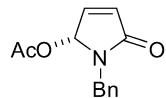


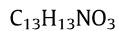
Stereochemistry abstracts

Sho Yamashita, Nobuyuki Mase, Kunihiko Takabe\*

Tetrahedron: Asymmetry 19 (2008) 2115



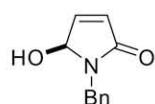
Ee = >99% (chiral HPLC)  
 $[\alpha]_D^{27} = -44.7$  (c 0.97, CHCl<sub>3</sub>)  
 Source of chirality: enzymatic resolution  
 Absolute configuration: (R)



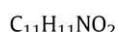
(R)-1-Benzyl-5-oxo-2,5-dihydro-1H-pyrrol-2-yl acetate

Sho Yamashita, Nobuyuki Mase, Kunihiko Takabe\*

Tetrahedron: Asymmetry 19 (2008) 2115



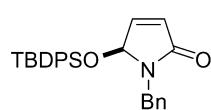
Ee = >99% (chiral HPLC)  
 $[\alpha]_D^{27} = -35.0$  (c 1.08, CHCl<sub>3</sub>)  
 Source of chirality: enzymatic resolution  
 Absolute configuration: (S)



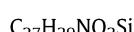
(S)-1-Benzyl-5-hydroxy-1H-pyrrol-2(5H)-one

Sho Yamashita, Nobuyuki Mase, Kunihiko Takabe\*

Tetrahedron: Asymmetry 19 (2008) 2115



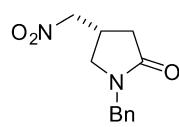
Ee = >99% (chiral HPLC)  
 $[\alpha]_D^{25} = +15.5$  (c 1.00, CHCl<sub>3</sub>)  
 Source of chirality: asymmetric synthesis  
 Absolute configuration: (S)



(S)-1-Benzyl-5-(tert-butyldiphenylsilyloxy)-1H-pyrrol-2(5H)-one

Sho Yamashita, Nobuyuki Mase, Kunihiko Takabe\*

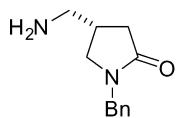
Tetrahedron: Asymmetry 19 (2008) 2115



Ee = >99% (chiral HPLC)  
 $[\alpha]_D^{29} = +13.7$  (c 0.50, MeOH)  
 Source of chirality: asymmetric synthesis  
 Absolute configuration: (R)

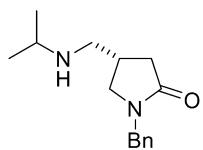


(R)-1-Benzyl-4-(nitromethyl)pyrrolidin-2-one



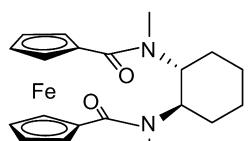
$C_{12}H_{16}N_2O$   
(S)-Nebracetam ((S)-4-(aminomethyl)-1-benzylpyrrolidin-2-one)

$[\alpha]_D^{26} = -8.0$  (*c* 1.00, H<sub>2</sub>O)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (S)



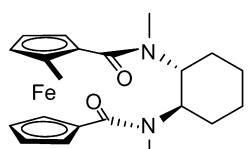
$C_{15}H_{22}N_2O$   
(S)-1-Benzyl-4-((isopropylamino)methyl)pyrrolidin-2-one

$[\alpha]_D^{30} = -7.5$  (*c* 1.01, MeOH)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (S)



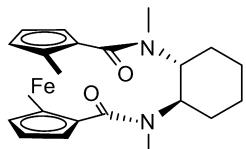
$C_{20}H_{24}FeN_2O_2$   
(R,R)-1,1'-[N,N'-(1,2-Cyclohexane-1,2-diyl)bis(N-methylcarboxamide)]ferrocene

Ee = 98%  
 $[\alpha]_D = +128.4$  (*c* 0.43, CHCl<sub>3</sub>)  
Source of chirality: (R,R)-1,2-diaminocyclohexane  
(98% ee)  
Absolute configuration: (R,R)



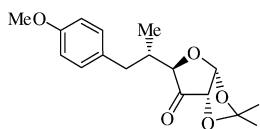
$C_{21}H_{26}FeN_2O_2$   
(R,R,R<sub>p</sub>)-1,1'-[N,N'-(1,2-Cyclohexane-1,2-diyl)bis(N-methylcarboxamide)]2-methylferrocene

De >98.5% (NMR)  
 $[\alpha]_D = +0.7$  (*c* 1.03, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (R,R,R<sub>p</sub>)



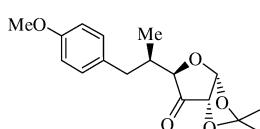
$C_{22}H_{28}FeN_2O_2$   
 $(R,R,R_p,R_p)$ -1,1'-[ $N,N'$ -(1,2-Cyclohexane-1,2-diyl)bis( $N$ -methylcarboxamide)]2,2'-dimethylferrocene

De >98.5% (NMR)  
 $[\alpha]_D = -10.5$  ( $c$  0.14,  $CHCl_3$ )  
 Source of chirality: asymmetric synthesis  
 Absolute configuration: ( $R,R,R_p,R_p$ )



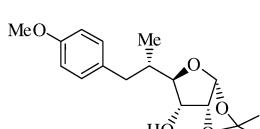
$C_{17}H_{22}O_5$   
 $(3'R,5R,6'S)$ -5-(( $S$ )-1-(4-Methoxyphenyl)propan-2-yl)-2,2-dimethylfuro[3,2-d][1,3]dioxol-6(3'H,5H,6'H)-one

$[\alpha]_D^{25} = +153.3$  ( $c$  1,  $CHCl_3$ )  
 Absolute configuration: ( $3'R,5R,6'S,S$ )



$C_{17}H_{22}O_5$   
 $(3'R,5R,6'S)$ -5-(( $R$ )-1-(4-Methoxyphenyl)propan-2-yl)-2,2-dimethylfuro[3,2-d][1,3]dioxol-6(3'H,5H,6'H)-one

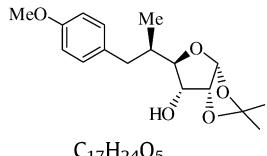
$[\alpha]_D^{25} = +109.9$  ( $c$  1.8,  $CHCl_3$ )  
 Absolute configuration: ( $3'R,5R,6'S,R$ )



$C_{17}H_{24}O_5$   
 $(3'R,5R,6R,6'R)$ -5-(( $S$ )-1-(4-Methoxyphenyl)propan-2-yl)-2,2-dimethyl-tetrahydrofuro[3,2-d][1,3]dioxol-6-ol

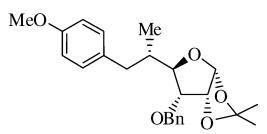
$[\alpha]_D^{25} = +48.4$  ( $c$  1,  $CHCl_3$ )  
 Absolute configuration: ( $3'R,5R,6R,6'R,S$ )

$[\alpha]_D^{25} = +37.7$  (c 1.1, CHCl<sub>3</sub>)  
Absolute configuration: (3'R,5R,6R,6'R,R)

 $C_{17}H_{24}O_5$ 

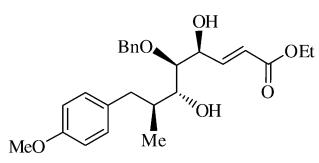
(3'R,5R,6R,6'R)-5-((R)-1-(4-Methoxyphenyl)propan-2-yl)-2,2-dimethyl-tetrahydrofuro[3,2-d][1,3]dioxol-6-ol

$[\alpha]_D^{25} = +72.4$  (c 1, CHCl<sub>3</sub>)  
Absolute configuration: (3'R,5R,6R,6'R,S)

 $C_{24}H_{30}O_5$ 

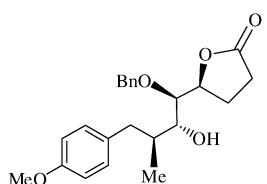
(3'R,5R,6R,6'R)-6-(Benzylxy)-5-((S)-1-(4-methoxyphenyl)propan-2-yl)-2,2-dimethyl-tetrahydrofuro[3,2-d][1,3]dioxole

$[\alpha]_D^{25} = +14.9$  (c 3.3, MeOH)  
Absolute configuration: (4S,5R,6R,7S)

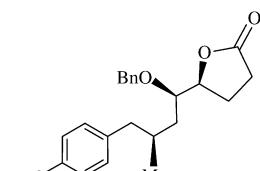
 $C_{25}H_{32}O_6$ 

(4S,5R,6R,7S,E)-Ethyl 5-(benzyloxy)-4,6-dihydroxy-8-(4-methoxyphenyl)-7-methyloct-2-enoate

$[\alpha]_D^{25} = -4.8$  (c 3.6, MeOH)  
Absolute configuration: (S,1R,2R,3S)

 $C_{23}H_{28}O_5$ 

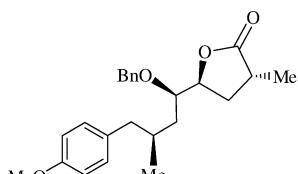
(S)-5-((1R,2R,3S)-1-(Benzylxy)-2-hydroxy-4-(4-methoxyphenyl)-3-methylbutyl)-dihydrofuran-2(3H)-one



$[\alpha]_D^{25} = +7.5$  (c 1.25, MeOH)  
Absolute configuration: (S,1R,3S)

 $C_{23}H_{28}O_4$ 

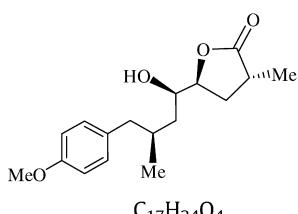
(S)-5-((1R,3S)-1-(Benzylxy)-4-(4-methoxyphenyl)-3-methylbutyl)-dihydrofuran-2(3H)-one



$[\alpha]_D^{25} = +13.3$  (c 1, MeOH)  
Absolute configuration: (3R,5S,1R,3S)

 $C_{24}H_{30}O_4$ 

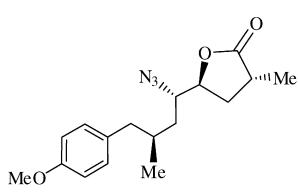
(3R,5S)-5-((1R,3S)-1-(Benzylxy)-4-(4-methoxyphenyl)-3-methylbutyl)-3-methyl-dihydrofuran-2(3H)-one



$[\alpha]_D^{25} = +38.0$  (c 1.1, CHCl<sub>3</sub>)  
Absolute configuration: (3R,5S,1R,3S)

 $C_{17}H_{24}O_4$ 

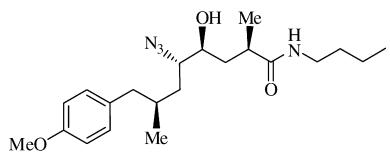
(3R,5S)-5-((1R,3S)-1-Hydroxy-4-(4-methoxyphenyl)-3-methylbutyl)-3-methyl-dihydrofuran-2(3H)-one



$[\alpha]_D^{25} = +53.6$  (c 1, CHCl<sub>3</sub>)  
Absolute configuration: (3R,5S,1S,3S)

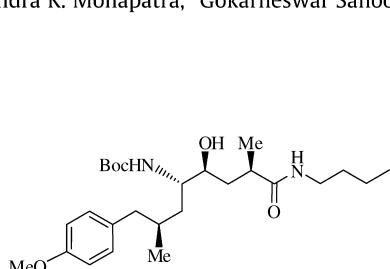
 $C_{17}H_{23}N_3O_3$ 

(3R,5S)-5-((1S,3S)-1-Azido-4-(4-methoxyphenyl)-3-methylbutyl)-3-methyl-dihydrofuran-2(3H)-one



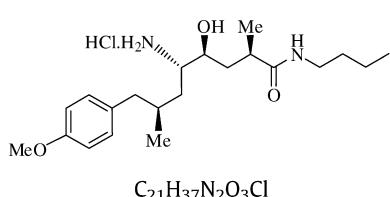
$C_{21}H_{34}N_4O_3$   
(2R,4S,5S,7S)-5-Azido-N-butyl-4-hydroxy-8-(4-methoxyphenyl)-2,7-dimethyloctanamide

$[\alpha]_D^{25} = -10.5$  (*c* 1, CHCl<sub>3</sub>)  
Absolute configuration: (2*R*,4*S*,5*S*,7*S*)



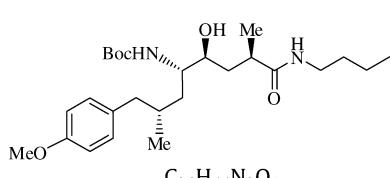
$C_{26}H_{44}N_2O_5$   
tert-Butyl (2*S*,4*S*,5*S*,7*R*)-8-(butylamino)-5-hydroxy-1-(4-methoxyphenyl)-2,7-dimethyl-8-oxooctan-4-ylcarbamate

$[\alpha]_D^{25} = -17.6$  (*c* 1, CHCl<sub>3</sub>)  
Absolute configuration: (2*S*,4*S*,5*S*,7*R*)



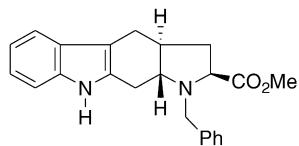
$C_{21}H_{37}N_2O_3Cl$   
(2*R*,4*S*,5*S*,7*S*)-5-Amino-N-butyl-4-hydroxy-8-(4-methoxyphenyl)-2,7-dimethyloctanamide hydrochloride salt

$[\alpha]_D^{25} = +6.2$  (*c* 0.5, H<sub>2</sub>O)  
Absolute configuration: (2*R*,4*S*,5*S*,7*S*)



$C_{26}H_{44}N_2O_5$   
tert-Butyl (2*R*,4*S*,5*S*,7*R*)-8-(butylamino)-5-hydroxy-1-(4-methoxyphenyl)-2,7-dimethyl-8-oxooctan-4-ylcarbamate

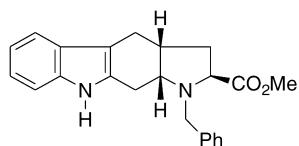
$[\alpha]_D^{25} = -17.9$  (*c* 0.3, CHCl<sub>3</sub>)  
Absolute configuration: (2*R*,4*S*,5*S*,7*R*)



$[\alpha]_D^{22} = -102$  (c 1.25, CHCl<sub>3</sub>)  
 Source of chirality: L-tyrosine  
 Absolute configuration: (2S,3aS,10aR)

C<sub>23</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>

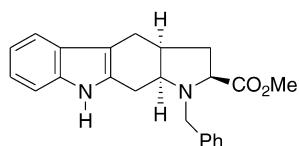
(2S,3aS,10aR)-1-Benzyl-2-methoxycarbonyl-1,2,3,3a,4,9,10,10a-octahydropyrrolo[2,3-b]carbazole



$[\alpha]_D^{22} = -129$  (c 2.14, CHCl<sub>3</sub>)  
 Source of chirality: L-tyrosine  
 Absolute configuration: (2S,3aR,10aR)

C<sub>23</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>

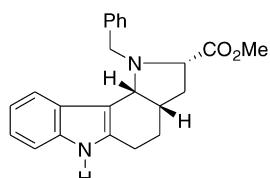
(2S,3aR,10aR)-1-Benzyl-2-methoxycarbonyl-1,2,3,3a,4,9,10,10a-octahydropyrrolo[2,3-b]carbazole



$[\alpha]_D^{22} = 3$  (c 0.5, CHCl<sub>3</sub>)  
 Source of chirality: L-tyrosine  
 Absolute configuration: (2S,3aS,10aS)

C<sub>23</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>

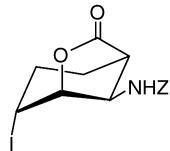
(2S,3aS,10aS)-1-Benzyl-2-methoxycarbonyl-1,2,3,3a,4,9,10,10a-octahydropyrrolo[2,3-b]carbazole



$[\alpha]_D^{22} = -13$  (c 1.4, CHCl<sub>3</sub>)  
 Source of chirality: L-tyrosine  
 Absolute configuration: (2S,3aS,10cR)

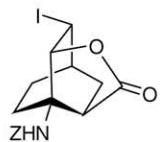
C<sub>23</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>

(2S,3aS,10cR)-1-Benzyl-2-methoxycarbonyl-1,2,3,3a,4,5,6,10c-octahydropyrrolo[3,2-c]carbazole



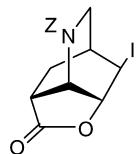
De = 99%  
 $[\alpha]_D = +57$  (*c* 0.8,  $\text{CH}_2\text{Cl}_2$ )  
 Absolute configuration: (1*R*,4*R*,5*R*,8*R*)

8-(Benzylloxycarbonylamino)-2-iodo-6-oxabicyclo[3.2.1]octen-7-one



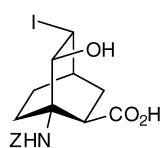
De = 99%  
 $[\alpha]_D = -55$  (*c* 0.9,  $\text{CH}_2\text{Cl}_2$ )  
 Absolute configuration: (1*R*,2*R*,3*R*,6*R*,7*R*)

7-(Benzylloxycarbonylamino)-2-iodo-4-oxa-8-tricyclo[4.3.1.0^3.7]decane-5-one



De = 99%  
 $[\alpha]_D = +43$  (*c* 1.0,  $\text{CH}_2\text{Cl}_2$ )  
 Absolute configuration: (1*S*,2*R*,3*R*,6*R*,7*S*)

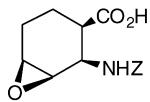
8-(Benzylloxycarbonyl)-2-iodo-4-oxa-8-azatricyclo[4.3.1.0^3.7]decane-5-one



De = 99%  
 $[\alpha]_D = -30$  (*c* 0.8,  $\text{CH}_2\text{Cl}_2$ )  
 Absolute configuration: (1*R*,2*R*,3*R*,4*R*,6*R*)

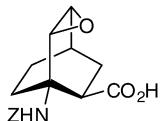
1-(Benzylloxycarbonylamino)-2-hydroxy-3-iodobicyclo[2.2.2]octane-6-carboxylic acid

De = 99%

 $[\alpha]_D = +71$  (c 0.7, EtOH)Absolute configuration: (1*R*,2*R*,3*R*,4*S*)

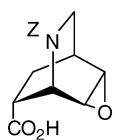
8-(Benzylloxycarbonylamino)-3,4-epoxycyclohexane-1-carboxylic acid

De = 99%

 $[\alpha]_D = -47$  (c 0.5,  $\text{CH}_2\text{Cl}_2$ )Absolute configuration: (1*R*,2*R*,3*S*,4*R*,6*R*)

1-(Benzylloxycarbonylamino)-2,3-epoxybicyclo[2.2.2]octane-6-carboxylic acid

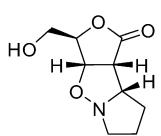
De = 99%

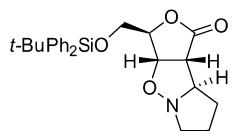
 $[\alpha]_D = -104$  (c 1.2, EtOH)Absolute configuration: (1*S*,4*S*,5*S*,6*R*,7*R*)

2-(Benzylloxycarbonyl)-2-azabicyclo[2.2.2]oct-5-ene-7-carboxylic acid

 $[\alpha]_D^{25} = -67.4$  (c 0.6,  $\text{CH}_2\text{Cl}_2$ )

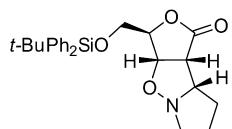
Source of chirality: asymmetric synthesis

Absolute configuration: (1*aS*,2*R*,4*aR*,4*bS*) $\text{C}_9\text{H}_{13}\text{NO}_4$ (1*aS*,2*R*,4*aR*,4*bS*)-2-Hydroxymethyl-hexahydrofuro[3,4-d]pyrrolo[1,2-b]isoxazol-4(3*H*)-one



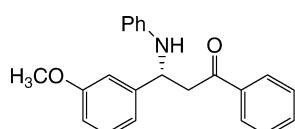
$[\alpha]_D^{25} = +37.5$  (c 1.2,  $\text{CH}_2\text{Cl}_2$ )  
Source of chirality: asymmetric synthesis  
Absolute configuration: (1aS,2R,4aR,4bR)

$\text{C}_{25}\text{H}_{31}\text{NO}_4\text{Si}$   
(1aS,2R,4aR,4bR)-2-(tert-Butyldiphenylsilyloxyethyl)-hexahydrofuro[3,4-d]pyrrolo[1,2-b]isoxazol-4(3H)-one



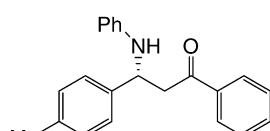
$[\alpha]_D^{25} = -37.7$  (c 1.06,  $\text{CH}_2\text{Cl}_2$ )  
Source of chirality: asymmetric synthesis  
Absolute configuration: (1aS,2R,4aR,4bS)

$\text{C}_{25}\text{H}_{31}\text{NO}_4\text{Si}$   
(1aS,2R,4aR,4bS)-2-(tert-Butyldiphenylsilyloxyethyl)-hexahydrofuro[3,4-d]pyrrolo[1,2-b]isoxazol-4(3H)-one



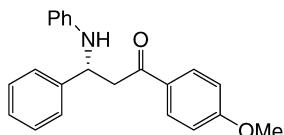
Ee = 40%  
 $[\alpha]_D^{32} = -12.5$  (c 0.5,  $\text{CHCl}_3$ )  
Source of chirality: asymmetric synthesis  
Absolute configuration: (3R)

$\text{C}_{22}\text{H}_{21}\text{NO}_2$   
(R)-3-(3-Methoxyphenyl)-1-phenyl-3-(phenylamino)propan-1-one



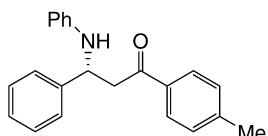
Ee = 42%  
 $[\alpha]_D^{32} = +3.9$  (c 0.5,  $\text{CHCl}_3$ )  
Source of chirality: asymmetric synthesis  
Absolute configuration: (3R)

$\text{C}_{22}\text{H}_{21}\text{NO}$   
(R)-1-Phenyl-3-(phenylamino)-3-p-tolylpropan-1-one



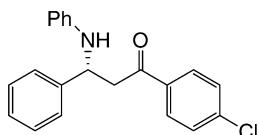
Ee = 49%  
 $[\alpha]_D^{32} = -5.7$  (c 0.5, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (3R)

C<sub>22</sub>H<sub>21</sub>NO<sub>2</sub>  
(R)-1-(4-Methoxyphenyl)-3-phenyl-3-(phenylamino)propan-1-one



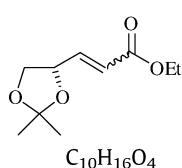
Ee = 52%  
 $[\alpha]_D^{32} = -16.0$  (c 0.5, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (3R)

C<sub>22</sub>H<sub>21</sub>NO<sub>2</sub>  
(R)-3-Phenyl-3-(phenylamino)-1-p-tolylpropan-1-one



Ee = 31%  
 $[\alpha]_D^{32} = -5.8$  (c 0.55, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (3R)

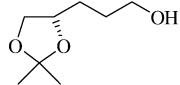
C<sub>21</sub>H<sub>18</sub>ClNO  
(R)-1-(4-Chlorophenyl)-3-phenyl-3-(phenylamino)propan-1-one



$[\alpha]_D^{25} = +4.3$  (c 1.8, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (3S)

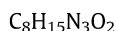
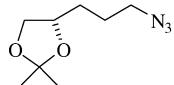
C<sub>10</sub>H<sub>16</sub>O<sub>4</sub>  
(S,E/Z)-Methyl 3-(2,2-dimethyl-1,3-dioxolan-4-yl)acrylate

$[\alpha]_D^{25} = +7.4$  (*c* 1.3, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (3S)



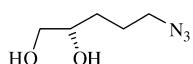
(*S*)-3-(2,2-Dimethyl-1,3-dioxolan-4-yl)propan-1-ol

$[\alpha]_D^{25} = +6.5$  (*c* 1.5, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S)



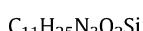
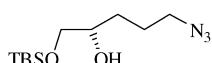
(*S*)-4-(3-Azidopropyl)-2,2-dimethyl-1,3-dioxolane

$[\alpha]_D^{25} = -7.4$  (*c* 1.2, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S)



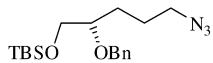
(*S*)-5-Azidopentane-1,2-diol

$[\alpha]_D^{25} = +1.1$  (*c* 1.0, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S)



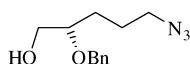
(*S*)-5-Azido-1-(tert-butyldimethylsilyloxy)pentan-2-ol

$[\alpha]_D^{25} = -21.6$  (c 2.1, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S)



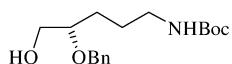
C<sub>18</sub>H<sub>31</sub>N<sub>3</sub>O<sub>2</sub>Si  
(S)-(5-Azido-2-(benzyloxy)pentyl)dimethylsilane

$[\alpha]_D^{25} = -5.0$  (c .9, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S)



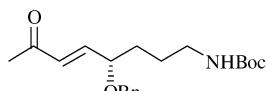
C<sub>12</sub>H<sub>17</sub>N<sub>3</sub>O<sub>2</sub>  
(S)-5-Azido-2-(benzyloxy)pentan-1-ol

$[\alpha]_D^{25} = -13.2$  (c .8, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S)



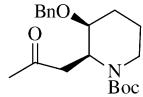
C<sub>17</sub>H<sub>27</sub>NO<sub>4</sub>  
(S)-tert-Butyl 4-(benzyloxy)-5-hydroxypentylcarbamate

$[\alpha]_D^{25} = -15.2$  (c 1.2, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (4S)



C<sub>20</sub>H<sub>29</sub>NO<sub>4</sub>  
(S,E)-tert-Butyl 4-(benzyloxy)-7-oxooct-5-enylcarbamate

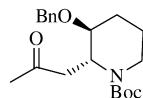
$[\alpha]_D^{25} = +22.0$  (c 1.7, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S,3S)



C<sub>20</sub>H<sub>29</sub>NO<sub>4</sub>

(2S,3S)-tert-Butyl 3-(benzyloxy)-2-(2-oxopropyl)piperidine-1-carboxylate

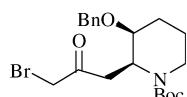
$[\alpha]_D^{25} = -42.3$  (c 1.1, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2R,3S)



C<sub>20</sub>H<sub>29</sub>NO<sub>4</sub>

(2R,3S)-tert-Butyl 3-(benzyloxy)-2-(2-oxopropyl)piperidine-1-carboxylate

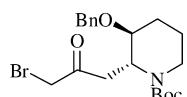
$[\alpha]_D^{25} = -19.3$  (c 0.7, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2S,3S)



C<sub>20</sub>H<sub>28</sub>NO<sub>4</sub>Br

(2S,3S)-tert-Butyl 3-(benzyloxy)-2-(3-bromo-2-oxopropyl)piperidine-1-carboxylate

$[\alpha]_D^{25} = -32.2$  (c 0.5, CHCl<sub>3</sub>)  
Source of chirality: D-mannitol  
Absolute configuration: (2R,3S)



C<sub>20</sub>H<sub>28</sub>NO<sub>4</sub>Br

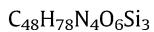
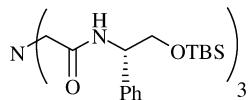
(2R,3S)-tert-Butyl 3-(benzyloxy)-2-(3-bromo-2-oxopropyl)piperidine-1-carboxylate

Ee = 100%

 $[\alpha]_D^{25} = +30.0$  (c 0.50,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: L-amino alcohol

Absolute configuration: (S)

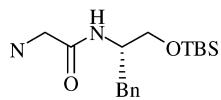
*N,N',N''-Tris[(1S)-(2-TBDMSO-1-phenylethyl-)]nitrilotriacetamide*

Ee = 100%

 $[\alpha]_D^{25} = +74.4$  (c 0.67,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: L-amino alcohol

Absolute configuration: (S)

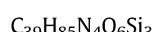
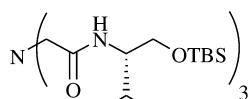
*N,N',N''-Tris[(1S)-(2-TBDMSO-1-benzylethyl-)]nitrilotriacetamide*

Ee = 100%

 $[\alpha]_D^{25} = -38.1$  (c 1.50,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: L-amino alcohol

Absolute configuration: (S)

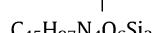
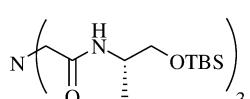
*N,N',N''-Tris[(1S)-(2-TBDMSO-1-iso-propylethyl-)]nitrilotriacetamide*

Ee = 100%

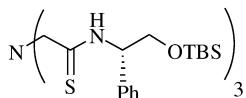
 $[\alpha]_D^{25} = -38.8$  (c 1.0,  $\text{CH}_2\text{Cl}_2$ )

Source of chirality: L-amino alcohol

Absolute configuration: (S)

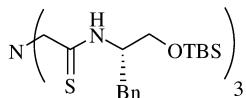
*N,N',N''-Tris[(1S)-(2-TBDMSO-1-iso-butylethyl-)]nitrilotriacetamide*

Ee = 100%  
 $[\alpha]_D^{25} = +35.6$  (c 0.50,  $\text{CH}_2\text{Cl}_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)



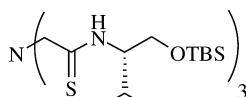
$\text{C}_{48}\text{H}_{78}\text{N}_4\text{O}_3\text{S}_3\text{Si}_3$   
*N,N',N''*-Tris[(1*S*)-(2-TBDMSO-1-phenylethyl-)]nitrilotri(thio-acetamide)

Ee = 100%  
 $[\alpha]_D^{25} = +103.0$  (c 0.63,  $\text{CH}_2\text{Cl}_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)



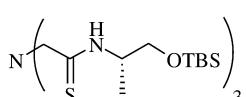
$\text{C}_{51}\text{H}_{85}\text{N}_4\text{O}_3\text{S}_3\text{Si}_3$   
*N,N',N''*-Tris[(1*S*)-(2-TBDMSO-1-benzylethyl-)]nitrilotri(thio-acetamide)

Ee = 100%  
 $[\alpha]_D^{25} = -105.0$  (c 0.50,  $\text{CH}_2\text{Cl}_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)

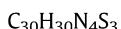
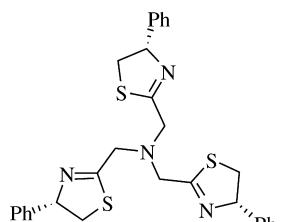


$\text{C}_{39}\text{H}_{85}\text{N}_4\text{O}_3\text{S}_3\text{Si}_3$   
*N,N',N''*-Tris[(1*S*)-(2-TBDMSO-1-iso-propylethyl-)]nitrilotri(thio-acetamide)

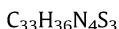
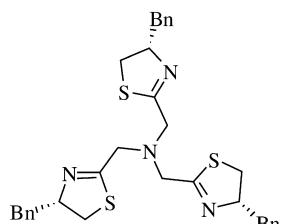
Ee = 100%  
 $[\alpha]_D^{25} = -62.8$  (c 1.0,  $\text{CH}_2\text{Cl}_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)



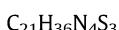
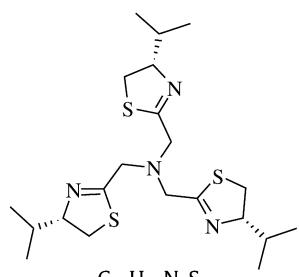
$\text{C}_{42}\text{H}_{91}\text{N}_4\text{O}_3\text{S}_3\text{Si}_3$   
*N,N',N''*-Tris[(1*S*)-(2-TBDMSO-1-iso-butylethyl-)]nitrilotri(thio-acetamide)

Tri{[2-(4*S*)-(4-phenyl-1,3-thiazolinyl)] methyl} amine

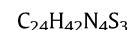
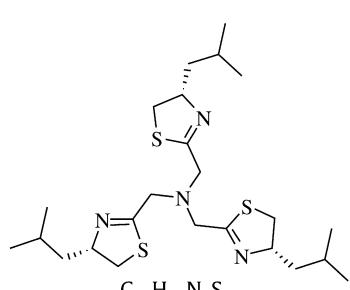
Ee = 100%  
 $[\alpha]_D^{25} = +126.0$  (c 0.25,  $CH_2Cl_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)

Tri{[2-(4*S*)-(4-benzyl-1,3-thiazolinyl)] methyl} amine

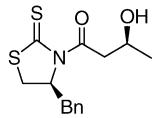
Ee = 100%  
 $[\alpha]_D^{25} = +120.0$  (c 0.30,  $CH_2Cl_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)

Tri{[2-(4*S*)-(4-i-propyl-1,3-thiazolinyl)] methyl} amine

Ee = 100%  
 $[\alpha]_D^{25} = -65.0$  (c 0.30,  $CH_2Cl_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)

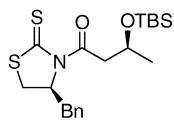
Tri{[2-(4*S*)-(4-i-butyl-1,3-thiazolinyl)] methyl} amine

Ee = 100%  
 $[\alpha]_D^{25} = -95.0$  (c 0.20,  $CH_2Cl_2$ )  
 Source of chirality: L-amino alcohol  
 Absolute configuration: (S)



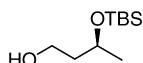
$[\alpha]_D^{25} = +167.2$  (*c* 1.143, CHCl<sub>3</sub>)  
 Absolute configuration: (3*S*,4*S*)  
 Source of chirality: Evans Aldol reaction

C<sub>14</sub>H<sub>17</sub>NO<sub>2</sub>S<sub>2</sub>  
 (3*S*)-1-[(*S*)-4-Benzyl-2-thioxothiazolidin-3-yl]-3-hydroxybutan-1-one



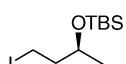
$[\alpha]_D^{25} = +120.2$  (*c* 1.220, CHCl<sub>3</sub>)  
 Absolute configuration: (3*S*,4*S*)  
 Source of chirality: Evans Aldol reaction

C<sub>20</sub>H<sub>31</sub>NO<sub>2</sub>S<sub>2</sub>Si  
 (3*S*)-1-[(*S*)-4-Benzyl-2-thioxothiazolidin-3-yl]-3-(*tert*-butyldimethylsilyloxy)butan-1-one



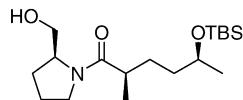
$[\alpha]_D^{25} = +24.6$  (*c* 0.906, CHCl<sub>3</sub>)  
 Absolute configuration: (3*S*)  
 Source of chirality: Evans Aldol reaction

C<sub>10</sub>H<sub>24</sub>O<sub>2</sub>Si  
 (S)-3-(*tert*-Butyldimethylsilyloxy)-1-butanol



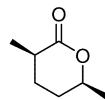
$[\alpha]_D^{25} = +50.2$  (*c* 0.833, CHCl<sub>3</sub>)  
 Absolute configuration: (3*S*)  
 Source of chirality: Evans Aldol reaction

C<sub>10</sub>H<sub>23</sub>IOSi  
 (S)-3-(*tert*-Butyldimethylsilyloxy)butyl iodide



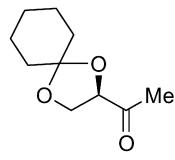
$[\alpha]_D^{25} = +22.5$  (*c* 0.600, CHCl<sub>3</sub>)  
 Absolute configuration: (2*R*,2*S*,5*S*)  
 Source of chirality: asymmetric alkylation

C<sub>18</sub>H<sub>37</sub>NO<sub>3</sub>Si  
 (2*R*,5*S*)-5-(*tert*-Butyldimethylsilyloxy)-1-[(*S*)-2-(hydroxymethyl)pyrrolidin-1-yl]-2-methylhexan-1-one



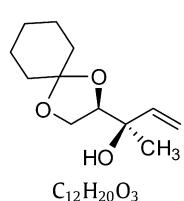
$[\alpha]_D^{25} = -95.1$  (*c* 0.427, CHCl<sub>3</sub>)  
 Absolute configuration: (2*R*,5*S*)  
 Source of chirality: asymmetric synthesis

C<sub>7</sub>H<sub>12</sub>O<sub>2</sub>  
 (2*R*,5*S*)-2-Methyl-5-hexanolide



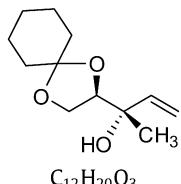
C<sub>10</sub>H<sub>16</sub>O<sub>3</sub>  
 (3*R*)-3,4-Cyclohexanedi oxybutan-2-one

$[\alpha]_D^{22} = +32.0$  (*c* 1.62, CHCl<sub>3</sub>)  
 Source of chirality: (R)-cyclohexyldeneglyceraldehyde  
 Absolute configuration: (3*R*)



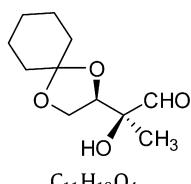
C<sub>12</sub>H<sub>20</sub>O<sub>3</sub>  
 (3*R*,4*R*)-4,5-Cyclohexanedi oxy-3-methylpent-1-en-3-ol

$[\alpha]_D^{22} = +11.3$  (*c* 1.12, CHCl<sub>3</sub>)  
 Source of chirality: (R)-cyclohexyldeneglyceraldehyde  
 Absolute configuration: (3*R*,4*R*)

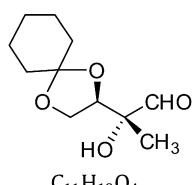


(3S,4R)-4,5-Cyclohexanedi oxy-3-methylpent-1-en-3-ol

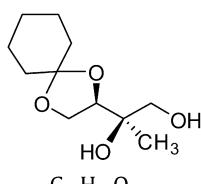
$[\alpha]_D^{22} = +20.6$  (*c* 1.04, CHCl<sub>3</sub>)  
 Source of chirality: (*R*)-cyclohexylideneglyceraldehyde  
 Absolute configuration: (3*S*,4*R*)

(2*S*,3*R*)-3,4-Cyclohexanedi oxy-2-methyl-2-hydroxybutanal

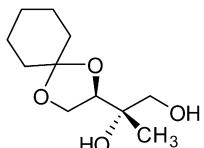
$[\alpha]_D^{22} = +16.05$  (*c* 1.52, CHCl<sub>3</sub>)  
 Source of chirality: (*R*)-cyclohexylideneglyceraldehyde  
 Absolute configuration: (2*S*,3*R*)

(2*R*,3*R*)-3,4-Cyclohexanedi oxy-2-hydroxy-2-methylbutanal

$[\alpha]_D^{22} = +18.1$  (*c* 1.14, CHCl<sub>3</sub>)  
 Source of chirality: (*R*)-cyclohexylideneglyceraldehyde  
 Absolute configuration: (2*R*,3*R*)

(2*R*,3*R*)-3,4-Cyclohexanedi oxy-2-methylbutane-1,2-diol

$[\alpha]_D^{22} = +11.6$  (*c* 1.02, CHCl<sub>3</sub>)  
 Source of chirality: (*R*)-cyclohexylideneglyceraldehyde  
 Absolute configuration: (2*R*,3*R*)

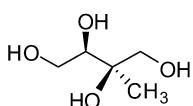


(2S,3R)-3,4-Cyclohexanedi oxy-2-methylbutane-1,2-diol

 $[\alpha]_D^{22} = +12.8$  (c 1.72, CHCl<sub>3</sub>)

Source of chirality: (R)-cyclohexyldieneglyceraldehyde

Absolute configuration: (2S,3R)

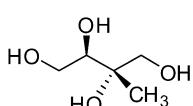


(2R,3R)-2-Methylbutane-1,2,3,4-tetrol

 $[\alpha]_D^{22} = +11.2$  (c 1.41, MeOH)

Source of chirality: (R)-cyclohexyldieneglyceraldehyde

Absolute configuration: (2R,3R)

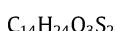
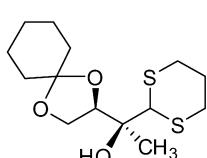


(2S,3R)-2-Methylbutane-1,2,3,4-tetrol

 $[\alpha]_D^{22} = +15.0$  (c 1.44, MeOH)

Source of chirality: (R)-cyclohexyldieneglyceraldehyde

Absolute configuration: (2S,3R)

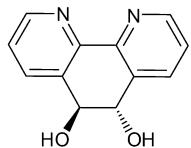


(2S,3R)-3,4-Cyclohexanedi oxy-2-methyl-2-(1',3'-propanediyl dithio)butan-2-ol

 $[\alpha]_D^{22} = +12.45$  (c 2.86, CHCl<sub>3</sub>)

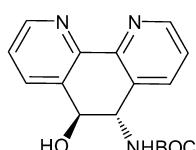
Source of chirality: (R)-cyclohexyldieneglyceraldehyde

Absolute configuration: (2S,3R)



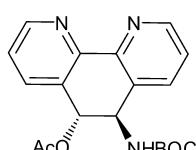
$C_{12}H_{10}N_2O_2$   
(5S,6S)-Dihydro-5,6-dihydroxy-1,10-phenanthroline

Ee = 94%  
 $[\alpha]_D^{25} = -75.1$  (c 0.4, CH<sub>3</sub>OH)  
 Source of chirality: enzymatic resolution  
 Absolute configuration: (5S,6S)



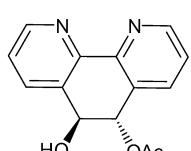
$C_{17}H_{19}N_3O_4$   
(5S,6S)-Dihydro-5-hydroxy-6-tert-butoxycarbonylamino-1,10-phenanthroline

Ee = 96%  
 $[\alpha]_D^{25} = +51.9$  (c 0.2, CHCl<sub>3</sub>)  
 Source of chirality: enzymatic resolution  
 Absolute configuration: (5S,6S)



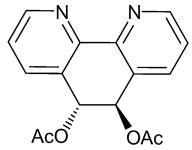
$C_{19}H_{21}N_3O_5$   
(5R,6R)-Dihydro-5-hydroxy-6-tert-butoxycarbonylamino-1,10-phenanthroline

Ee = 90%  
 $[\alpha]_D^{25} = -68.9$  (c 0.3, CH<sub>3</sub>OH)  
 Source of chirality: enzymatic resolution  
 Absolute configuration: (5R,6R)



$C_{14}H_{12}N_2O_3$   
(5S,6S)-Dihydro-5-acetoxy-6-hydroxy-1,10-phenanthroline

Ee = 90%  
 $[\alpha]_D^{25} = +75.0$  (c 0.6, CH<sub>3</sub>OH)  
 Source of chirality: enzymatic resolution  
 Absolute configuration: (5S,6S)



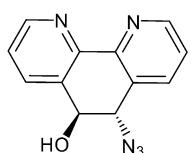
$C_{16}H_{14}N_2O_4$   
(5R,6R)-Dihydro-5,6-diacetoxy-1,10-phenanthroline

Ee = 94%

 $[\alpha]_D^{25} = -211.4$  (c 0.3, CH<sub>3</sub>OH)

Source of chirality: enzymatic resolution

Absolute configuration: (5R,6R)



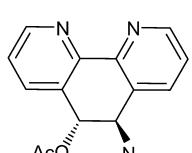
$C_{12}H_9N_5O$   
(5S,6S)-Dihydro-5-azido-6-hydroxy-1,10-phenanthroline

Ee &gt;98%

 $[\alpha]_D^{25} = -67.5$  (c 0.6, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

Absolute configuration: (5S,6S)



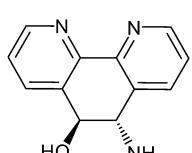
$C_{14}H_{11}N_5O_2$   
(5R,6R)-Dihydro-5-acetoxy-6-azido-1,10-phenanthroline

Ee = 97%

 $[\alpha]_D^{25} = -264.5$  (c 0.6, CH<sub>3</sub>OH)

Source of chirality: enzymatic resolution

Absolute configuration: (5R,6R)



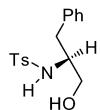
$C_{12}H_{11}N_3O$   
(5S,6S)-Dihydro-5-amino-6-hydroxy-1,10-phenanthroline

Ee &gt;98%

 $[\alpha]_D^{25} = -51.9$  (c 0.1, CH<sub>3</sub>OH)

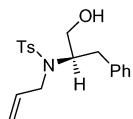
Source of chirality: enzymatic resolution

Absolute configuration: (5S,6S)



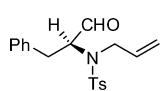
$[\alpha]_D^{29} = -21.4$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (S)

C<sub>16</sub>H<sub>19</sub>NO<sub>3</sub>S  
(S)-3-Phenyl-2-(tosylamino)propan-1-ol



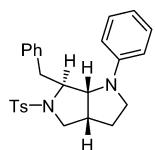
$[\alpha]_D^{29} = -1.2$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (S)

C<sub>19</sub>H<sub>23</sub>NO<sub>3</sub>S  
(S)-2-(N-Allyl-N-tosylamino)-3-phenylpropan-1-ol



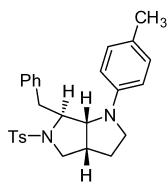
$[\alpha]_D^{29} = -0.2$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (S)

C<sub>19</sub>H<sub>21</sub>NO<sub>3</sub>S  
(S)-2-(N-Allyl-N-tosylamino)-3-phenylpropanal



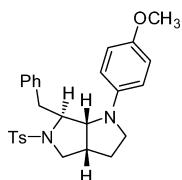
$[\alpha]_D^{28} = +6.6$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (3aR,6S,6aR)

C<sub>26</sub>H<sub>28</sub>N<sub>2</sub>O<sub>2</sub>S  
(3aR,6S,6aR)-cis-1-Phenyl-5-tosyl-6-benzyl-octahydropyrrolo[3,4-b]pyrrole



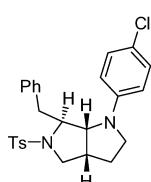
C<sub>27</sub>H<sub>30</sub>N<sub>2</sub>O<sub>2</sub>S  
(3aR,6S,6aR)-*cis*-1-(4-Methyl)-phenyl-5-tosyl-6-benzyl-octahydropyrrolo[3,4-*b*]pyrrole

$[\alpha]_D^{29} = 27.5$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (3aR,6S,6aR)



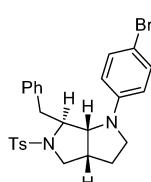
C<sub>27</sub>H<sub>30</sub>N<sub>2</sub>O<sub>3</sub>S  
(3aR,6S,6aR)-*cis*-1-(4-Methoxy)-phenyl-5-tosyl-6-benzyl-octahydropyrrolo[3,4-*b*]pyrrole

$[\alpha]_D^{29} = +24.6$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (3aR,6S,6aR)



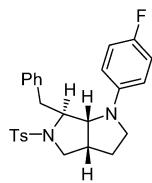
C<sub>26</sub>H<sub>27</sub>ClN<sub>2</sub>O<sub>2</sub>S  
(3aR,6S,6aR)-*cis*-1-(4-Chloro)-phenyl-5-tosyl-6-benzyl-octahydropyrrolo[3,4-*b*]pyrrole

$[\alpha]_D^{28} = +27.0$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (3aR,6S,6aR)



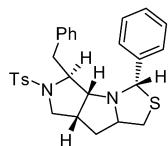
C<sub>26</sub>H<sub>27</sub>BrN<sub>2</sub>O<sub>2</sub>S  
(3aR,6S,6aR)-*cis*-1-(4-Bromo)-phenyl-5-tosyl-6-benzyl-octahydropyrrolo[3,4-*b*]pyrrole

$[\alpha]_D^{29} = +29.8$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (3aR,6S,6aR)



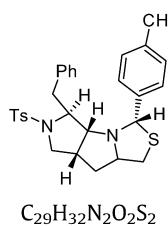
$C_{26}H_{27}FN_2O_2S$   
(3aR,6S,6aR)-*cis*-1-(4-Fluoro)-phenyl-5-tosyl-6-benzyl-octahydropyrrolo[3,4-*b*]pyrrole

$[\alpha]_D^{27} = +2.5$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (3aR,6S,6aR)



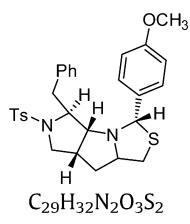
$C_{28}H_{30}N_2O_2S_2$   
(2S,3aR,4S,6aR,7aR)-*cis*-2-Phenyl-4-benzyl-5-N-(*p*-methyl)-benzenesulfonyl perhydro thiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrrole

$[\alpha]_D^{29} = -10.6$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (2S,3aR,4S,6aR,7aR)



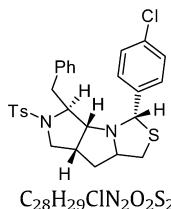
$C_{29}H_{32}N_2O_2S_2$   
(2S,3aR,4S,6aR,7aR)-*cis*-2-(*p*-Methyl)-phenyl-4-benzyl-5-N-(*p*-methyl)-benzene sulfonyl perhydrothiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrrole

$[\alpha]_D^{29} = -14.8$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (2S,3aR,4S,6aR,7aR)



$C_{29}H_{32}N_2O_3S_2$   
(2S,3aR,4S,6aR,7aR)-*cis*-2-(*p*-Methoxy)-phenyl-4-benzyl-5-N-(*p*-methyl)-benzenesulfonyl perhydrothiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrrole

$[\alpha]_D^{29} = -15.8$  (c 1, CHCl<sub>3</sub>)  
Source of chirality: chiral starting material  
Absolute configuration: (2S,3aR,4S,6aR,7aR)

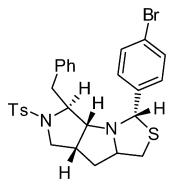


(2S,3aR,4S,6aR,7aR)-*cis*-2-(*p*-Chloro)-4-benzyl-5-*N*-(*p*-methyl)-benzenesulfonyl perhydro thiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrrole

$[\alpha]_D^{29} = -12.8$  (*c* 1, CHCl<sub>3</sub>)

Source of chirality: chiral starting material

Absolute configuration: (2S,3aR,4S,6aR,7aR)

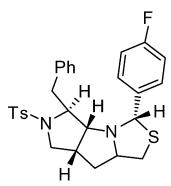


(2R,3aR,4S,6aR,7aR)-*cis*-2-(*p*-Bromo)-phenyl-4-benzyl-5-*N*-(*p*-methyl)-benzenesulfonyl perhydrothiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrrole

$[\alpha]_D^{29} = -13.8$  (*c* 1, CHCl<sub>3</sub>)

Source of chirality: chiral starting material

Absolute configuration: (2R,3aR,4S,6aR,7aR)

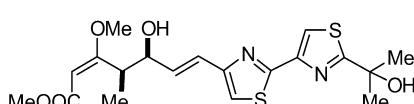


(2S,3aR,4S,6aR,7aR)-*cis*-2-(*p*-Fluoro)phenyl-4-benzyl-5-*N*-(*p*-methyl)-benzenesulfonyl perhydro thiazolo[3',4'-2,3]pyrrolo[4,5-*c*]pyrrole

$[\alpha]_D^{29} = -15.6$  (*c* 1, CHCl<sub>3</sub>)

Source of chirality: chiral starting material

Absolute configuration: (2S,3aR,4S,6aR,7aR)



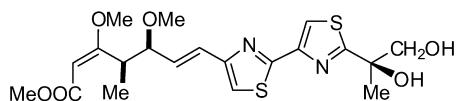
14-Hydroxycystothiazole C

$[\alpha]_D^{22} = +112.6$  (*c* 1.17, CHCl<sub>3</sub>)

Ee = >99%

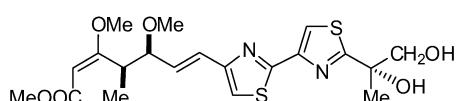
Source of chirality: lipase

Absolute configuration: (4R,5S)



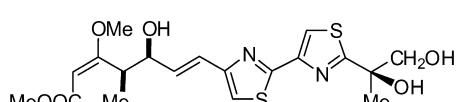
$C_{20}H_{26}N_2O_6S_2$   
(14R,15)-Dihydroxycystothiazole A

$[\alpha]_D^{23} = +113.0$  (*c* 0.76,  $CHCl_3$ )  
Ee = >99%  
Source of chirality: lipase  
Absolute configuration: (4*R*,5*S*,14*R*)



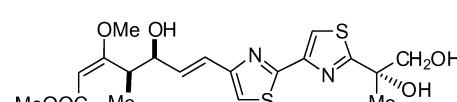
$C_{20}H_{26}N_2O_6S_2$   
(14S,15)-Dihydroxycystothiazole A

$[\alpha]_D^{24} = +77.8$  (*c* 0.675,  $CHCl_3$ )  
Ee = >99%  
Source of chirality: lipase  
Absolute configuration: (4*R*,5*S*,14*S*)



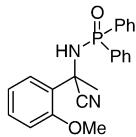
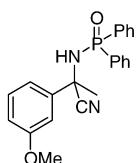
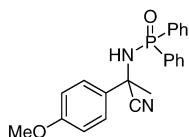
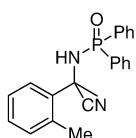
$C_{19}H_{24}N_2O_6S_2$   
(14R,15)-Dihydroxycystothiazole C

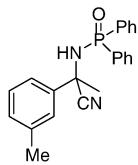
$[\alpha]_D^{24} = +145.9$  (*c* 0.64,  $CHCl_3$ )  
Ee = >99%  
Source of chirality: lipase  
Absolute configuration: (4*R*,5*S*,14*R*)



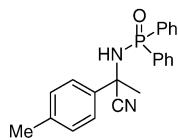
$C_{19}H_{24}N_2O_6S_2$   
(14S,15)-Dihydroxycystothiazole C

$[\alpha]_D^{25} = +91.1$  (*c* 1.00,  $CHCl_3$ )  
Ee = >99%  
Source of chirality: lipase  
Absolute configuration: (4*R*,5*S*,14*S*)

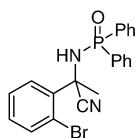

 $[\alpha]_D^{23} = -2.15 (c \ 1.3, \text{CH}_2\text{Cl}_2)$ 
 $\text{C}_{22}\text{H}_{21}\text{N}_2\text{O}_2\text{P}$ 
*N*-[1-Cyano-1-(2-methoxyphenyl)ethyl]diphenylphosphinic amide

 $[\alpha]_D^{23} = -4.9 (c \ 1.6, \text{CH}_2\text{Cl}_2)$ 
 $\text{C}_{22}\text{H}_{22}\text{N}_2\text{O}_2\text{P}$ 
*N*-[1-Cyano-1-(3-methoxyphenyl)ethyl]diphenylphosphinic amide

 $[\alpha]_D^{23} = -2.35 (c \ 0.85, \text{CH}_2\text{Cl}_2)$ 
 $\text{C}_{22}\text{H}_{22}\text{N}_2\text{O}_2\text{P}$ 
*N*-[1-Cyano-1-(4-methoxyphenyl)ethyl]diphenylphosphinic amide

 $[\alpha]_D^{23} = -2.7 (c \ 2.0, \text{CH}_2\text{Cl}_2)$ 
 $\text{C}_{22}\text{H}_{21}\text{N}_2\text{OP}$ 
*N*-[1-Cyano-1-(2-methylphenyl)ethyl]diphenylphosphinic amide


 $[\alpha]_D^{23} = -1.7$  (c 1.05, CH<sub>2</sub>Cl<sub>2</sub>)

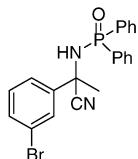
C<sub>22</sub>H<sub>21</sub>N<sub>2</sub>OP  
*N*-[1-Cyano-1-(3-methylphenyl)ethyl]diphenylphosphinic amide


 $[\alpha]_D^{23} = -1.7$  (c 1.05, CH<sub>2</sub>Cl<sub>2</sub>)

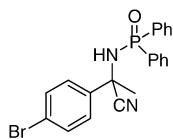
C<sub>22</sub>H<sub>21</sub>N<sub>2</sub>OP  
*N*-[1-Cyano-1-(4-methylphenyl)ethyl]diphenylphosphinic amide


 $[\alpha]_D^{23} = -1.3$  (c 1.15, CH<sub>2</sub>Cl<sub>2</sub>)

C<sub>21</sub>H<sub>18</sub>BrN<sub>2</sub>OP  
*N*-[1-(2-Bromophenyl)-1-cyanoethyl]diphenylphosphinic amide

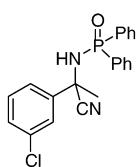

 $[\alpha]_D^{23} = -4.6$  (c 1.4, CH<sub>2</sub>Cl<sub>2</sub>)

C<sub>21</sub>H<sub>18</sub>BrN<sub>2</sub>OP  
*N*-[1-(3-Bromophenyl)-1-cyanoethyl]diphenylphosphinic amide



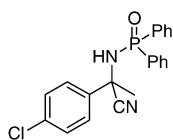
$C_{21}H_{18}BrN_2OP$   
*N*-[1-(4-Bromophenyl)-1-cyanoethyl]diphenylphosphinic amide

$[\alpha]_D^{23} = -6.4$  (*c* 1.15,  $CH_2Cl_2$ )



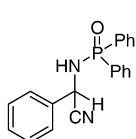
$C_{21}H_{18}ClN_2OP$   
*N*-[1-(3-Chlorophenyl)-1-cyanoethyl]diphenylphosphinic amide

$[\alpha]_D^{23} = -3.2$  (*c* 1.25,  $CH_2Cl_2$ )



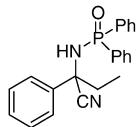
$C_{21}H_{18}ClN_2OP$   
*N*-[1-(4-Chlorophenyl)-1-cyanoethyl]diphenylphosphinic amide

$[\alpha]_D^{23} = -5.7$  (*c* 0.85,  $CH_2Cl_2$ )

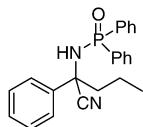


$C_{20}H_{17}N_2OP$   
*N*-Cyano(phenyl)methyl(diphenyl)phosphinic amide

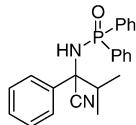
$[\alpha]_D^{23} = -0.6$  (*c* 1.2,  $CH_2Cl_2$ )

$[\alpha]_D^{23} = +0.9$  (c 1.2, CH<sub>2</sub>Cl<sub>2</sub>)
C<sub>22</sub>H<sub>21</sub>N<sub>2</sub>OP

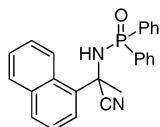
N-(1-Cyano-1-phenylpropyl)diphenylphosphinic amide

 $[\alpha]_D^{23} = -3.4$  (c 0.85, CH<sub>2</sub>Cl<sub>2</sub>)
C<sub>23</sub>H<sub>23</sub>N<sub>2</sub>OP

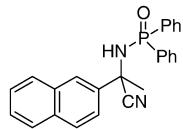
N-(1-Cyano-1-phenylbutyl)diphenylphosphinic amide

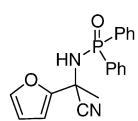
 $[\alpha]_D^{23} = -3.2$  (c 1.05, CH<sub>2</sub>Cl<sub>2</sub>)
C<sub>23</sub>H<sub>23</sub>N<sub>2</sub>OP

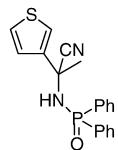
N-(1-Cyano-2-methyl-1-phenylpropyl)diphenylphosphinic amide

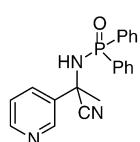
 $[\alpha]_D^{23} = -1.2$  (c 1.25, CH<sub>2</sub>Cl<sub>2</sub>)
C<sub>25</sub>H<sub>21</sub>N<sub>2</sub>OP

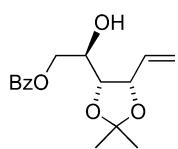
N-[1-Cyano-1-(1-naphthyl)ethyl]diphenylphosphinic amide

$[\alpha]_D^{23} = -3.2 (c \ 1.05, \text{CH}_2\text{Cl}_2)$ 

 $C_{25}H_{21}N_2OP$ 
*N*-[1-Cyano-1-(2-naphthyl)ethyl]diphenylphosphinic amide

 $[\alpha]_D^{23} = -2.7 (c \ 0.9, \text{CH}_2\text{Cl}_2)$ 

 $C_{19}H_{17}N_2O_2P$ 
*N*-[1-Cyano-1-(2-furyl)ethyl]diphenylphosphinic amide

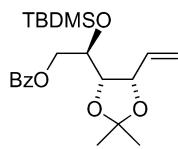
 $[\alpha]_D^{23} = -0.9 (c \ 1.05, \text{CH}_2\text{Cl}_2)$ 

 $C_{19}H_{17}N_2OPS$ 
*N*-[1-Cyano-1-(3-thienyl)ethyl]diphenylphosphinic amide

 $[\alpha]_D^{23} = -2.4 (c \ 1.05, \text{CH}_2\text{Cl}_2)$ 

 $C_{20}H_{18}N_3OP$ 
*N*-[1-Cyano-1-(3-pyridyl)ethyl]diphenylphosphinic amide



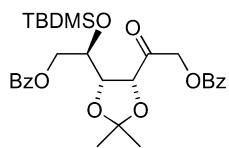
Ee >99%  
 $[\alpha]_D = +13.2$  (c 0.98, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose  
 Absolute configuration: (2R,3S,4S)

C<sub>16</sub>H<sub>20</sub>O<sub>5</sub>  
 (2R,3S,4S)-2-Hydroxy-3,4-O-isopropylidene-hex-5-enyl benzoate



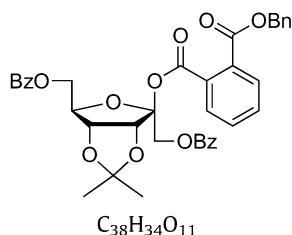
Ee >99%  
 $[\alpha]_D = -2.3$  (c 1.03, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose  
 Absolute configuration: (2R,3S,4S)

C<sub>22</sub>H<sub>34</sub>O<sub>5</sub>Si  
 (2R,3S,4S)-2-tert-Butyldimethylsilyloxy-3,4-O-isopropylidene-hex-5-enyl benzoate



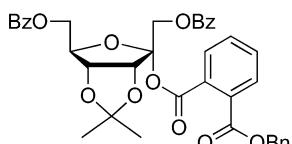
Ee >99%  
 $[\alpha]_D = +21.0$  (c 1.05, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose  
 Absolute configuration: (3R,4S,5R)

C<sub>29</sub>H<sub>38</sub>O<sub>8</sub>Si  
 1,6-Di-O-benzoyl-5-O-tert-butyldimethylsilyl-3,4-O-isopropylidene-D-psicose

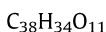


Ee >99%  
 $[\alpha]_D = -11.1$  (c 0.89, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose  
 Absolute configuration: (2R,3R,4S,5R)

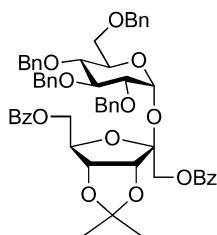
C<sub>38</sub>H<sub>34</sub>O<sub>11</sub>  
 (1,6-Di-O-benzoyl-3,4-O-isopropylidene-β-D-psicofuranosyl) benzyl phthalate



Ee >99%  
 $[\alpha]_D = +6.5$  (*c* 1.06, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose  
 Absolute configuration: (2*S*,3*R*,4*S*,5*R*)



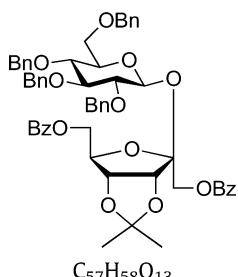
(1,6-Di-O-benzoyl-3,4-O-isopropylidene- $\alpha$ -D-psicofuranosyl) benzyl phthalate



Ee >99%  
 $[\alpha]_D = +29.0$  (*c* 1.08, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose, D-glucose  
 Absolute configuration: (2'S,3'R,4'R,5'R,1S,2R,3S,4R,5R)

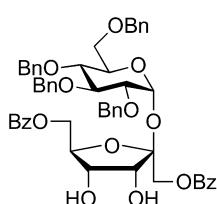


(1,6-Di-O-benzoyl-3,4-O-isopropylidene- $\beta$ -D-psicofuranosyl) 2,3,4,6-tetra-O-benzyl- $\alpha$ -D-glucopyranoside

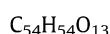


Ee >99%  
 $[\alpha]_D = -13.8$  (*c* 1.00, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose, D-glucose  
 Absolute configuration: (2'S,3'R,4'R,5'R,1R,2R,3S,4R,5R)

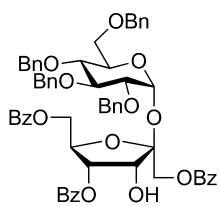
(1,6-Di-O-benzoyl-3,4-O-isopropylidene- $\beta$ -D-psicofuranosyl) 2,3,4,6-tetra-O-benzyl- $\beta$ -D-glucopyranoside



Ee >99%  
 $[\alpha]_D = +55.5$  (*c* 1.03, CHCl<sub>3</sub>)  
 Source of chirality: D-ribose, D-glucose  
 Absolute configuration: (2'S,3'R,4'S,5'R,1R,2R,3S,4R,5R)



(1,6-Di-O-benzoyl-b-D-psicofuranosyl) 2,3,4,6-tetra-O-benzyl- $\alpha$ -D-glucopyranoside



Ee &gt;99%

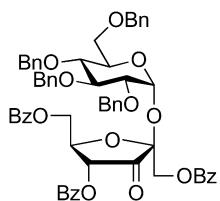
 $[\alpha]_D = +37.5$  (c 0.99, CHCl<sub>3</sub>)

Source of chirality: D-ribose, D-glucose

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

C<sub>61</sub>H<sub>58</sub>O<sub>14</sub>

(1,3,6-Tri-O-benzoyl-β-D-psicofuranosyl) 2,3,4,6-tetra-O-benzyl-α-D-glucopyranoside



Ee &gt;99%

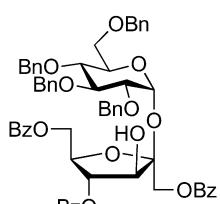
 $[\alpha]_D = +98.5$  (c 0.68, CHCl<sub>3</sub>)

Source of chirality: D-ribose, D-glucose

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

C<sub>61</sub>H<sub>56</sub>O<sub>14</sub>

(1,4,6-Tri-O-benzoyl-β-D-erythro-2,3-hexodiulofuranosyl) 2,3,4,6-tetra-O-benzyl-α-D-glucopyranoside



Ee &gt;99%

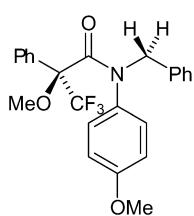
 $[\alpha]_D = +39.2$  (c 1.00, CHCl<sub>3</sub>)

Source of chirality: D-ribose, D-glucose

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

C<sub>61</sub>H<sub>58</sub>O<sub>14</sub>

(1,4,6-Tri-O-benzoyl-β-D-fructofuranosyl) 2,3,4,6-tetra-O-benzyl-α-D-glucopyranoside

 $[\alpha]_D^{24} = -106$  (c 0.4, CH<sub>2</sub>Cl<sub>2</sub>)C<sub>24</sub>H<sub>22</sub>F<sub>3</sub>NO<sub>3</sub>

N-Benzyl-3,3,3-trifluoro-2-methoxy-N-(4-methoxyphenyl)-2-phenylpropanamide