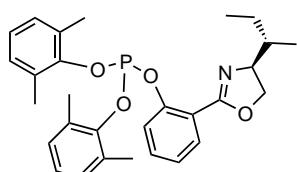


Oleg G. Bondarev,* Sergey E. Lyubimov, Alexei A. Shiryaev,
Nikolay E. Kadilnikov, Vadim A. Davankov and
Konstantin N. Gavrilov

Tetrahedron: Asymmetry 13 (2002) 1587



2-[{(4'S)-4'-sec-Butyl-2'-oxazolin-2'-yl}phenyl]bis(2,6-dimethylphenyl)phosphite

Ee = 100%

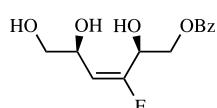
$[\alpha]_D^{24} = +10.3$ (*c* 1.0, CH₂Cl₂)

Source of chirality: (S)-(+) -isoleucine

Absolute configuration: (4'S)

Kyeong Lee, Wen Zhou, Laura-Lee C. Kelley,
Cory Momany and Chung K. Chu*

Tetrahedron: Asymmetry 13 (2002) 1589



(-)-(E)-(2S,5S)-6-Benzoyloxy-4-fluorohex-3-ene-1,2,5-triol

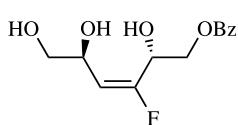
$[\alpha]_D = -6.6$ (*c* 1.45, MeOH)

Source of chirality: D-mannitol

Absolute configuration: 2S,3E,5S

Kyeong Lee, Wen Zhou, Laura-Lee C. Kelley,
Cory Momany and Chung K. Chu*

Tetrahedron: Asymmetry 13 (2002) 1589



(-)-(E)-(2S,5R)-6-Benzoyloxy-4-fluorohex-3-ene-1,2,5-triol

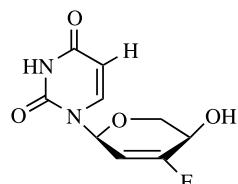
$[\alpha]_D = -4.3$ (*c* 1.23, MeOH)

Source of chirality: D-mannitol

Absolute configuration: 2S,3E,5R

Kyeong Lee, Wen Zhou, Laura-Lee C. Kelley,
Cory Momany and Chung K. Chu*

Tetrahedron: Asymmetry 13 (2002) 1589



(-)1-[(1S,4R)-3-Fluoro-4-hydroxy-5-dihydro-2,3-enypyranosyl]uracil

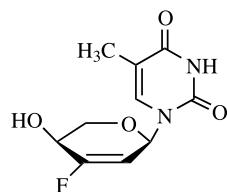
$[\alpha]_D = -36.4$ (*c* 0.26, MeOH)

Source of chirality: D-mannitol and asymmetric synthesis

Absolute configuration: 1S,4R

Kyeong Lee, Wen Zhou, Laura-Lee C. Kelley,
Cory Momany and Chung K. Chu*

Tetrahedron: Asymmetry 13 (2002) 1589



(+)-1-[(1R,4S)-3-Fluoro-4-hydroxy-5-dihydro-2,3-enpyranosyl]thymine

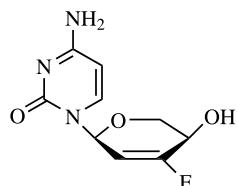
$[\alpha]_D = +16.9$ (*c* 0.23, MeOH)

Source of chirality: D-mannitol and asymmetric synthesis

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

Kyeong Lee, Wen Zhou, Laura-Lee C. Kelley,
Cory Momany and Chung K. Chu*

Tetrahedron: Asymmetry 13 (2002) 1589



(-)-1-[(1*S*,4*R*)-3-Fluoro-4-hydroxy-5-dihydro-2,3-enpyranosyl]cytosine

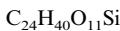
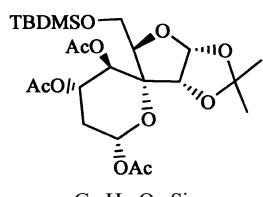
$[\alpha]_D = -11.25$ (*c* 0.27, MeOH)

Source of chirality: D-mannitol and asymmetric synthesis

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

G. V. M. Sharma,* J. Janardhan Reddy, M. H. V. Ramana Rao
and Nicolas Gallois

Tetrahedron: Asymmetry 13 (2002) 1599



5-*t*-Butyldimethylsilyloxymethyl-2,2-dimethyl-3',4'-di(methylcarbonyloxy)-(3'S,3a*R*,4'*R*,5*R*,6'S,6*aR*)-spiro[perhydrofuro[2,3-*d*][1,3]dioxole-6,2'-(3'H,4'H,5'H,6'H-pyran)]-6-yl acetate

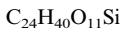
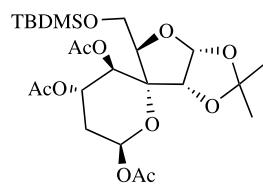
$[\alpha]_D = +18.7$ (*c* 1.3, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 3'S,3a*R*,4'*R*,5*R*,6'S,6*aR*

G. V. M. Sharma,* J. Janardhan Reddy, M. H. V. Ramana Rao
and Nicolas Gallois

Tetrahedron: Asymmetry 13 (2002) 1599



5-*t*-Butyldimethylsilyloxymethyl-2,2-dimethyl-3',4'-di(methylcarbonyloxy)-(3'S,3a*R*,4'*R*,5*R*,6'S,6*aR*)-spiro[perhydrofuro[2,3-*d*][1,3]dioxole-6,2'-(3'H,4'H,5'H,6'H-pyran)]-6-yl acetate

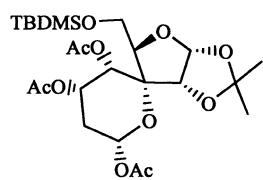
$[\alpha]_D = -6.1$ (*c* 0.25, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 3'S,3a*R*,4'*R*,5*R*,6'S,6*aR*

G. V. M. Sharma,* J. Janardhan Reddy, M. H. V. Ramana Rao
and Nicolas Gallois

Tetrahedron: Asymmetry 13 (2002) 1599



5-*t*-Butyldimethylsilyloxymethyl-2,2-dimethyl-3',4'-di(methylcarbonyloxy)-(3'*R*,3a*R*,4'*R*,5*R*,6'*S*,6a*S*)-spiro[perhydrofuro[2,3-*d*][1,3]dioxole-6,2'-(3'*H*,4'*H*,5'*H*,6'*H*-pyran)]-6-yl acetate

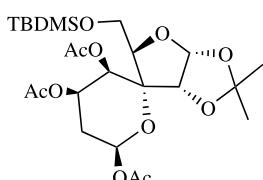
[α]_D = +40.7 (*c* 1.15, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 3'*R*,3a*R*,4'*R*,5*R*,6'*S*,6a*R*

G. V. M. Sharma,* J. Janardhan Reddy, M. H. V. Ramana Rao
and Nicolas Gallois

Tetrahedron: Asymmetry 13 (2002) 1599



5-*t*-Butyldimethylsilyloxymethyl-2,2-dimethyl-3',4'-di(methylcarbonyloxy)-(3'*S*,3a*R*,4'*S*,5*R*,6'*R*,6a*R*)-spiro[perhydrofuro[2,3-*d*][1,3]dioxole-6,2'-(3'*H*,4'*H*,5'*H*,6'*H*-pyran)]-6-yl acetate

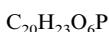
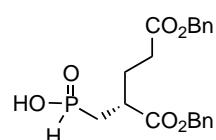
[α]_D = -25.95 (*c* 1.2, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 3'*S*,3a*R*,4'*S*,5*R*,6'*R*,6a*R*

Dilrukshi Vitharana, Jessica E. France, David Scarpetti,
George W. Bonneville, Pavel Majer and Takashi Tsukamoto*

Tetrahedron: Asymmetry 13 (2002) 1609



(*R*)-2-Hydroxyphosphinoylmethyl-pentanedioic acid dibenzyl ester

E.e. >99%

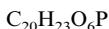
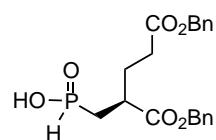
[α]_D²⁰ = +2.9 (*c* 1.0, CHCl₃)

Source of chirality: resolution

Absolute configuration: *R*

Dilrukshi Vitharana, Jessica E. France, David Scarpetti,
George W. Bonneville, Pavel Majer and Takashi Tsukamoto*

Tetrahedron: Asymmetry 13 (2002) 1609



(*S*)-2-Hydroxyphosphinoylmethyl-pentanedioic acid dibenzyl ester

E.e. >99%

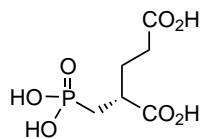
[α]_D²⁰ = -2.3 (*c* 1.0, CHCl₃)

Source of chirality: resolution

Absolute configuration: *S*

Dilrukshi Vitharana, Jessica E. France, David Scarpetti,
George W. Bonneville, Pavel Majer and Takashi Tsukamoto*

Tetrahedron: Asymmetry 13 (2002) 1609



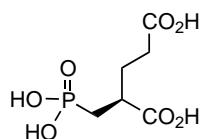
(*R*)-2-(Phosphonomethyl)pentanedioic acid

E.e. >99%

$[\alpha]_D^{20} = -5.9$ (*c* 1.0, water)

Source of chirality: asymmetric synthesis

Absolute configuration: *R*



(*S*)-2-(Phosphonomethyl)pentanedioic acid

Tetrahedron: Asymmetry 13 (2002) 1609

E.e. >99%

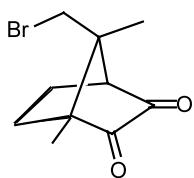
$[\alpha]_D^{20} = 6.1$ (*c* 1.0, water)

Source of chirality: asymmetric synthesis

Absolute configuration: *S*

Igor V. Komarov,* Axel Monsees, Renat Kadyrov, Christine Fischer,
Ute Schmidt and Armin Börner*

Tetrahedron: Asymmetry 13 (2002) 1615



(*1R,7R*)-7-(Bromomethyl)-1,7-dimethylbicyclo[2.2.1]heptane-2,3-dione

Mp 123–124°C

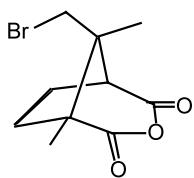
$[\alpha]_D^{30} = +77.5$ (*c* 0.0213, MeOH)

Source of chirality: (*R*)-camphor

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

Igor V. Komarov,* Axel Monsees, Renat Kadyrov, Christine Fischer,
Ute Schmidt and Armin Börner*

Tetrahedron: Asymmetry 13 (2002) 1615



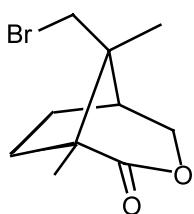
(*1R,8R*)-8-(Bromomethyl)-1,8-dimethyl-3-oxabicyclo[3.2.1]octane-2,4-dione

Mp 152–153°C

$[\alpha]_D^{30} = +36.5$ (*c* 7.25×10⁻³, MeOH)

Source of chirality: (*R*)-camphor

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



C₁₀H₁₇BrO₂

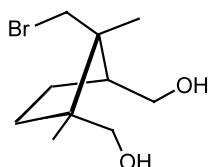
(1*R*,5*R*,8*R*)-8-(Bromomethyl)-1,8-dimethyl-3-oxabicyclo[3.2.1]octan-2-one

Mp 132–133°C

[α]_D³⁰ = +7.4 (*c* 9.85 × 10⁻³, MeOH)

Source of chirality: (*R*)-camphor

Absolute configuration: 1*R*,5*R*,8*R*



C₇H₁₁NO₂

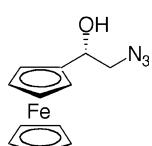
(1*R*,2*R*,3*S*)-(2-Bromomethyl-3-hydroxymethyl-2,3-dimethylcyclopentyl)methanol

Mp 116–117°C

[α]_D³⁰ = +33.4 (*c* 1.0, MeOH)

Source of chirality: (*R*)-camphor

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



C₁₂H₁₃FeN₃O

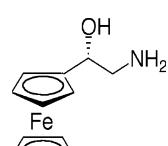
(*R*)-2-Azido-1-ferrocenylethanol

Ee = 94%

[α]_D = -77.0 (*c* 1.35, CHCl₃)

Source of chirality: (*S*)-CBS-oxazaborolidine

Absolute configuration: *R*



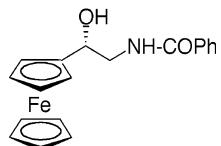
C₁₂H₁₅FeNO

(*R*)-2-Amino-1-ferrocenylethanol

[α]_D = -27.0 (*c* 1.22, CHCl₃)

Source of chirality: (*R*)-2-azido-1-ferrocenylethanol

Absolute configuration: *R*

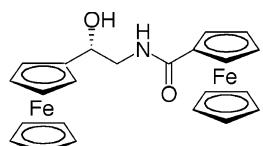


$C_{19}H_{19}FeNO_2$
(*R*)-*N*-(2-Ferrocenyl-2-hydroxyethyl)benzamide

$[\alpha]_D = -2.1$ (*c* 1.74, CHCl₃)

Source of chirality: (*R*)-2-amino-1-ferrocenylethanol

Absolute configuration: *R*

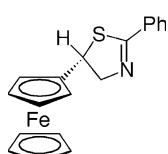


$C_{23}H_{23}Fe_2NO_2$
(*R*)-*N*-(2-Ferrocenyl-2-hydroxyethyl)ferrocenecarboxamide

$[\alpha]_D = +6.0$ (*c* 2.28, CHCl₃)

Source of chirality: (*R*)-2-amino-1-ferrocenylethanol

Absolute configuration: *R*

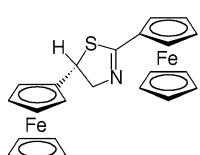


$C_{19}H_{17}FeNS$
(*R*)-2-Phenyl-5-ferrocenylthiazoline

$[\alpha]_D = -11.0$ (*c* 1.73, CHCl₃)

Source of chirality: (*R*)-*N*-(2-ferrocenyl-2-hydroxyethyl)benzamide

Absolute configuration: *R*

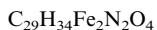
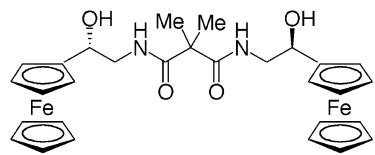


$C_{23}H_{21}Fe_2NS$
(*R*)-2,5-Diferrocenylthiazoline

$[\alpha]_D = +64.0$ (*c* 2.27, CHCl₃)

Source of chirality: (*R*)-*N*-(2-ferrocenyl-2-hydroxyethyl)ferrocenecarboxamide

Absolute configuration: *R*

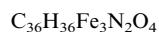
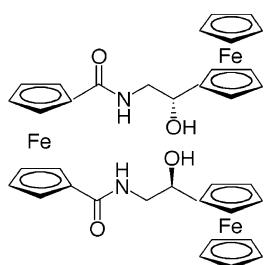


(R,R)-2,2-Dimethyl-N,N'-bis(2-ferrocenyl-2-hydroxyethyl)propanediamide

 $[\alpha]_D = -4.5$ (*c* 2.92, CHCl₃)

Source of chirality: (R)-2-amino-1-ferrocenylethanol

Absolute configuration: R,R

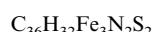
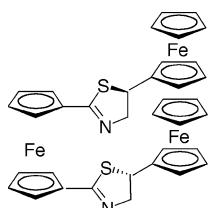


(R,R)-N,N'-Bis(2-ferrocenyl-2-hydroxyethyl)-1,1'-ferrocenedicarboxamide

 $[\alpha]_D = -29.2$ (*c* 0.6, MeOH)

Source of chirality: (R)-2-amino-1-ferrocenylethanol

Absolute configuration: R,R

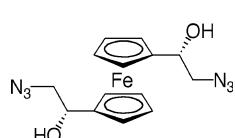


(R,R)-1,1'-Bis(5-ferrocenylthiazolin-2-yl)ferrocene

 $[\alpha]_D = +43.2$ (*c* 2.27, CHCl₃)

Source of chirality: (R)-2-amino-1-ferrocenylethanol

Absolute configuration: R,R



(R,R)-1,1'-Bis(2-azido-1-hydroxyethyl)ferrocene

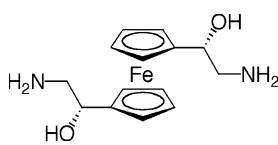
De = 80%

Ee >95%

 $[\alpha]_D = -73$ (*c* 1.78, CHCl₃)

Source of chirality: (S)-CBS-oxazaborolidine

Absolute configuration: R,R

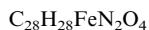
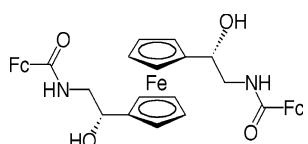


(R,R)-1,1'-Bis(2-amino-1-hydroxyethyl)ferrocene

$[\alpha]_D = -12.0$ (*c* 1.52, MeOH)

Source of chirality: (*R,R*)-1,1'-bis(2-azido-1-hydroxyethyl)ferrocene

Absolute configuration: *R,R*

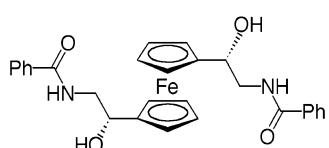


(R,R)-1,1'-Bis(2-phenylcarbonylamino-1-hydroxyethyl)ferrocene

$[\alpha]_D = -2.6$ (*c* 0.75, MeOH)

Source of chirality: (*R,R*)-1,1'-bis(2-amino-1-hydroxyethyl)ferrocene

Absolute configuration: *R,R*

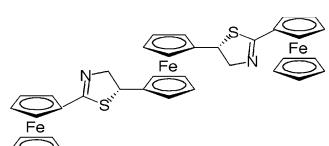


(R,R)-1,1'-Bis(2-ferrocenylcarbonylamino-1-hydroxyethyl)ferrocene

$[\alpha]_D = -12.0$ (*c* 1.28, CHCl₃)

Source of chirality: (*R,R*)-1,1'-bis(2-amino-1-hydroxyethyl)ferrocene

Absolute configuration: *R,R*

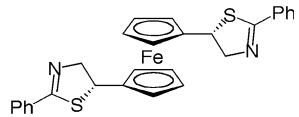


(R,R)-1,1'-Bis(2-ferrocenylthiazolin-5-yl)ferrocene

$[\alpha]_D = +23.7$ (*c* 0.72, CHCl₃)

Source of chirality: (*R,R*)-1,1'-bis(2-amino-1-hydroxyethyl)ferrocene

Absolute configuration: *R,R*

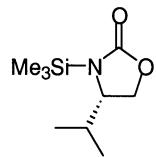
 $C_{28}H_{24}FeN_2S_2$

(R,R)-1,1'-Bis(2-phenylthiazolin-5-yl)ferrocene

 $[\alpha]_D = +13.2$ (*c* 1.21, CHCl₃)

Source of chirality: (R,R)-1,1'-bis(2-amino-1-hydroxyethyl)ferrocene

Absolute configuration: R,R

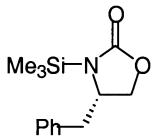
 $C_9H_{19}NO_2Si$

(4S)-Isopropyl-(3-trimethylsilyl)oxazolidin-2-one

 $[\alpha]_D^{25} = +28.5$ (*c* 1.77, CHCl₃)

Source of chirality: (4S)-isopropylloxazolidin-2-one

Absolute configuration: S

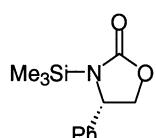
 $C_{13}H_{19}NO_2Si$

(4S)-Benzyl-(3-trimethylsilyl)oxazolidin-2-one

 $[\alpha]_D^{25} = +35.9$ (*c* 1.02, CHCl₃)

Source of chirality: (4S)-benzyloxazolidin-2-one

Absolute configuration: S

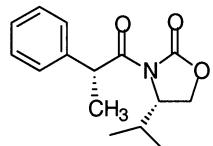
 $C_{12}H_{17}NO_2Si$

(4S)-Phenyl-(3-trimethylsilyl)oxazolidin-2-one

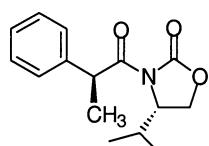
 $[\alpha]_D^{25} = +68.1$ (*c* 0.5, CHCl₃)

Source of chirality: (4S)-phenyloxazolidin-2-one

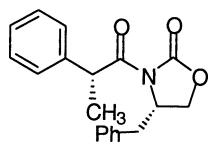
Absolute configuration: S

 $C_{15}H_{19}NO_3$

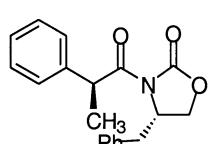
(4S,2R)-4-Isopropyl-3-(2'-phenylpropanoyl)oxazolidin-2-one

 $[\alpha]_D^{25} = +7.8$ (*c* 0.58, CHCl₃)Source of chirality: (4*S*)-isopropylloxazolidin-2-oneAbsolute configuration: 4*S*,3'*R* $C_{15}H_{19}NO_3$

(4S,2S)-4-Isopropyl-3-(2'-phenylpropanoyl)oxazolidin-2-one

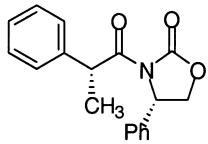
 $[\alpha]_D^{25} = +100.6$ (*c* 1.11, CHCl₃)Source of chirality: (4*S*)-isopropylloxazolidin-2-oneAbsolute configuration: 4*S*,3'*S* $C_{19}H_{19}NO_3$

(4S,2R)-4-Benzyl-3-(2'-phenylpropanoyl)oxazolidin-2-one

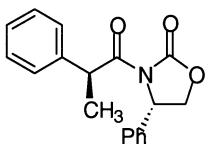
 $[\alpha]_D^{25} = +16.1$ (*c* 0.96, CHCl₃)Source of chirality: (4*S*)-benzyloxazolidin-2-oneAbsolute configuration: 4*S*,3'*R* $C_{19}H_{19}NO_3$

(4S,2S)-4-Benzyl-3-(2'-phenylpropanoyl)oxazolidin-2-one

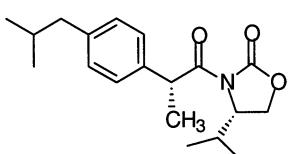
 $[\alpha]_D^{25} = +107.1$ (*c* 1.01, CHCl₃)Source of chirality: (4*S*)-benzyloxazolidin-2-oneAbsolute configuration: 4*S*,3'*S*

 $C_{18}H_{17}NO_3$

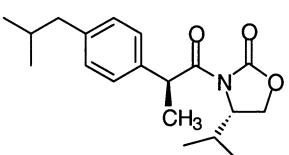
(4S,2R)-4-Phenyl-3-(2'-phenylpropanoyl)oxazolidin-2-one

 $[\alpha]_D^{25} = +7.4$ (*c* 0.87, CHCl₃)Source of chirality: (4*S*)-phenyloxazolidin-2-oneAbsolute configuration: 4*S*,3'*R* $C_{18}H_{17}NO_3$

(4S,2S)-4-Phenyl-3-(2'-phenylpropanoyl)oxazolidin-2-one

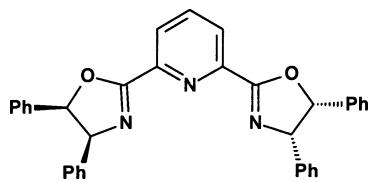
 $[\alpha]_D^{25} = +141.1$ (*c* 0.27, CHCl₃)Source of chirality: (4*S*)-phenyloxazolidin-2-oneAbsolute configuration: 4*S*,3'*S* $C_{19}H_{27}NO_3$

(4S,2R)-4-Isopropyl-3-[2'-(4-isobutylphenyl)propanoyl]oxazolidin-2-one

 $[\alpha]_D^{25} = -30.8$ (*c* 0.87, CHCl₃)Source of chirality: (4*S*)-isopropyloxazolidin-2-oneAbsolute configuration: 4*S*,3'*R* $C_{19}H_{27}NO_3$

(4S,2S)-4-Isopropyl-3-[2'-(4-isobutylphenyl)propanoyl]oxazolidin-2-one

 $[\alpha]_D^{25} = +111.0$ (*c* 1.02, CHCl₃)Source of chirality: (4*S*)-isopropyloxazolidin-2-oneAbsolute configuration: 4*S*,3'*S*



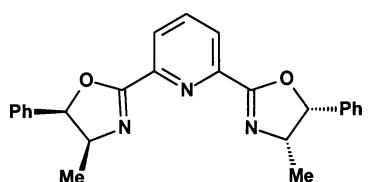
C₃₅H₂₇N₃O₂

2,6-Bis[(4S,5R)-diphenyl-1,3-oxazolin-2-yl]pyridine

[α]_D = -305 (*c* 0.5 in chloroform)

Source of chirality: (1*R*,2*S*)-2-amino-1,2-diphenylethanol

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



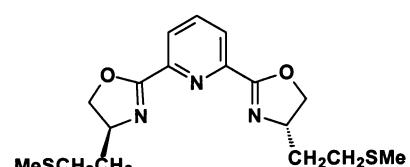
C₂₅H₂₃N₃O₂

2,6-Bis[(4S,5R)-4-methyl-5-phenyl-1,3-oxazolin-2-yl]pyridine

[α]_D = -433 (*c* 0.5 in chloroform)

Source of chirality: (1*R*,2*S*)-norephedrine

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



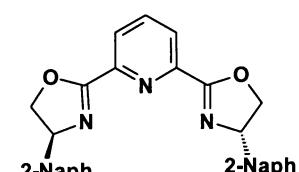
C₁₇H₂₃N₃O₂S₂

2,6-Bis[(4S)-4-(1-methylthio)ethyl-1,3-oxazolin-2-yl]pyridine

[α]_D = -165 (*c* 0.5 in chloroform)

Source of chirality: (S)-methioninol

Absolute configuration: 4*S*



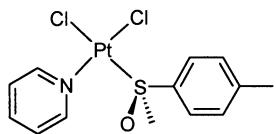
C₃₁H₂₃N₃O₂

2,6-Bis[(4S)-4-(2-naphthyl)-1,3-oxazolin-2-yl]pyridine

[α]_D = -289 (*c* 0.5 in chloroform)

Source of chirality: (2*S*)-2-amino-2-(2'-naphthyl)-ethanol

Absolute configuration: 4*S*



$C_{13}H_{15}Cl_2NOPtS$
(-)-*cis*-Dichloro[(*S*)-methyl *p*-tolylsulfoxide]pyridyl platinum(II)

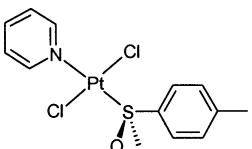
Ee = 100%

$[\alpha]_D^{20} = -117$ (CH_2Cl_2)

Mp: 163°C

Source of chirality: asymmetric synthesis

Absolute configuration: *S*



$C_{13}H_{15}Cl_2NOPtS$
(-)-*trans*-Dichloro[(*S*)-methyl *p*-tolylsulfoxide]pyridyl platinum(II)

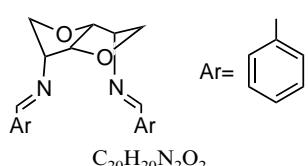
Ee = 100%

$[\alpha]_D^{20} = -22$ (CH_2Cl_2)

Mp: 151.5°C

Source of chirality: asymmetric synthesis

Absolute configuration: *S*



$C_{20}H_{20}N_2O_2$
N-[(*E*)-Phenylmethylidene]-*N*-(3*R*,3*aR*,6*R*,6*aR*)-6-{[(*E*)-phenylmethylidene]amino}hexahydrofuro[3,2-*b*]furan-3-yl)amine

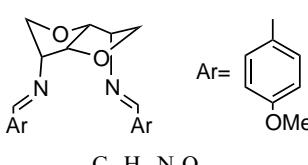
E.e. >99%

$[\alpha]_D^{20} = +320.3$ (*c* 0.75, $CHCl_3$)

Mp 112°C

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*R*,6*aR*



$C_{22}H_{24}N_2O_4$
N-[(*E*)-(4-Methoxyphenyl)methylidene]-*N*-(3*R*,3*aR*,6*R*,6*aR*)-6-{[(*E*)-(4-methoxyphenyl)methylidene]amino}hexahydrofuro[3,2-*b*]furan-3-yl)amine

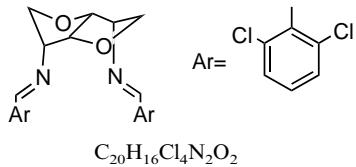
E.e. >99%

$[\alpha]_D^{20} = +253.0$ (*c* 0.91, $CHCl_3$)

Mp 152°C

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*R*,6*aR*



N-[(*E*)-(2,6-Dichlorophenyl)methylidene]-*N*-(3*R*,3*aR*,6*R*,6*aR*)-6-{[(*E*)-(2,6-dichlorophenyl)methylidene]amino}hexahydrofuro[3,2-*b*]-furan-3-ylamine

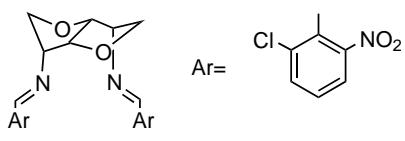
E.e. >99%

$[\alpha]_D^{20} = +156.5$ (*c* 1.10, CHCl₃)

Mp 125°C

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*R*,6*aR*



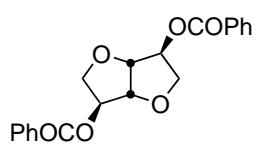
N-[(*E*)-(2-Chloro-6-nitrophenyl)methylidene]-*N*-(3*R*,3*aR*,6*R*,6*aR*)-6-{[(*E*)-(2-chloro-6-nitrophenyl)methylidene]amino}hexahydrofuro[3,2-*b*]-furan-3-ylamine

E.e. >99%

$[\alpha]_D^{20} = +49.2$ (*c* 0.06, CHCl₃)

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*R*,6*aR*



(3*S*,3*aR*,6*S*,6*aR*)-6-(Benzoyloxy)hexahydrofuro[3,2-*b*]furan-3-yl benzoate

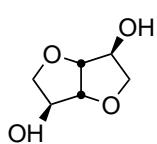
E.e. >99%

$[\alpha]_D^{20} = +134.6$ (*c* 1.13, CHCl₃)

Mp 105°C

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*S*,3*aR*,6*S*,6*aR*



(3*S*,3*aR*,6*S*,6*aR*)-Hexahydrofuro[3,2-*b*]furan-3,6-diol

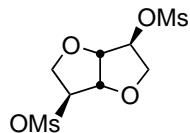
E.e. >99%

$[\alpha]_D^{20} = +20.4$ (*c* 0.91, H₂O)

Mp 38°C

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*S*,3*aR*,6*S*,6*aR*



$C_8H_{14}O_8S_2$

($3S,3aS,6S,6aS$)-6-[(Methylsulfonyl)oxy]hexahydrofuro[3,2-*b*]furan-3-yl methanesulfonate

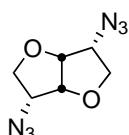
E.e. >99%

$[\alpha]_D^{20} = +40.4$ (*c* 1.02, acetone)

Mp 158°C

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*S*,3*aS*,6*S*,6*aS*



$C_6H_8N_6O_2$

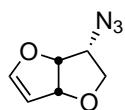
($3R,3aR,6R,6aR$)-3,6-Diazidohexahydrofuro[3,2-*b*]furan

E.e. >99%

$[\alpha]_D^{20} = +307.4$ (*c* 1.32, CHCl₃)

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*R*,6*aR*



$C_6H_7N_3O_2$

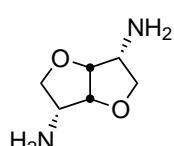
($3R,3aR,6aR$)-2,3,3*a*,6*a*-Tetrahydrofuro[3,2-*b*]furan-3-yl azide

E.e. >99%

$[\alpha]_D^{20} = +149.0$ (*c* 0.52, CHCl₃)

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*aR*



$C_6H_{12}N_2O_2$

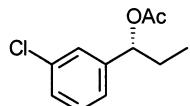
($3R,3aR,6R,6aR$)-6-Aminohexahydrofuro[3,2-*b*]furan-3-ylamine

E.e. >99%

$[\alpha]_D^{20} = +61.2$ (*c* 0.97, H₂O)

Source of chirality: stereoselective synthesis from D-isomannide

Absolute configuration: 3*R*,3*aR*,6*R*,6*aR*



C₁₁H₁₃ClO₂

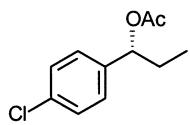
(R)-(+)-1-(3'-Chlorophenyl)propyl acetate

E.e. >99% (determined by HPLC)

[α]_D²⁰ = +55 (c 5, CHCl₃)

Source of chirality: lipase-mediated acetylation

Absolute configuration: R



C₁₁H₁₃ClO₂

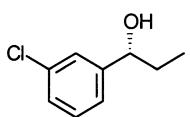
(R)-(+)-1-(4'-Chlorophenyl)propyl acetate

E.e. >99% (determined by HPLC)

[α]_D²⁰ = +75 (c 2.3, CHCl₃)

Source of chirality: lipase-mediated acetylation

Absolute configuration: R



C₉H₁₁ClO

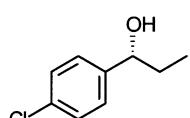
(R)-(+)-1-(3'-Chlorophenyl)propan-1-ol

E.e. >99% (determined by HPLC)

[α]_D²⁰ = +30.5 (c 1, CHCl₃)

Source of chirality: lipase-mediated acetylation

Absolute configuration: R (literature)



C₉H₁₁ClO

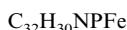
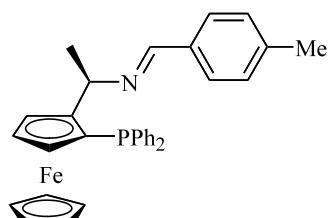
(R)-(+)-1-(4'-Chlorophenyl)propan-1-ol

E.e. >99% (determined by HPLC)

[α]_D²⁰ = +27.3 (c 2.4, CHCl₃)

Source of chirality: lipase-mediated acetylation

Absolute configuration: R (literature)



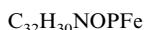
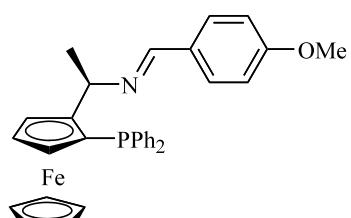
(*R*)-*N*-(4-Methylbenzylidene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

$[\alpha]_D^{25} = -446$ (*c* 0.13, CHCl₃)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality *R*, planar chirality: *S*



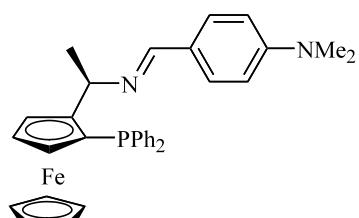
(*R*)-*N*-(4-Methoxybenzylidene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

$[\alpha]_D^{25} = -454$ (*c* 0.11, CHCl₃)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*



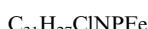
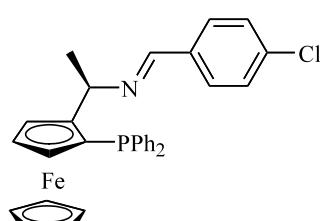
(*R*)-*N*-(4-Dimethylaminobenzylidene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

$[\alpha]_D^{25} = -540$ (*c* 0.10, CHCl₃)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*



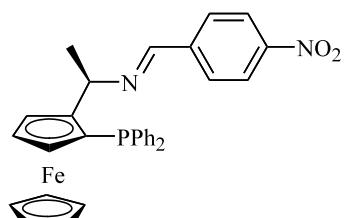
(*R*)-*N*-(4-Chlorobenzylidene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

$[\alpha]_D^{25} = -372$ (*c* 0.11, CHCl₃)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*



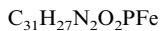
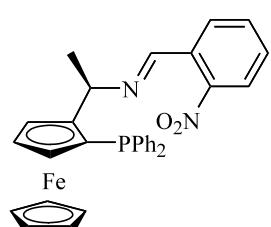
(R)-N-(4-Nitrobenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

[α]_D²⁵ = -500 (c 0.15, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: R, planar chirality: S



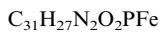
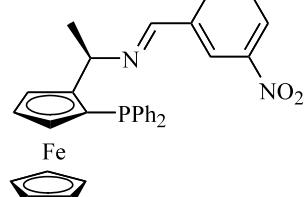
(R)-N-(2-Nitrobenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

[α]_D²⁵ = -354 (c 0.11, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: R, planar chirality: S



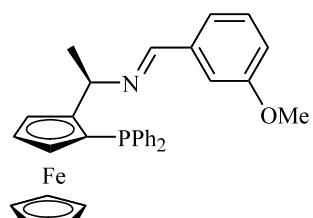
(R)-N-(3-Nitrobenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

[α]_D²⁵ = -483 (c 0.12, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: R, planar chirality: S



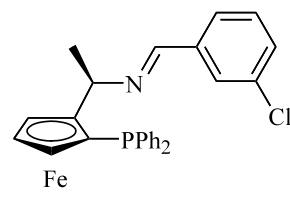
(R)-N-(3-Methoxybenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

[α]_D²⁵ = -430 (c 0.10, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: R, planar chirality: S



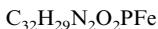
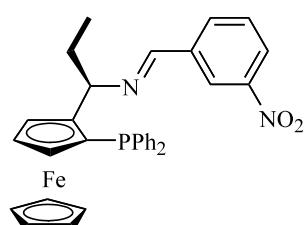
(R)-N-(3-Chlorobenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

[α]_D²⁵ = -458 (c 0.12, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: R, planar chirality: S



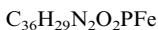
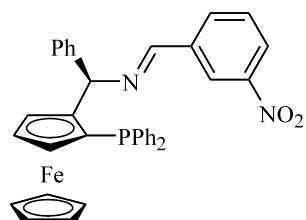
(R)-N-(3-Nitrobenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]propylamine

E.e. >98%

[α]_D²⁵ = -300 (c 0.10, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]propylamine

Absolute configuration: central chirality: R, planar chirality: S



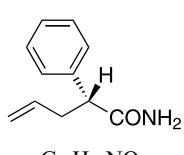
(R)-N-(3-Nitrobenzylidene)-1-[(S)-2-(diphenylphosphino)ferrocenyl]phenylmethylamine

E.e. >98%

[α]_D²⁵ = -450 (c 0.22, CHCl₃)

Source of chirality: (R)-1-[(S)-2-(diphenylphosphino)ferrocenyl]phenylmethylamine

Absolute configuration: central chirality: R, planar chirality: S



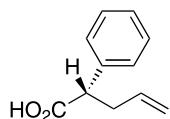
(2R)-2-Phenyl-4-pentenamide

E.e. 99.2%

[α]_D²⁵ = -83.4 (c 4.4, CHCl₃)

Source of chirality: enzymatic synthesis

Absolute configuration: 2R

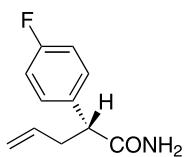
 $C_{11}H_{12}O_2$

(2S)-2-Phenyl-4-pentenoic acid

E.e. 96.8%

 $[\alpha]_D^{25} = +79$ (*c* 4.1, CHCl₃)

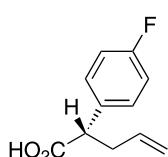
Source of chirality: enzymatic synthesis

Absolute configuration: 2*S* $C_{11}H_{12}FNO$ (2*R*)-2-(4-Fluorophenyl)-4-pentenamide

E.e. >99.5%

 $[\alpha]_D^{25} = -75.7$ (*c* 4.9, CHCl₃)

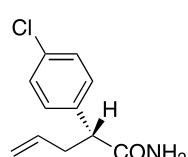
Source of chirality: enzymatic synthesis

Absolute configuration: 2*R* $C_{11}H_{11}FO_2$ (2*S*)-2-(4-Fluorophenyl)-4-pentenoic acid

E.e. 99.3%

 $[\alpha]_D^{25} = +67.3$ (*c* 4.9, CHCl₃)

Source of chirality: enzymatic synthesis

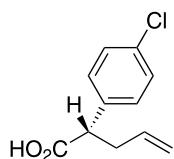
Absolute configuration: 2*S* $C_{11}H_{12}ClNO$ (2*R*)-2-(4-Chlorophenyl)-4-pentenamide

E.e. 99.3%

 $[\alpha]_D^{25} = -71.0$ (*c* 2.3, CHCl₃)

Source of chirality: enzymatic synthesis

Absolute configuration: 2*R*

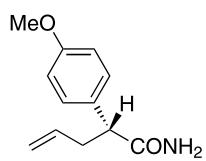


$C_{11}H_{11}ClO_2$
(2S)-2-(4-Chlorophenyl)-4-pentenoic acid

E.e. >99.5%

 $[\alpha]_D^{25} = +49.8$ (*c* 2.75, CHCl₃)

Source of chirality: enzymatic synthesis

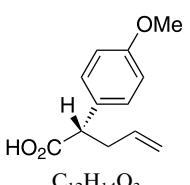
Absolute configuration: 2*S*

$C_{12}H_{15}NO_2$
(2*R*)-2-(4-Methoxyphenyl)-4-pentenamide

E.e. >99.5%

 $[\alpha]_D^{25} = -84.1$ (*c* 2.45, CHCl₃)

Source of chirality: enzymatic synthesis

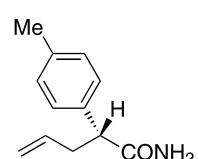
Absolute configuration: 2*R*

$C_{12}H_{14}O_3$
(2*S*)-2-(4-Methoxyphenyl)-4-pentenoic acid

E.e. 87.4%

 $[\alpha]_D^{25} = +71.0$ (*c* 2.45, CHCl₃)

Source of chirality: enzymatic synthesis

Absolute configuration: 2*S*

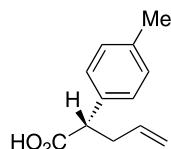
$C_{12}H_{15}NO$
(2*R*)-2-(4-Methylphenyl)-4-pentenamide

E.e. >99.5%

 $[\alpha]_D^{25} = -75.1$ (*c* 2.45, CHCl₃)

Source of chirality: enzymatic synthesis

Absolute configuration: 2*R*

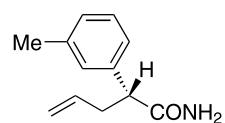
 $C_{12}H_{14}O_2$

(2S)-2-(4-Methylphenyl)-4-pentenoic acid

E.e. 94.3%

 $[\alpha]_D^{25} = +69.7$ (*c* 2.55, CHCl₃)

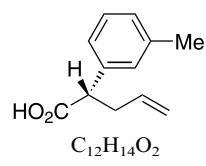
Source of chirality: enzymatic synthesis

Absolute configuration: 2*S* $C_{12}H_{15}NO$ (2*R*)-2-(3-Methylphenyl)-4-pentenamide

E.e. >99.5%

 $[\alpha]_D^{25} = -94.8$ (*c* 2.3, CHCl₃)

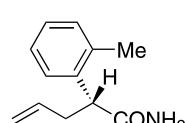
Source of chirality: enzymatic synthesis

Absolute configuration: 2*R* $C_{12}H_{14}O_2$ (2*S*)-2-(3-Methylphenyl)-4-pentenoic acid

E.e. >99.5%

 $[\alpha]_D^{25} = +68.7$ (*c* 1.95, CHCl₃)

Source of chirality: enzymatic synthesis

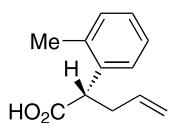
Absolute configuration: 2*S* $C_{12}H_{15}NO$ (2*R*)-2-(2-Methylphenyl)-4-pentenamide

E.e. 3.2%

 $[\alpha]_D^{25} = -1.3$ (*c* 4.7, CHCl₃)

Source of chirality: enzymatic synthesis

Absolute configuration: 2*R*

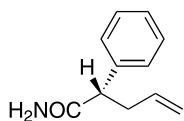
 $C_{12}H_{14}O_2$

(2S)-2-(2-Methylphenyl)-4-pentenoic acid

E.e. 78.5%

 $[\alpha]_D^{25} = +40$ (*c* 0.2, CHCl₃)

Source of chirality: enzymatic synthesis

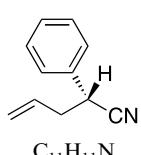
Absolute configuration: 2*S* $C_{11}H_{13}NO$

(2S)-2-Phenyl-4-pentenamide

E.e. 83.6%

 $[\alpha]_D^{25} = +70.3$ (*c* 1.45, CHCl₃)

Source of chirality: chemoenzymatic synthesis

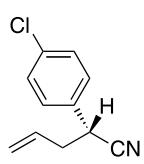
Absolute configuration: 2*S* $C_{11}H_{11}N$

(2R)-2-Phenyl-4-pentenenitrile

E.e. 93.0%

 $[\alpha]_D^{25} = +42$ (*c* 1.05, CHCl₃)

Source of chirality: chemoenzymatic synthesis

Absolute configuration: 2*R* $C_{11}H_{10}ClN$

(2R)-2-(4-Chlorophenyl)-4-pentenenitrile

E.e. >99.5%

 $[\alpha]_D^{25} = +27.3$ (*c* 1.1, CHCl₃)

Source of chirality: chemoenzymatic synthesis

Absolute configuration: 2*R*