHCl_3$)

Source of chirality: L-fucose

Absolute configuration: 1S,2R,3R,4R,5S

T.F. Herpin, W.B. Motherwell and M.J. Tozer | *Tetrahedron: Asymmetry* **1994,** *5,* 2269



$C_{26}H_{38}O_{13}F_2$

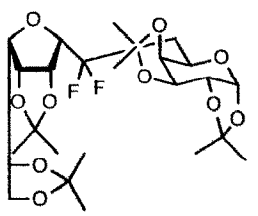
$[\alpha]_D^{20}$=+72.7 (c=0.22, $CHCl_3$)

Source of chirality: D-galactofuranose, α-D-glucopyranoside, stereoselective radical addition.

Absolute configuration 1S,2R,3S,4R,5R,8S,9R,10R,11S,12R (assigned by ^{1}H NMR coupling)

Methyl 2,3,4-tri-*O*-acetyl-8,11-anhydro-6,7-dideoxy-9,10;12,13-di-*O*- isopropylidene-7,7-difluoro-D-*glycero*-l-*galacto*-α-D-*gluco*-tridecopyranoside.

T.F. Herpin, W.B. Motherwell and M.J. Tozer | *Tetrahedron: Asymmetry* **1994,** *5,* 2269



$C_{25}H_{38}O_{10}F_2$

$[\alpha]_D^{20}$=-43.8 (c=0.14, $CHCl_3$)

Source of chirality: D-galactofuranose, α-D-galactopyranose, stereoselective radical addition.

Absolute configuration 1R,2R,3S,4S,5R,8S,9R,10R,11S,12R (assigned by ^{1}H NMR coupling)

1,2;3,4;9,10;12,13-Tetra-*O*-isopropylidene-6,7-dideoxy-7,7-difluoro-8,11-anhydro-D-*glycero*-L-*galacto*-α-D-*galacto*-tridecopyranose

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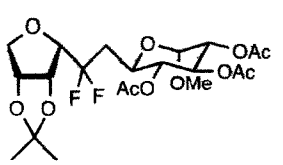
T.F. Herpin, W.B. Motherwell and M.J. Tozer | *Tetrahedron: Asymmetry* **1994,** *5,* 2269



$C_{21}H_{30}O_{11}F_2$

$[\alpha]_D^{20}$=+71.4 (c=0.7, $CHCl_3$)

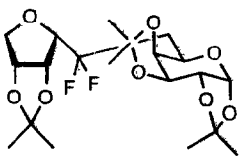
Source of chirality: D-erythrofuranose, α-D-glucopyranoside, stereoselective radical addition.

Absolute configuration 1S,2R,3S,4R,5R,8S,9R,10R (assigned by ^{1}H NMR coupling)

Methyl 2,3,4-tri-*O*-acetyl-9,10-*O*-isopropylidene-6,7-dideoxy-7,7-difluoro-8,11-anhydro-D-*arabino*-α-D-*gluco*-undecopyranoside.

T.F. Herpin, W.B. Motherwell and M.J. Tozer

Tetrahedron: Asymmetry **1994**, *5*, 2269



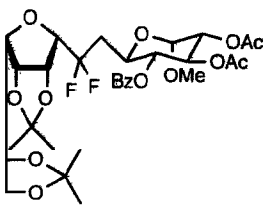
$C_{20}H_{30}O_8F_2$

$[\alpha]_D^{20}$=-62.8 (c=0.18, $CHCl_3$)
Source of chirality: D-erythrofuranose, α-D-galactopyranose, stereoselective radical addition.
Absolute configuration 1R,2R,3S,4S,5R,8S,9R,10R
(assigned by ^1H NMR coupling)

1,2;3,4;9,10-Tri-*O*-isopropylidene-6,7-dideoxy-7,7-difluoro-8,11-anhydro-D-*arabino*-α-D-*galacto*-undecopyranose.

T.F. Herpin, W.B. Motherwell and M.J. Tozer

Tetrahedron: Asymmetry **1994**, *5*, 2269



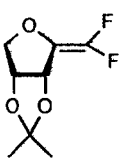
$C_{31}H_{40}F_2O_{13}$

$[\alpha]_D^{20}$=+56.8 (c=1.30, $CHCl_3$)
Source of chirality: D-galactofuranose, α-D-glucopyranose, stereoselective radical addition.
Absolute configuration 1S,2R,3S,4R,5R,8S,9R,10R,11S,12R
(assigned by ^1H NMR coupling)

Methyl 2,3-di-*O*-acetyl-8,11-anhydro-4-*O*-benzoyl-6,7-dideoxy-9,10;12,13-di-*O*-isopropylidene-7,7-difluoro-D-*glycero*-l-*galacto*-α-D-*gluco*-tridecopyranoside.

T.F. Herpin, W.B. Motherwell and M.J. Tozer

Tetrahedron: Asymmetry **1994**, *5*, 2269



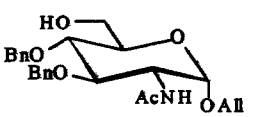
$C_8H_{10}F_2O_3$

$[\alpha]_D^{20}$=-206.0 (c=2.15, CH_2Cl_2)
Source of chirality: D-erythrofuranose
Absolute configuration 3R,4R
(assigned by ^1H NMR coupling)

2,5-Anhydro-1-deoxy-1,1-difluoro-3,4-*O*-isopropylidene-D-*erythro*-penta-1-enitol.

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994**, *5*, 2283



$C_{25}H_{31}O_6N$

Allyl 2-acetylamino-2-deoxy-3,4-dibenzyl-α-D-glucopyranoside

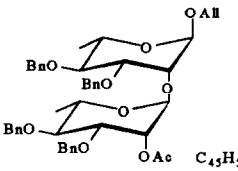
e.e = 100% (^{1}HNMR)
$[\alpha]_D^{20}$ +56.7 (c 1.3, $CHCl_3$)

Source of chirality: asymm. synth.

Absolute configuration: 1α
(assigned by high resolution NMR)

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994,** *5,* 2283



$C_{45}H_{52}O_{10}$

Allyl 2-O-(2-O-Acetyl-3,4-O-dibenzyl-α-L-rhamnopyranosyl)-3,4-O-dibenzyl-α-L-rhamnopyranoside

e.e = 100% (^{1}HNMR)

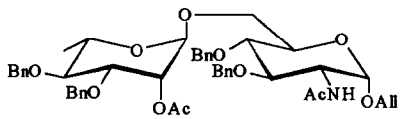
$[\alpha]_D^{20}$ -19.3 (c 1.2, $CHCl_3$)

Source of chirality: asymm. synth.

Absolute configuration: 1α,1'α
(assigned by high resolution NMR)

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994,** *5,* 2283



$C_{47}H_{55}NO_{11}$

Allyl 2-acetylamino-2-deoxy-3,4-dibenzyl-6-O-(2-O-Acetyl-3,4-O-dibenzyl-α-L-rhamnopyranosyl)-α-D-glucopyranoside

e.e = 100% (^{1}HNMR)

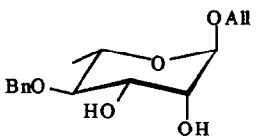
$[\alpha]_D^{20}$ +43 7 (c 1.2, $CHCl_3$)

Source of chirality: asymm. synth.

Absolute configuration: 1α,1'α
(assigned by high resolution NMR)

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994,** *5,* 2283



$C_{16}H_{22}O_5$

Allyl 4-O-benzyl-α-L-rhamnopyranoside

e.e = 100% (^{1}HNMR)

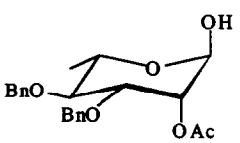
$[\alpha]_D^{20}$ -60.2 (c 1.2, $CHCl_3$)

Source of chirality: asymm. synth.

Absolute configuration: 1α
(assigned by high resolution NMR)

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994,** *5,* 2283



$C_{22}H_{26}O_6$

2-O-Acetyl-3,4-O-dibenzyl-α-L-rhamnopyranose

e.e = 100% (^{1}HNMR)

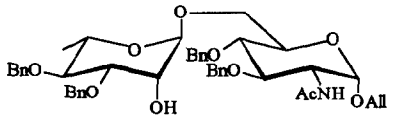
$[\alpha]_D^{20}$ -23.5 (c 1.2, $CHCl_3$)

Source of chirality: asymm. synth.

Absolute configuration: 1α
(assigned by high resolution NMR)

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994,** *5,* 2283



$C_{45}H_{53}NO_{10}$

Allyl 2-acetylamino-2-deoxy-3,4-dibenzyl-6-O-(3,4-O-dibenzyl-α-L-rhamnopyranosyl)-α-D-glucopyranoside

e.e = 100% (^{1}HNMR)

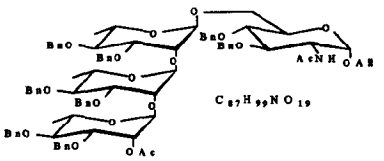
$[\alpha]_D^{20}$ +34.7 (c 1.2, $CHCl_3$)

Source of chirality: asymm. synth.

Absolute configuration: 1α, 1'α
(assigned by high resolution NMR)

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*

Tetrahedron: Asymmetry **1994,** *5,* 2283



$C_{87}H_{99}NO_{19}$

Allyl 2-acetylamino-2-deoxy-3,4-dibenzyl-6-O-{2-O-[2-O-(2-O-acetyl-3,4-O-dibenzyl-α-L-rhamnopyranosyl)-3,4-O-dibenzyl-α-L-rhamnopyranosyl]-3,4-O-dibenzyl-α-L-rhamnopyranosyl}-α-D-glucopyranoside

e.e = 100% (^{1}HNMR)

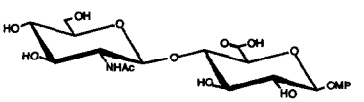
$[\alpha]_D^{20}$ +34.7 (c 1.4, CHCl3)

Source of chirality: asymm. synth.

Absolute configuration: 1α, 1'α, 1"α, 1"'α
(assigned by high resolution NMR)

T. M. Slaghek, T. K. Hyppönen, T. Ogawa, J. P. Kamerling and J. F. G. Vliegenthart

Tetrahedron: Asymmetry **1994,** *5,* 2291

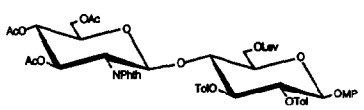


$C_{21}H_{29}NO_{13}$
$[\alpha]_D$ -40° (c 1, H_2O)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(2-acetamido-2-deoxy-β-D-glucopyranosyl)-(1→4)-β-D-glucopyranosyluronic acid

T. M. Slaghek, T. K. Hyppönen, T. Ogawa, J. P. Kamerling and J. F. G. Vliegenthart

Tetrahedron: Asymmetry **1994,** *5,* 2291

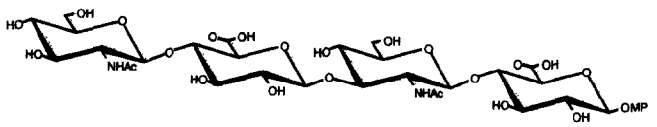


$C_{54}H_{55}NO_{20}$
$[\alpha]_D$ +57° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

T. M. Slaghek, T. K. Hyppönen, T. Ogawa, J. P. Kamerling and J. F. G. Vliegenthart

Tetrahedron: Asymmetry **1994,** *5,* 2291



$C_{35}H_{50}N_2O_{24}$
$[\alpha]_D$ -45° (c 1, H_2O)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(2-acetamido-2-deoxy-β-D-glucopyranosyl)-(1→4)-*O*-(β-D-glucopyranosyluronic acid)-(1→3)-*O*-(2-acetamido-2-deoxy-β-D-glucopyranosyl)-(1→4)-β-D-glucopyranosyluronic acid

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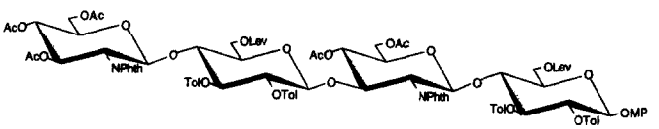
Tetrahedron: Asymmetry **1994,** *5,* 2291



$C_{99}H_{100}N_2O_{37}$
$[\alpha]_D$ +38° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-*O*-(6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranosyl)-(1→3)-*O*-(4,6-di-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

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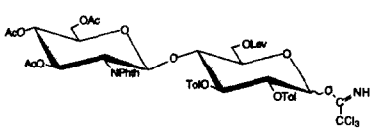

$C_{49}H_{49}Cl_3N_2O_{19}$
$[\alpha]_D$ +80° (c 1, CH_2Cl_2) (α:β 3:2)
source of chirality: D-glucose
D-glucosamine

O-(3,4,6-Tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-α/β-D-glucopyranosyl trichloroacetimidate

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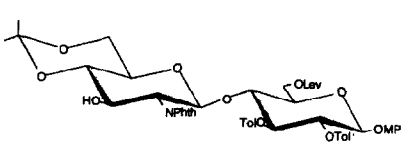

$C_{51}H_{53}NO_{17}$
$[\alpha]_D$ +31° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(2-deoxy-4,6-*O*-isopropylidene-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

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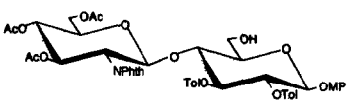

$C_{49}H_{49}NO_{18}$
$[\alpha]_D$ +86° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

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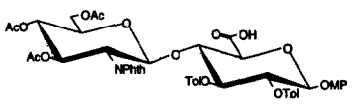

$C_{49}H_{47}NO_{19}$
$[\alpha]_D$ +4° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranosyluronic acid

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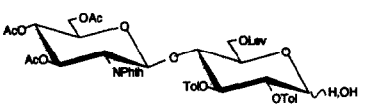

$C_{47}H_{49}NO_{19}$
$[\alpha]_D$ +93° (c 1, CH_2Cl_2) (α:β 2.7:1)
source of chirality: D-gluoose
D-glucosamine

O-(3,4,6-Tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-α/β-D-glucopyranose

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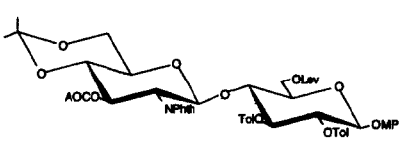

$C_{55}H_{57}NO_{19}$
$[\alpha]_D$ +25° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3-*O*-allyloxycarbonyl-2-deoxy-4,6-*O*-isopropylidene-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

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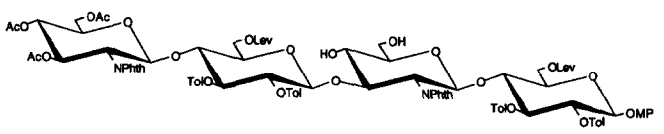

$C_{95}H_{96}N_2O_{35}$
$[\alpha]_D$ +70° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-*O*-(6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranosyl)-(1→3)-*O*-(2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-6-*O*-levulinoyl-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

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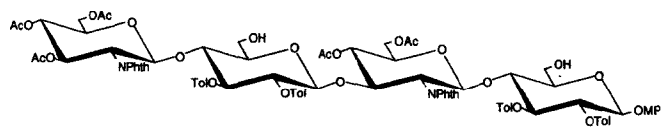

$C_{89}H_{88}N_2O_{33}$
$[\alpha]_D$ +59° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-*O*-(2,3-di-*O*-*p*-toluoyl-β-D-glucopyranosyl)-(1→3)-*O*-(4,6-di-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranoside

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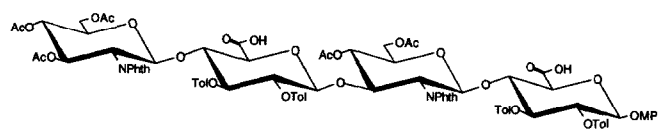

$C_{89}H_{84}N_2O_{35}$
$[\alpha]_D$ +6° (c 1, CH_2Cl_2)
source of chirality: D-glucose
D-glucosamine

4-Methoxyphenyl *O*-(3,4,6-tri-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-*O*-(2,3-di-*O*-*p*-toluoyl-β-D-glucopyranosyluronic acid)-(1→3)-*O*-(4,6-di-*O*-acetyl-2-deoxy-2-phthalimido-β-D-glucopyranosyl)-(1→4)-2,3-di-*O*-*p*-toluoyl-β-D-glucopyranosyluronic acid

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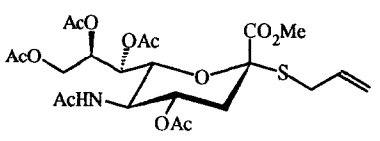

$[\alpha]_D^{23}$ = +38.9 (c 1.0, $CHCl_3$)
m.p. 108.5-111 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{23}H_{33}NO_{12}S$
Allyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulo-pyranosid) onate

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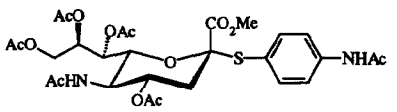

$[\alpha]_D^{23}$ = +33.9 (c 1.86, $CHCl_3$)
m.p. 97-98 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{28}H_{36}N_2O_{13}S$
4-N-acetamidophenyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulopyranosid) onate

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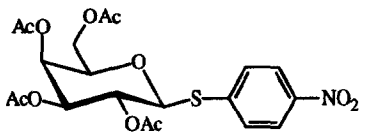

$[\alpha]_D^{23}$ = -8.3 (c 1.0, $CHCl_3$)
m.p. 168.7-169 °C
Source of chirality: D-galactose as starting material

$C_{20}H_{23}NO_{11}S$
4-Nitrophenyl 2,3,4,6-tetra-*O*-acetyl-1-thio-ß-D-galactopyranoside

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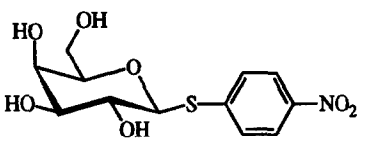

$[\alpha]_D^{23}$ = -100.8 (c 1.0, CH_3OH)
m.p. 160.2-161.5 °C
Source of chirality: D-galactose as starting material

$C_{12}H_{15}NO_7S$
4-Nitrophenyl 1-thio-ß-D-galactopyranoside

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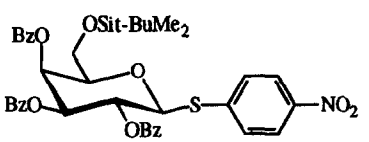

$[\alpha]_D^{23}$ = +84.4 (c 1.0, $CHCl_3$)
m.p. 159-160 °C
Source of chirality: D-galactose as starting material

$C_{39}H_{41}NO_{10}SSi$
4-Nitrophenyl 2,3,4-tri-*O*-benzoyl-6-*O*-t-butyldimethylsilyl-1-thio-ß-D-galactopyranoside

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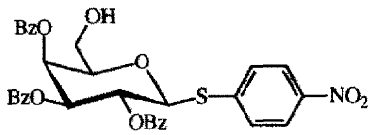

$[\alpha]_D^{23}$= +69.9° (c 1.0, $CHCl_3$)
m.p. 106.5-107.7 °C
Source of chirality: D-galactose as starting material

$C_{33}H_{27}NO_{10}S$
4-Nitrophenyl 2,3,4-tri-*O*-benzoyl-1-thio-ß-D-galactopyranoside

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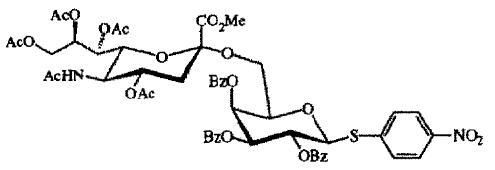

$[\alpha]_D^{23}$= +45.2 (c 1.1, $CHCl_3$)
m.p. 117.4-118.5 °C
Source of chirality: N-acetylneuraminic acid and D-galactose as starting material

$C_{53}H_{34}N_2O_{21}S$
4-Nitrophenyl *O*-(methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-D-glycero-α-D-galacto-2-nonulopyranosylonate)-(2→6)-2,3,4-tri-*O*-benzoyl-1-thio-ß-D-galactopyranoside

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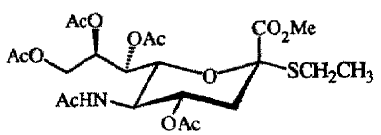

$[\alpha]_D^{23}$= +31.4 (c 1.0, $CHCl_3$)
m.p. 83-84 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{22}H_{33}NO_{12}S$
Ethyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulo-pyranosid) onate

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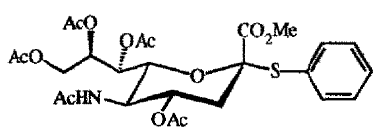

$[\alpha]_D^{23}$= +20.9 (c 1.0, $CHCl_3$)
m.p. 141-142 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{26}H_{33}NO_{12}S$
Phenyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulo-pyranosid) onate

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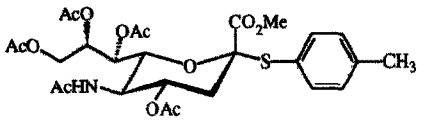

$[\alpha]_D^{23}$ = +24.0 (c 1.0, $CHCl_3$)
m.p. 114-115 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{27}H_{35}NO_{12}S$
4-Methylphenyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulopyranosid) onate

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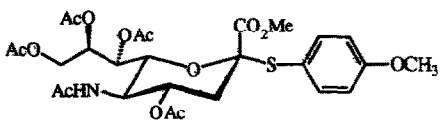

$[\alpha]_D^{23}$ = +20.7 (c 1.0, $CHCl_3$)
m.p. 136-137 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{27}H_{35}NO_{13}S$
4-Methoxyphenyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulopyranosid) onate

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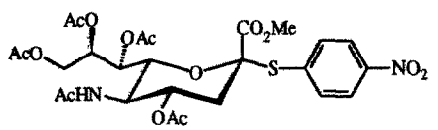

$[\alpha]_D^{23}$ = +18.2 (c 1.0, $CHCl_3$)
m.p. 170-171 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{26}H_{32}N_2O_{14}S$
4-Nitrophenyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulopyranosid) onate

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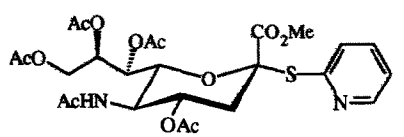

$[\alpha]_D^{23}$ = +29.0 (c 1.0, $CHCl_3$)
m.p. 150-152 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{25}H_{32}N_2O_{12}S$
2-Pyridyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulopyranosid) onate

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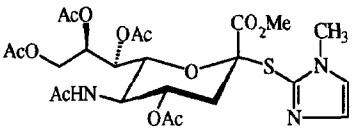

$[\alpha]_D^{23} = +17.7$ (c 1.0, $CHCl_3$)
m.p. 140-142 °C
Source of chirality: N-acetylneuraminic acid as starting material

$C_{24}H_{33}N_3O_{12}S$
2-N^1-methylimidazolyl (methyl 5-acetamido-4,7,8,9-tetra-*O*-acetyl-3,5-dideoxy-2-thio-D-glycero-α-D-galacto-2-nonulopyranosid) onate