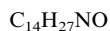
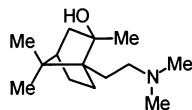


Stereochemistry abstracts

Antonio García Martínez,\* Enrique Teso Vilar, Amelia García Fraile, Santiago de la Moya Cerero\* and Beatriz Lora Maroto

*Tetrahedron: Asymmetry 14 (2003) 1959*



10-[(Dimethylamino)methyl]-2-methylisoborneol

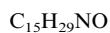
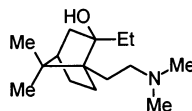
$[\alpha]_D^{20} = -18$  (c 1.0,  $CHCl_3$ )

Source of chirality: natural (+)-(1*R*)-camphor

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

Antonio García Martínez,\* Enrique Teso Vilar, Amelia García Fraile, Santiago de la Moya Cerero\* and Beatriz Lora Maroto

*Tetrahedron: Asymmetry 14 (2003) 1959*



10-[(Dimethylamino)methyl]-2-ethylisoborneol

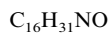
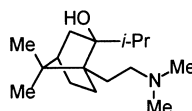
$[\alpha]_D^{20} = -13$  (c 1.2,  $CHCl_3$ )

Source of chirality: natural (+)-(1*R*)-camphor

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

Antonio García Martínez,\* Enrique Teso Vilar, Amelia García Fraile, Santiago de la Moya Cerero\* and Beatriz Lora Maroto

*Tetrahedron: Asymmetry 14 (2003) 1959*



10-[(Dimethylamino)methyl]-2-isopropylisoborneol

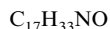
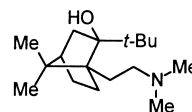
$[\alpha]_D^{20} = -14$  (c 2.6,  $CHCl_3$ )

Source of chirality: natural (+)-(1*R*)-camphor

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

Antonio García Martínez,\* Enrique Teso Vilar, Amelia García Fraile, Santiago de la Moya Cerero\* and Beatriz Lora Maroto

*Tetrahedron: Asymmetry 14 (2003) 1959*



2-*tert*-Butyl 10-[(dimethylamino)methyl]isoborneol

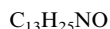
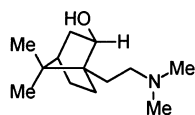
$[\alpha]_D^{20} = -19$  (c 1.3,  $CHCl_3$ )

Source of chirality: natural (+)-(1*R*)-camphor

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

Antonio García Martínez,\* Enrique Teso Vilar, Amelia García Fraile,  
Santiago de la Moya Cerero\* and Beatriz Lora Maroto

*Tetrahedron: Asymmetry 14 (2003) 1959*



10-[(Dimethylamino)methyl]isoborneol

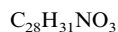
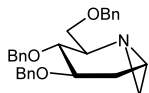
$[\alpha]_D^{20} = +7$  (*c* 0.8,  $CHCl_3$ )

Source of chirality: natural (+)-(1*R*)-camphor

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



(2*R*,3*R*,4*R*,6*S*)-3,4-Di(benzyloxy)-2-benzyloxymethyl-1-azabicyclo[4.1.0]heptane

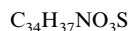
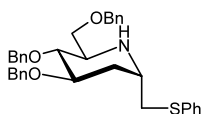
$[\alpha]_D^{20} +10.5$  (*c* 1.1,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

Absolute configuration: 2*R*,3*R*,4*R*,6*S*

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



4,5,7-Tri-*O*-benzyl-2,3,6-trideoxy-2,6-imino-1-*S*-phenyl-1-thio-*D*-manno-heptitol

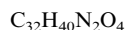
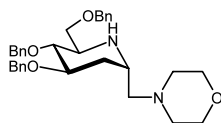
$[\alpha]_D^{20} +18.0$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



4,5,7-Tri-*O*-benzyl-1,2,3,6-tetradeoxy-2,6-imino-1-morpholino-*D*-manno-heptitol

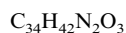
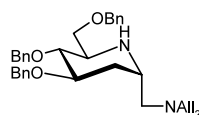
$[\alpha]_D^{20} +22.5$  (*c* 0.6,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



4,5,7-Tri-*O*-benzyl-1,2,3,6-tetra-deoxy-1-diallylamino-2,6-imino-*D*-manno-heptitol

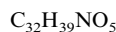
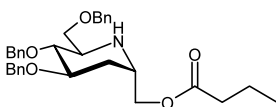
$[\alpha]_D^{20} +9.5$  (*c* 0.2,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



4,5,7-Tri-*O*-benzyl-1-*O*-butanoyl-2,3,6-trideoxy-2,6-imino-*D*-manno-heptitol

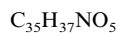
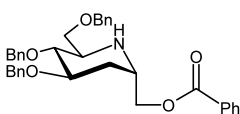
$[\alpha]_D^{20} +19.5$  (*c* 0.9,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



1-*O*-Benzoyl-4,5,7-tri-*O*-benzyl-2,3,6-trideoxy-2,6-imino-*D*-manno-heptitol

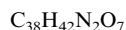
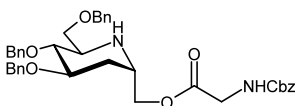
$[\alpha]_D^{20} +25.5$  (*c* 0.5,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



4,5,7-Tri-*O*-benzyl-1-*O*-(benzyloxycarbonylaminoacetyl)-2,3,6-trideoxy-2,6-imino-*D*-manno-heptitol

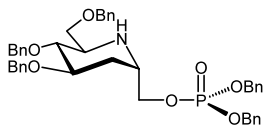
$[\alpha]_D^{20} +20.5$  (*c* 1.2,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



$C_{42}H_{46}NO_7P$

4,5,7-Tri-*O*-benzyl-1-*O*-(dibenzoyloxyphosphoryl)-2,3,6-trideoxy-2,6-imino-*D*-manno-heptitol

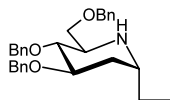
$[\alpha]_D^{20} +13.5$  (*c* 1.9,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

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

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



$C_{29}H_{35}NO_3$

(2*R*,3*R*,4*R*,6*R*)-3,4-Di(benzyloxy)-2-benzyloxymethyl-6-ethylpiperidine

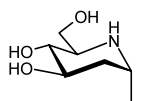
$[\alpha]_D^{20} +24.0$  (*c* 1.4,  $CHCl_3$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

Absolute configuration: 2*R*,3*R*,4*R*,6*R*

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



$C_8H_{17}NO_3$

(2*R*,3*R*,4*R*,6*R*)-2-Hydroxymethyl-6-ethylpiperidine-3,4-diol- ( $\alpha$ -1-*C*-ethyl-fagomine)

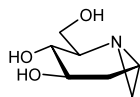
$[\alpha]_D^{20} +42.5$  (*c* 0.4,  $H_2O$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

Absolute configuration: 2*R*,3*R*,4*R*,6*R*

Jean-Yves Goujon, David Gueyrard, Philippe Compain,\*  
Olivier R. Martin\* and Naoki Asano

*Tetrahedron: Asymmetry 14 (2003) 1969*



$C_7H_{13}NO_3$

(2*R*,3*R*,4*R*,6*S*)-2-Hydroxymethyl-1-azabicyclo[4.1.0]heptane-3,4-diol

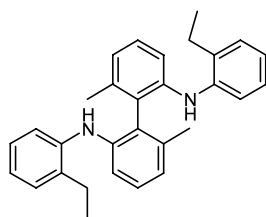
$[\alpha]_D^{20} +57.7$  (*c* 0.4,  $H_2O$ )

Source of chirality: tri-*O*-benzyl-*D*-glucal and stereoselective electrophile-induced cyclization

Absolute configuration: 2*R*,3*R*,4*R*,6*S*

P. N. O'Shaughnessy and Peter Scott\*

*Tetrahedron: Asymmetry 14 (2003) 1979*



$C_{30}H_{32}N_2$

*N,N'*-Bis(2-ethylphenyl)-6,6'-dimethylbiphenyl-2,2'-diamine

E.e. = 99.5% [by HPLC analysis of a precursor]

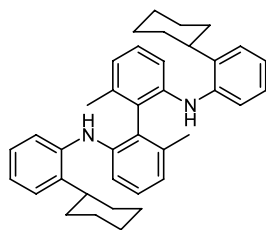
$[\alpha]_D^{24.2} = -147$  (*c* 0.20,  $CHCl_3$ )

Source of chirality: (*R*)-(+)-2,2'-diamino-6,6'-dimethylbiphenyl

Absolute configuration: *R*

P. N. O'Shaughnessy and Peter Scott\*

*Tetrahedron: Asymmetry 14 (2003) 1979*



$C_{38}H_{44}N_2$

*N,N'*-Bis(2-cyclohexylphenyl)-6,6'-dimethylbiphenyl-2,2'-diamine

E.e. = 99.5% [by HPLC analysis of a precursor]

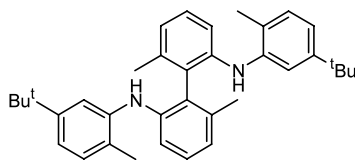
$[\alpha]_D^{24.5} = -152$  (*c* 0.20,  $CHCl_3$ )

Source of chirality: (*R*)-(+)-2,2'-diamino-6,6'-dimethylbiphenyl

Absolute configuration: *R*

P. N. O'Shaughnessy and Peter Scott\*

*Tetrahedron: Asymmetry 14 (2003) 1979*



$C_{36}H_{44}N_2$

*N,N'*-Bis(2-methyl-5-*tert*-butylphenyl)-6,6'-dimethylbiphenyl-2,2'-diamine

E.e. = 99.5% [by HPLC analysis of a precursor]

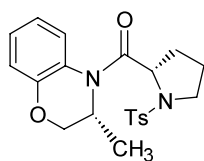
$[\alpha]_D^{24.7} = -158$  (*c* 0.20,  $CHCl_3$ )

Source of chirality: (*R*)-(+)-2,2'-diamino-6,6'-dimethylbiphenyl

Absolute configuration: *R*

Victor P. Krasnov,\* Galina L. Levit, Iraida M. Bukrina,  
Irina N. Andreeva, Liliya Sh. Sadretdinova, Marina A. Korolyova,  
Mikhail I. Kodess, Valery N. Charushin and Oleg N. Chupakhin

*Tetrahedron: Asymmetry 14 (2003) 1985*



$C_{21}H_{24}N_2O_4S$

*N*-[*N'*-Tosyl-(2*S*)-prolyl]-(*3R*)-2,3-dihydro-3-methyl-4*H*-1,4-benzoxazine

D.e. = 99.2% (by HPLC)

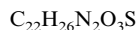
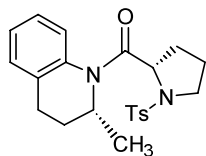
$[\alpha]_D^{20} = -330$  (*c* 1.1,  $CHCl_3$ )

Source of chirality: resolution

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

Victor P. Krasnov,\* Galina L. Levit, Iraida M. Bukrina,  
Irina N. Andreeva, Liliya Sh. Sadretdinova, Marina A. Korolyova,  
Mikhail I. Kodess, Valery N. Charushin and Oleg N. Chupakhin

*Tetrahedron: Asymmetry 14 (2003) 1985*

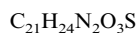
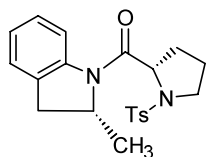


*N*-[*N'*-Tosyl-(2*S*)-prolyl]-(*2R*)-2-methyl-1,2,3,4-tetrahydroquinoline

D.e. = 99.0% (by HPLC)  
 $[\alpha]_D^{20} -372$  (*c* 2.0,  $CHCl_3$ )  
Source of chirality: resolution  
Absolute configuration: (2*S*,2'*R*)

Victor P. Krasnov,\* Galina L. Levit, Iraida M. Bukrina,  
Irina N. Andreeva, Liliya Sh. Sadretdinova, Marina A. Korolyova,  
Mikhail I. Kodess, Valery N. Charushin and Oleg N. Chupakhin

*Tetrahedron: Asymmetry 14 (2003) 1985*

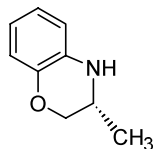


*N*-[*N'*-Tosyl-(2*S*)-prolyl]-(*2R*)-2-methylindoline

D.e. = 98.8% (by HPLC)  
 $[\alpha]_D^{20} -78$  (*c* 1.1,  $CHCl_3$ )  
Source of chirality: resolution  
Absolute configuration: (2*S*,2'*R*)

Victor P. Krasnov,\* Galina L. Levit, Iraida M. Bukrina,  
Irina N. Andreeva, Liliya Sh. Sadretdinova, Marina A. Korolyova,  
Mikhail I. Kodess, Valery N. Charushin and Oleg N. Chupakhin

*Tetrahedron: Asymmetry 14 (2003) 1985*

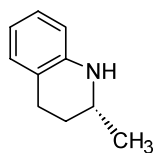


(-)-(*R*)-2,3-Dihydro-3-methyl-4*H*-1,4-benzoxazine

E.e. = 97.0% (by HPLC)  
 $[\alpha]_D^{20} -19$  (*c* 1.3,  $CHCl_3$ )  
Source of chirality: resolution  
Absolute configuration: (*R*)

Victor P. Krasnov,\* Galina L. Levit, Iraida M. Bukrina,  
Irina N. Andreeva, Liliya Sh. Sadretdinova, Marina A. Korolyova,  
Mikhail I. Kodess, Valery N. Charushin and Oleg N. Chupakhin

*Tetrahedron: Asymmetry 14 (2003) 1985*

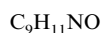
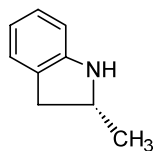


(+)-(*R*)-2-Methyl-1,2,3,4-tetrahydroquinoline

E.e. = 96.7% (by HPLC)  
 $[\alpha]_D^{20} +84$  (*c* 1.3, benzene)  
Source of chirality: resolution  
Absolute configuration: (*R*)

Victor P. Krasnov,\* Galina L. Levit, Iraida M. Bukrina,  
Irina N. Andreeva, Liliya Sh. Sadretdinova, Marina A. Korolyova,  
Mikhail I. Kodess, Valery N. Charushin and Oleg N. Chupakhin

*Tetrahedron: Asymmetry 14 (2003) 1985*

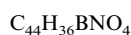
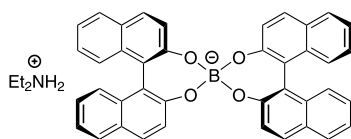


(+)-(R)-2-Methylindoline

E.e. = 97.2% (by HPLC)  
 $[\alpha]_D^{20} +11$  (c 2.0, benzene)  
Source of chirality: resolution  
Absolute configuration: (R)

Christabel Carter, Sarah Fletcher and Adam Nelson\*

*Tetrahedron: Asymmetry 14 (2003) 1995*

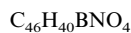
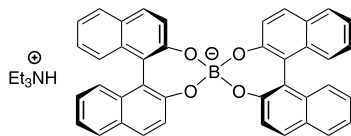


Diethylammonium bis[(R)-1,1'-bi-2-naphtholato]borate

E.e. >98%  
 $[\alpha]_D = -265.3$  (c 1.10, DMSO)  
Source of chirality: (R)-1,1'-bi-2-naphthol

Christabel Carter, Sarah Fletcher and Adam Nelson\*

*Tetrahedron: Asymmetry 14 (2003) 1995*

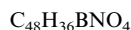
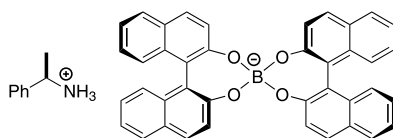


Triethylammonium bis[(R)-1,1'-bi-2-naphtholato] borate

E.e. >98%  
 $[\alpha]_D = -232.4$  (c 1.01, DMSO)  
Source of chirality: (R)-1,1'-bi-2-naphthol

Christabel Carter, Sarah Fletcher and Adam Nelson\*

*Tetrahedron: Asymmetry 14 (2003) 1995*

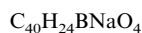
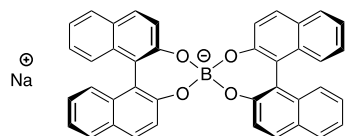


(R)- $\alpha$ -Methylbenzylammonium bis[(S)-1,1'-bi-2-naphtholato]borate

E.e. >98%  
 $[\alpha]_D = 320.9$  (c 1.05, DMSO)  
Source of chirality: (S)-1,1'-bi-2-naphthol and  
(R)- $\alpha$ -methylbenzylamine

Christabel Carter, Sarah Fletcher and Adam Nelson\*

*Tetrahedron: Asymmetry 14 (2003) 1995*



Sodium bis[(*R*)-1,1'-bi-2-naphtholato]borate

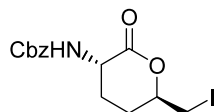
E.e. >98%

$[\alpha]_{\text{D}} = 173.6$  (*c* 1.04, DMSO)

Source of chirality: (*R*)-1,1'-bi-2-naphthol

Pietro Allevi\* and Mario Anastasia

*Tetrahedron: Asymmetry 14 (2003) 2005*



(2*S*,5*R*)-2-Benzyloxycarbonylamino-5-iodomethyl- $\delta$ -valerolactone

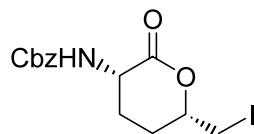
$[\alpha]_{\text{D}}^{25} = +7.0$  (*c* 1,  $\text{CHCl}_3$ )

Source of chirality: asymmetric synthesis

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

Pietro Allevi\* and Mario Anastasia

*Tetrahedron: Asymmetry 14 (2003) 2005*



(2*S*,5*S*)-2-Benzyloxycarbonylamino-5-iodomethyl- $\delta$ -valerolactone

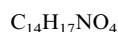
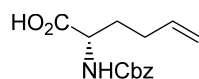
$[\alpha]_{\text{D}}^{25} = +41.5$  (*c* 1,  $\text{CHCl}_3$ )

Source of chirality: asymmetric synthesis

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

Pietro Allevi\* and Mario Anastasia

*Tetrahedron: Asymmetry 14 (2003) 2005*



(*S*)-2-Benzyloxycarbonylamino-hex-5-enoic acid

E.e. >98%

$[\alpha]_{\text{D}}^{25} = +21.6$  (*c* 1,  $\text{CHCl}_3$ )

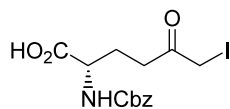
Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*)



Pietro Allevi\* and Mario Anastasia

*Tetrahedron: Asymmetry 14 (2003) 2005*



$C_{14}H_{16}INO_5$

Allyl (2*S*)-2-benzyloxycarbonylamino-6-iodo-5-oxohexanoate

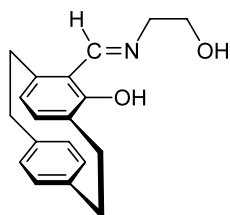
$[\alpha]_D^{25} = -3.0$  (*c* 1,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{19}H_{21}NO_2$

Schiff base of (*S*)-4-formyl-5-hydroxy[2.2]paracyclophane and ethanolamine

E.e. >99%

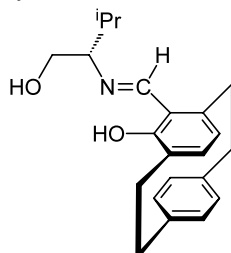
$[\alpha]_D^{22} = -481.8$  (*c* 0.23,  $CHCl_3$ )

Source of chirality: chiral starting material

Absolute configuration: (*Sp*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{22}H_{26}NO_2$

Schiff base of (*R*)-4-formyl-5-hydroxy[2.2]paracyclophane and (*R*)-valinol

E.e. >98%

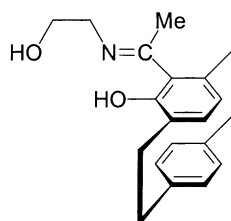
$[\alpha]_D^{22} = +653.5$  (*c* 0.36,  $CH_3OH$ )

Source of chirality: chiral starting material

Absolute configuration: (*Rp,R*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{20}H_{23}NO_2$

Schiff base of (*R*)-4-acetyl-5-hydroxy[2.2]paracyclophane and ethanolamine

E.e. >99%

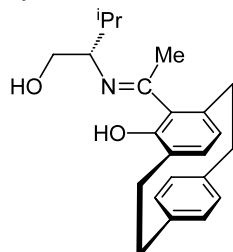
$[\alpha]_D^{22} = +611.7$  (*c* 0.21,  $CHCl_3$ )

Source of chirality: chiral starting material

Absolute configuration: (*Rp*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{23}H_{29}NO_2$

Schiff base of (*R*)-4-acetyl-5-hydroxy[2.2]paracyclophane and (*S*)-valinol

E.e. >99%

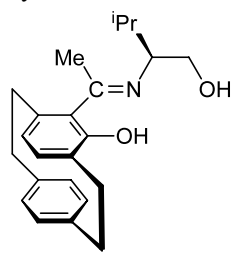
$[\alpha]_D^{22} +653.5$  (*c* 0.25,  $CHCl_3$ )

Source of chirality: chiral starting material

Absolute configuration: (*Rp,S*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{23}H_{29}NO_2$

Schiff base of (*S*)-4-acetyl-5-hydroxy[2.2]paracyclophane and (*S*)-valinol

E.e. >99%

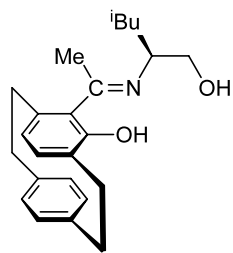
$[\alpha]_D^{22} -603.8$  (*c* 0.27,  $CHCl_3$ )

Source of chirality: chiral starting material

Absolute configuration: (*Sp,S*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{24}H_{31}NO_2$

Schiff base of (*S*)-4-acetyl-5-hydroxy[2.2]paracyclophane and (*S*)-leucinol

E.e. >99%

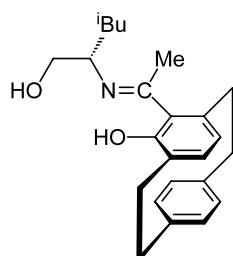
$[\alpha]_D^{22} -560.8$  (*c* 0.22,  $CHCl_3$ )

Source of chirality: chiral starting material

Absolute configuration: (*Sp,S*)

Tatyana I. Danilova, Valeria I. Rozenberg,\* Elena V. Sergeeva,  
Zoya A. Starikova and Stefan Bräse\*

*Tetrahedron: Asymmetry 14 (2003) 2013*



$C_{24}H_{31}NO_2$

Schiff base of (*R*)-4-acetyl-5-hydroxy[2.2]paracyclophane and (*S*)-leucinol

E.e. >99%

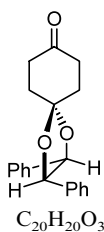
$[\alpha]_D^{22} +646.8$  (*c* 0.24,  $CHCl_3$ )

Source of chirality: chiral starting material

Absolute configuration: (*Rp,S*)

Felix Busqué, Mariona Cantó, Pedro de March,\* Marta Figueredo,  
Josep Font and Sonia Rodríguez

*Tetrahedron: Asymmetry 14 (2003) 2021*



(+)-(2*R*,3*R*)-2,3-Diphenyl-1,4-dioxaspiro[4.5]decan-8-one

Ee = 100%

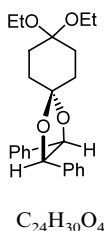
$[\alpha]_D^{20} = +38.4$  (c 1.3,  $CHCl_3$ )

Source of chirality: (*R,R*)-1,2-diphenyl ethanediol

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

Felix Busqué, Mariona Cantó, Pedro de March,\* Marta Figueredo,  
Josep Font and Sonia Rodríguez

*Tetrahedron: Asymmetry 14 (2003) 2021*



(+)-(2*R*,3*R*)-8,8-Diethoxy-2,3-diphenyl-1,4-dioxaspiro[4.5]decane

Ee = 100%

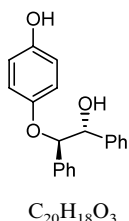
$[\alpha]_D^{20} = +18.5$  (c 0.3,  $CHCl_3$ )

Source of chirality: (*R,R*)-1,2-diphenyl ethanediol

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

Felix Busqué, Mariona Cantó, Pedro de March,\* Marta Figueredo,  
Josep Font and Sonia Rodríguez

*Tetrahedron: Asymmetry 14 (2003) 2021*



(+)-4-[(1*R*,2*R*)-2-Hydroxy-1,2-diphenylethoxy]phenol

Ee = 100%

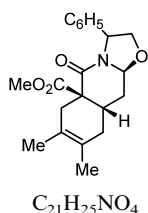
$[\alpha]_D^{20} = +13.3$  (c 0.5, acetone)

Source of chirality: (*R,R*)-1,2-diphenyl ethanediol

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

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(3*R*,5*aR*,9*aS*,10*aS*)-5*a*-(Methoxycarbonyl)-7,8-dimethyl-5-oxo-3-phenyl-2,3,9*a*,10,10*a*-hexahydro-6*H*-oxazolo[3,2-*b*]isoquinoline

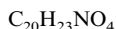
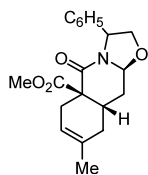
$[\alpha]_D^{22} = -13.0$  (c 1.15,  $CHCl_3$ )

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aR*,9*aS*,10*aS* (determined by X-ray crystallography)

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(3*R*,5*aR*,9*aS*,10*aS*)-5*a*-(Methoxycarbonyl)-8-methyl-5-oxo-3-phenyl-2,3,9,9*a*,10,10*a*-hexahydro-6*H*-oxazolo[3,2-*b*]isoquinoline

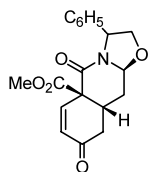
$[\alpha]_D^{22} = -15.3$  (*c* 1.08,  $CHCl_3$ )

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aR*,9*aS*,10*aS*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(3*R*,5*aR*,9*aR*,10*aS*)-5*a*-(Methoxycarbonyl)-5,8-dioxo-3-phenyl-2,3,9,9*a*,10,10*a*-hexahydro-8*H*-oxazolo[3,2-*b*]isoquinoline

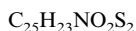
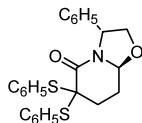
$[\alpha]_D^{22} = +3.1$  (*c* 0.32, EtOH)

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aS*,9*aR*,10*aS*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(3*R*,8*aS*)-5-Oxo-3-phenyl-6,6-bis(phenylsulfanyl)-2,3,6,7,8,8*a*-hexahydro-5*H*-oxazolo[3,2-*a*]pyridine

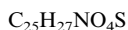
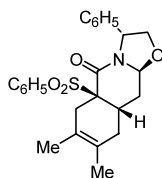
$[\alpha]_D^{22} = -49.0$  (*c* 0.5,  $CHCl_3$ )

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,8*aS*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(3*R*,5*aR*,9*aS*,10*aS*)-5*a*-(Benzenesulfonyl)-7,8-dimethyl-5-oxo-3-phenyl-2,3,9,9*a*,10,10*a*-hexahydro-6*H*-oxazolo[3,2-*b*]isoquinoline

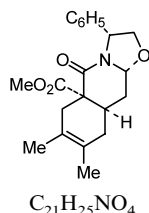
$[\alpha]_D^{22} = -5.5$  (*c* 0.3, EtOH)

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aR*,9*aS*,10*aS*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



C<sub>21</sub>H<sub>25</sub>NO<sub>4</sub>

(3*R*,5*aS*,9*aR*,10*aR*)-5*a*-(Methoxycarbonyl)-7,8-dimethyl-5-oxo-3-phenyl-2,3,9,9*a*,10,10*a*-hexahydro-6*H*-oxazolo[3,2-*b*]isoquinoline

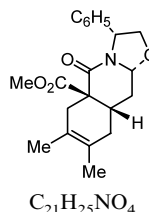
$[\alpha]_D^{22} = -131.3$  (*c* 0.6, MeOH)

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aS*,9*aR*,10*aR* (determined by X-ray crystallography)

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



C<sub>21</sub>H<sub>25</sub>NO<sub>4</sub>

(3*R*,5*aR*,9*aS*,10*aR*)-5*a*-(Methoxycarbonyl)-7,8-dimethyl-5-oxo-3-phenyl-2,3,9,9*a*,10,10*a*-hexahydro-6*H*-oxazolo[3,2-*b*]isoquinoline

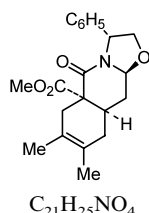
$[\alpha]_D^{22} = +34.7$  (*c* 0.76, MeOH)

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aR*,9*aS*,10*aR*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



C<sub>21</sub>H<sub>25</sub>NO<sub>4</sub>

(3*R*,5*aS*,9*aR*,10*aS*)-5*a*-(Methoxycarbonyl)-7,8-dimethyl-5-oxo-3-phenyl-2,3,9,9*a*,10,10*a*-hexahydro-6*H*-oxazolo[3,2-*b*]isoquinoline

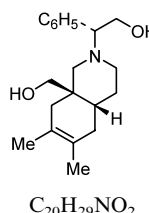
$[\alpha]_D^{22} = -2.2$  (*c* 0.98, MeOH)

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 3*R*,5*aS*,9*aR*,10*aS*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virgina López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



C<sub>20</sub>H<sub>29</sub>NO<sub>2</sub>

(4*aR*,8*aS*)-8*a*-(Hydroxymethyl)-2-[(1*R*)-2-hydroxy-1-phenylethyl]-6,7-dimethyl-2,3,4,4*a*,5,8-hexahydro-1*H*-isoquinoline

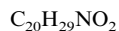
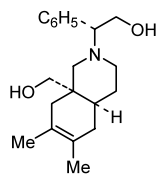
$[\alpha]_D^{22} = -4.6$  (*c* 0.2, MeOH)

Source of chirality: (*R*)-(-)-phenylglycinol

Absolute configuration: 4*aR*,8*aS*

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virginia López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(4aS,8aR)-8a-(Hydroxymethyl)-2-[(1R)-2-hydroxy-1-phenylethyl]-6,7-dimethyl-2,3,4,4a,5,8-hexahydro-1H-isoquinoline

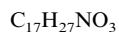
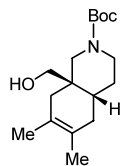
$$[\alpha]_D^{22} = -4.5 \text{ (c 0.25, MeOH)}$$

Source of chirality: (R)-(-)-phenylglycinol

Absolute configuration: 4aS,8aR

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virginia López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(4aR,8aS)-2-(*tert*-Butoxycarbonyl)-8a-(hydroxymethyl)-6,7-dimethyl-3,4,4a,5,8,8a-hexahydro-1H-isoquinoline

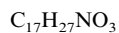
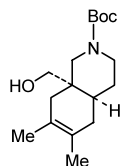
$$[\alpha]_D^{22} = +5.0 \text{ (c 2.0, MeOH)}$$

Source of chirality: (R)-(-)-phenylglycinol

Absolute configuration: 4aR,8aS

Núria Casamitjana, Mercedes Amat, Núria Llor, Marçal Carreras,  
Xavier Pujol, M. Montserrat Fernández, Virginia López, Elies Molins,  
Carles Miravittles and Joan Bosch\*

*Tetrahedron: Asymmetry 14 (2003) 2033*



(4aS,8aR)-2-(*tert*-Butoxycarbonyl)-8a-(hydroxymethyl)-6,7-dimethyl-3,4,4a,5,8,8a-hexahydro-1H-isoquinoline

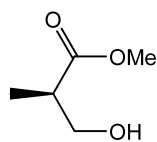
$$[\alpha]_D^{22} = -5.5 \text{ (c 2.0, MeOH)}$$

Source of chirality: (R)-(-)-phenylglycinol

Absolute configuration: 4aS,8aR

Francesco Molinari,\* Raffaella Gandolfi, Raffaella Villa, Eva Urban  
and Andreas Kiener

*Tetrahedron: Asymmetry 14 (2003) 2041*



Methyl 2-methyl-3-hydroxypropionate

E.e. = 97%

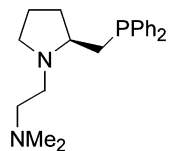
$$[\alpha]_D^{20} = -25.6 \text{ (c 2.0, MeOH)}$$

Source of chirality: enzymatic reaction

Absolute configuration: R

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



$C_{21}H_{29}N_2P$

(2*S*)-(-)-1-(2-*N,N*-Dimethylamino)ethyl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e.  $\geq 99\%$

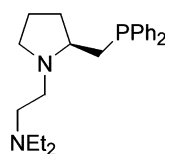
$[\alpha]_D^{25} = -160.0$  (*c* 1.18, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



$C_{23}H_{33}N_2P$

(2*S*)-(-)-1-(2-*N,N*-Diethylamino)ethyl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e.  $\geq 99\%$

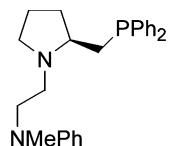
$[\alpha]_D^{25} = -83.1$  (*c* 1.09, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



$C_{26}H_{31}N_2P$

(2*S*)-(-)-1-(2-*N*-Methyl, *N*-phenylamino)ethyl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e.  $\geq 99\%$

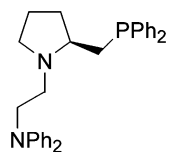
$[\alpha]_D^{25} = -144.5$  (*c* 1.05, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



$C_{31}H_{33}N_2P$

(2*S*)-(-)-1-(2-*N,N*-Diphenylamino)ethyl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e.  $\geq 99\%$

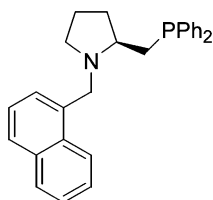
$[\alpha]_D^{25} = -102.1$  (*c* 1.05, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>28</sub>H<sub>28</sub>NP

(2*S*)-(-)-1-(1-Naphthylmethyl)-2-[(diphenylphosphino)methyl]-pyrrolidine

E.e. ≥ 99%

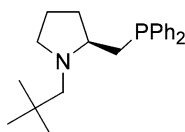
$[\alpha]_D^{25} = -154.8$  (*c* 1.08, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>22</sub>H<sub>30</sub>NP

(2*S*)-(-)-1-(2,2-Dimethylpropyl)-2-(diphenylphosphinomethyl)-pyrrolidine

E.e. ≥ 99%

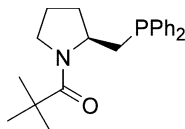
$[\alpha]_D^{25} = -152.1$  (*c* 1.01, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>22</sub>H<sub>28</sub>NOP

(2*S*)-(-)-1-(2,2-Dimethylpropionyl)-2-(diphenylphosphinomethyl)-pyrrolidine

E.e. ≥ 99%

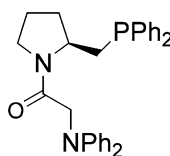
$[\alpha]_D^{25} = -71.6$  (*c* 1.70, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>31</sub>H<sub>31</sub>N<sub>2</sub>OP

(2*S*)-1-[2-(*N,N*-Diphenylamino)]acetyl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e. ≥ 99%

$[\alpha]_D^{25} = -67.8$  (*c* 1.06, EtOH)

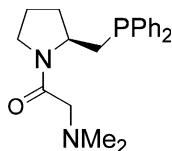
Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*



Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>21</sub>H<sub>27</sub>N<sub>2</sub>OP

(2*S*)-1-[2-(*N,N*-Dimethylamino)]acetyl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e. ≥ 99%

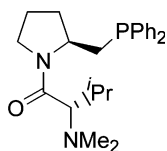
$[\alpha]_D^{25} = -94.5$  (c 1.24, EtOH)

Source of chirality: (*S*)-prolinol

Absolute configuration: 2*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>24</sub>H<sub>33</sub>N<sub>2</sub>OP

(2'*S*,2*S*)-(-)-1-[2-(*N,N*-Dimethylamino)-3-methyl]-butyryl-2-(diphenylphosphinomethyl)-pyrrolidine

E.e. ≥ 99%

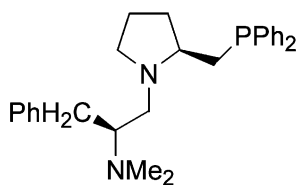
$[\alpha]_D^{25} = -78.8$  (c 1.24, EtOH)

Source of chirality: (*S*)-prolinol and L-valine

Absolute configuration: 2*S*,2'*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>28</sub>H<sub>35</sub>N<sub>2</sub>P

(2'*S*,2*S*)-1-[2-(*N,N*-Dimethylamino)-3-phenyl]-2-(diphenylphosphinomethyl)pyrrolidine

E.e. ≥ 99%

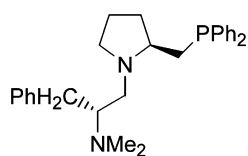
$[\alpha]_D^{25} = -83.1$  (c 1.09, EtOH)

Source of chirality: (*S*)-prolinol and D-phenylalanine

Absolute configuration: 2*S*,2'*S*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



C<sub>28</sub>H<sub>35</sub>N<sub>2</sub>P

(2'*R*,2*S*)-(-)-1-[2-(*N,N*-Dimethylamino)-3-phenyl]-2-(diphenylphosphinomethyl)pyrrolidine

E.e. ≥ 99%

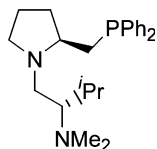
$[\alpha]_D^{25} = -160.0$  (c 1.18, EtOH)

Source of chirality: (*S*)-prolinol and L-phenylalanine

Absolute configuration: 2*S*,2'*R*

Xiaohui Cheng and King Kuok (Mimi) Hii\*

*Tetrahedron: Asymmetry 14 (2003) 2045*



$C_{24}H_{35}N_2P$

(2',2S)-(-)-1-[2-(N,N-Dimethylamino)-3-methyl]butyl-2-(diphenylphosphinomethyl)pyrrolidine

E.e.  $\geq 99\%$

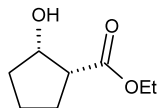
$[\alpha]_D^{25} = -132.6$  (c 1.08, EtOH)

Source of chirality: (S)-prolinol and L-valine

Absolute configuration: 2S,2'S

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_8H_{14}O_3$

Ethyl (1R,2S)-2-hydroxycyclopentanecarboxylate

E.e.  $>99\%$  by chiral GC

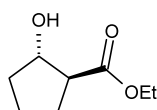
$[\alpha]_D^{20} +22.1$  (c 1.0, MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: 1R,2S

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_8H_{14}O_3$

Ethyl (1S,2S)-2-hydroxycyclopentanecarboxylate

E.e.  $>99\%$  by chiral HPLC

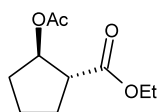
$[\alpha]_D^{20} +50.3$  (c 1.3, Et<sub>2</sub>O)

Source of chirality: enzymatic resolution

Absolute configuration: 1S,2S

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_{10}H_{16}O_4$

Ethyl (1R,2R)-2-acetoxycyclopentanecarboxylate

E.e.  $>99\%$  by chiral HPLC

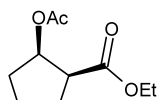
$[\alpha]_D^{20} -53.0$  (c 1.3, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

Absolute configuration: 1R,2R

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_{10}H_{16}O_4$

Ethyl (1*S*,2*R*)-2-acetoxycyclopentanecarboxylate

E.e. >99% by chiral GC

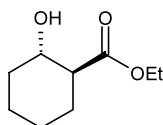
$[\alpha]_D^{20} -8.0$  (c 0.8,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_9H_{16}O_3$

Ethyl (1*S*,2*S*)-2-hydroxycyclohexanecarboxylate

E.e. >99% by chiral GC

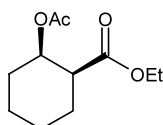
$[\alpha]_D^{20} +40.1$  (c 1.0,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_{11}H_{18}O_4$

Ethyl (1*S*,2*R*)-2-acetoxycyclohexanecarboxylate

E.e. >99% by chiral GC

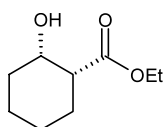
$[\alpha]_D^{20} -24.2$  (c 1.1,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_9H_{16}O_3$

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

E.e. >99% by chiral GC

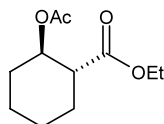
$[\alpha]_D^{20} +18.2$  (c 2.3,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_{11}H_{18}O_4$

Ethyl (1*R*,2*R*)-2-acetoxycyclohexanecarboxylate

E.e. >99% by chiral GC

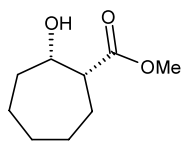
$[\alpha]_D^{20} -53.0$  (*c* 1.3,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_9H_{16}O_3$

Methyl (1*R*,2*S*)-2-hydroxycycloheptanecarboxylate

E.e. >99% by chiral HPLC

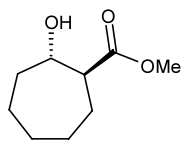
$[\alpha]_D^{20} +43.2$  (*c* 1.2,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_9H_{16}O_3$

Methyl (1*S*,2*S*)-2-hydroxycycloheptanecarboxylate

E.e. >99% by chiral GC

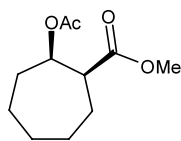
$[\alpha]_D^{20} +8.1$  (*c* 1.9,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



$C_{11}H_{18}O_4$

Methyl (1*S*,2*R*)-2-acetoxycycloheptanecarboxylate

E.e. >99% by chiral HPLC

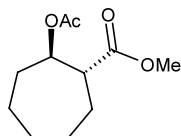
$[\alpha]_D^{20} +10.5$  (*c* 1.4,  $CHCl_3$ )

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



C<sub>11</sub>H<sub>18</sub>O<sub>4</sub>

Methyl (1*R*,2*R*)-2-hydroxycycloheptanecarboxylate

E.e. >99% by chiral GC

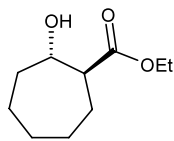
[ $\alpha$ ]<sub>D</sub><sup>20</sup> -13.4 (c 2.4, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



C<sub>10</sub>H<sub>18</sub>O<sub>3</sub>

Ethyl (1*S*,2*S*)-2-hydroxycycloheptanecarboxylate

E.e. >99% by chiral GC

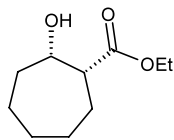
[ $\alpha$ ]<sub>D</sub><sup>20</sup> +17.3 (c 0.7, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

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

Laura M. Levy, Juan R. Dehli and Vicente Gotor\*

*Tetrahedron: Asymmetry 14 (2003) 2053*



C<sub>10</sub>H<sub>18</sub>O<sub>3</sub>

Ethyl (1*R*,2*S*)-2-hydroxycycloheptanecarboxylate

E.e. >99% by chiral HPLC

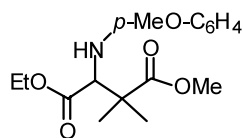
[ $\alpha$ ]<sub>D</sub><sup>20</sup> +48.7 (c 0.9, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

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

Nada Jaber, Fabien Carrée, Jean-Claude Fiaud and Jacqueline Collin\*

*Tetrahedron: Asymmetry 14 (2003) 2067*



C<sub>16</sub>H<sub>23</sub>NO<sub>5</sub>

4-Ethyl 1-methyl 3-(4-methoxy-phenylamino)-2,2-dimethylsuccinate

Ee = 90% by HPLC on Chiracel<sup>®</sup> OD-H column

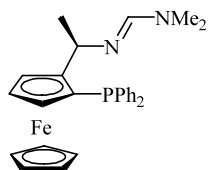
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = -20.1 (c 0.84, CHCl<sub>3</sub>)

Source of chirality: asymmetric catalysis

Absolute configuration: not known

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{27}H_{29}FeN_2P$

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

E.e. >98%

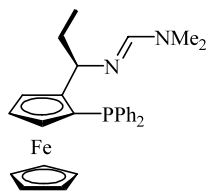
$[\alpha]_D^{25} = -427$  (*c* 0.11,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{28}H_{31}FeN_2P$

(*R*)-*N*-(Dimethylaminomethylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]propylamine

E.e. >98%

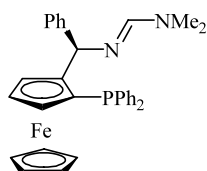
$[\alpha]_D^{25} = -450$  (*c* 0.22,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{32}H_{31}FeN_2P$

(*R*)-*N*-(Dimethylaminomethylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]phenylmethylamine

E.e. >98%

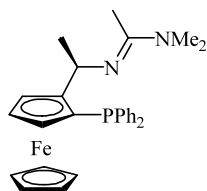
$[\alpha]_D^{25} = -330$  (*c* 0.20,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{28}H_{31}FeN_2P$

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

E.e. >98%

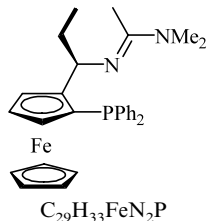
$[\alpha]_D^{25} = -402$  (*c* 0.10,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



(*R*)-*N*-(Dimethylaminoethylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]propylamine

E.e. >98%

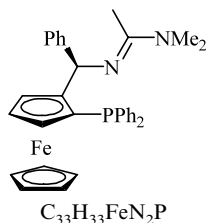
$[\alpha]_D^{25} = -431$  (*c* 0.10,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



(*R*)-*N*-(Dimethylaminoethylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]phenylmethylamine

E.e. >98%

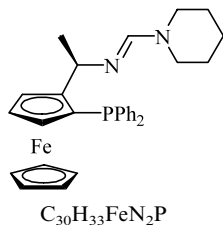
$[\alpha]_D^{25} = -345$  (*c* 0.20,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



(*R*)-*N*-[(1-Piperidino)methylene]-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

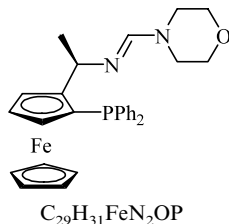
$[\alpha]_D^{25} = -470$  (*c* 0.10,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinquan Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



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

E.e. >98%

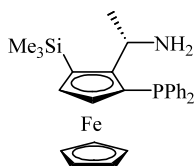
$[\alpha]_D^{25} = -482$  (*c* 0.11,  $CHCl_3$ )

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinqun Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{27}H_{32}FeNPSi$

(*S*)-1-[(*R*)-2-Trimethylsilyl-(*S*)-5-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

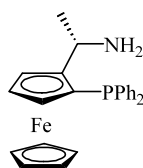
$[\alpha]_D^{25} = -342$  (*c* 0.10,  $CHCl_3$ )

Source of chirality: (*S*)-*N,N*-dimethyl-1-[(*R*)-2-trimethylsilyl-(*S*)-5-(diphenylphosphino)ferrocenyl]ethylamine

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinqun Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{24}H_{24}FeNP$

(*S*)-1-[(*S*)-2-(Diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

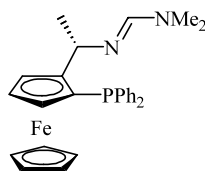
$[\alpha]_D^{25} = -341$  (*c* 0.11,  $CHCl_3$ )

Source of chirality: (*S*)-1-[(*R*)-2-trimethylsilyl-(*S*)-5-(diphenylphosphino)ferrocenyl]ethylamine

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinqun Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{27}H_{29}FeN_2P$

(*S*)-*N*-(Dimethylaminoethylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

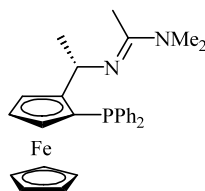
$[\alpha]_D^{25} = -161$  (*c* 0.19, MeOH)

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

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

Xiangping Hu, Huilin Chen, Huicong Dai, Xinqun Hu and Zhuo Zheng\*

*Tetrahedron: Asymmetry 14 (2003) 2073*



$C_{28}H_{31}FeN_2P$

(*S*)-*N*-(Dimethylaminoethylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

E.e. >98%

$[\alpha]_D^{25} = -142$  (*c* 0.28, MeOH)

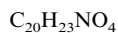
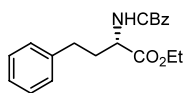
Source of chirality: (*S*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

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



Ching-Yao Chang and Teng-Kuei Yang\*

*Tetrahedron: Asymmetry 14 (2003) 2081*



(2*S*)-2-Benzyloxycarbonylamino-4-phenylbutyric acid ethyl ester

E.e. >98%

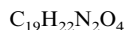
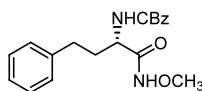
$[\alpha]_D = +25.1$  (*c* 1.08,  $CHCl_3$ )

Source of chirality: L-homophenylalanine ethyl ester

Absolute configuration: 2*S*

Ching-Yao Chang and Teng-Kuei Yang\*

*Tetrahedron: Asymmetry 14 (2003) 2081*



(1*S*)-(1-Methoxycarbonylamino-3-phenylpropyl)carbamic acid benzyl ester

E.e. >98%

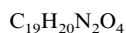
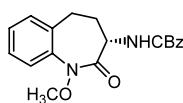
$[\alpha]_D = -29.5$  (*c* 1.03,  $CHCl_3$ )

Source of chirality: L-homophenylalanine ethyl ester

Absolute configuration: 1*S*

Ching-Yao Chang and Teng-Kuei Yang\*

*Tetrahedron: Asymmetry 14 (2003) 2081*



(3*S*)-(1-Methoxy-2-oxo-2,3,4,5-tetrahydro-1*H*-benzo[*b*]azepin-3-yl)carbamic acid benzyl ester

E.e. >98%

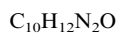
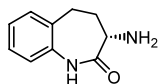
$[\alpha]_D = -120.7$  (*c* 1.03,  $CHCl_3$ )

Source of chirality: L-homophenylalanine ethyl ester

Absolute configuration: 3*S*

Ching-Yao Chang and Teng-Kuei Yang\*

*Tetrahedron: Asymmetry 14 (2003) 2081*



(3*S*)-3-Amino-1,3,4,5-tetrahydrobenzo[*b*]azepin-2-one

E.e. >98%

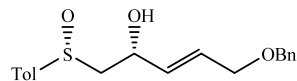
$[\alpha]_D = -447.0$  (*c* 1.02,  $CH_3OH$ )

Source of chirality: L-homophenylalanine ethyl ester

Absolute configuration: 3*S*

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



$C_{19}H_{22}O_3S$

5-Benzyloxy-1-(*S*)--(4-methylphenylsulfinyl)-(2*R*,3*E*)-penten-2-ol

De >95%

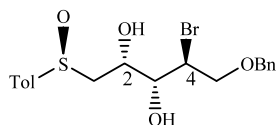
$[\alpha]_D^{24} = 118.9$  (*c* 0.75,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*<sub>S</sub>,2*R*)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



$C_{19}H_{23}BrO_4S$

5-Benzyloxy-4-bromo-1-(*S*)--(4-methylphenylsulfinyl)-(2*R*,3*R*,4*S*)-pentane-2,3-diol

De >95%

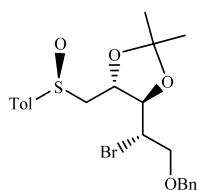
$[\alpha]_D^{24} = -129.5$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*<sub>S</sub>,2*R*,3*R*,4*S*)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



$C_{22}H_{29}BrO_4S$

4-[2-Benzyloxy-1-bromo-(1*S*)-ethyl]-2,2-dimethyl-5-(*S*)--(4-methylphenylsulfinylmethyl)-(4*R*,5*R*)-1,3-dioxolane

De >95%

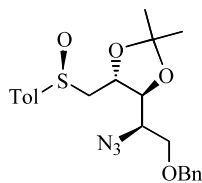
$[\alpha]_D^{24} = -152.4$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*<sub>S</sub>,1*S*,4*R*,5*R*)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



$C_{22}H_{29}N_3O_4S$

4-[1-Azido-2-benzyloxy-(1*R*)-ethyl]-2,2-dimethyl-5-(*S*)--(4-methylphenylsulfinylmethyl)-(4*S*,5*R*)-1,3-dioxolane

De >95%

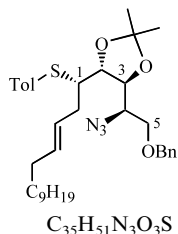
$[\alpha]_D^{24} = -49.5$  (*c* 0.65,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*<sub>S</sub>,1*R*,4*S*,5*R*)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



2-Azido-2-[2,2-dimethyl-5-[1-(4-methylphenylsulfanyl)-(E)-3-tetradecenyl]-(4S,5R)-1,3-dioxolan-4-yl]ethylbenzylether

De >95%

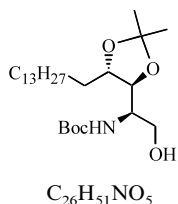
$[\alpha]_D^{24} = 13.1$  (c 0.2,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (4S,5R)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



2-(N-tert-Butoxycarbonyl)amino-2-(2,2-dimethyl-5-tetradecyl-(4S,5R)-1,3-dioxolan-4-yl)-1-ethanol

De >95%

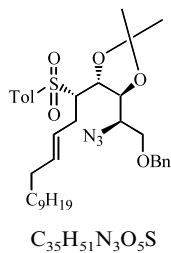
$[\alpha]_D^{24} = -9.1$  (c 0.6,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (4S,5R)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



1-[5-[1-Azido-2-benzyloxy-(1R)-ethyl]-2,2-dimethyl-5-[1-(4-methylphenylsulfonyl)-(E)-3-tetradecenyl]-(4S,5R)-1,3-dioxolane

De >95%

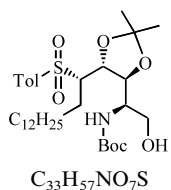
$[\alpha]_D^{24} = -12.7$  (c 1.6,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (1R,4S,5R)

Sadagopan Raghavan,\* A. Rajender and J. S. Yadav

*Tetrahedron: Asymmetry 14 (2003) 2093*



2-(N-tert-Butoxycarbonyl)amino-2-{2,2-dimethyl-5-[1-(4-methylphenylsulfonyl)tetradecyl]-(4S,5S)-1,3-dioxolan-4-yl}-1-ethanol

De >95%

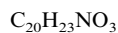
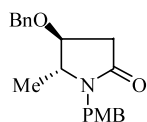
$[\alpha]_D^{24} = -3.4$  (c 2.4,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (4S,5S)

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Benzyloxy-1-(4-methoxybenzyl)-5-methyl-2-pyrrolidinone

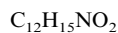
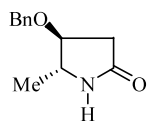
$[\alpha]_D^{20} = +91.2$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Benzyloxy-5-methyl-2-pyrrolidinone

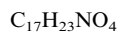
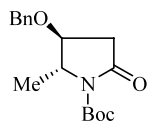
$[\alpha]_D^{20} = +60.5$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Benzyloxy-1-(*tert*-butyloxycarbonyl)-5-methyl-2-pyrrolidinone

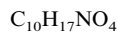
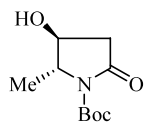
$[\alpha]_D^{20} = -21.1$  (*c* 1.1,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Hydroxy-1-(*tert*-butyloxycarbonyl)-5-methyl-2-pyrrolidinone

$[\alpha]_D^{20} = -48.4$  (*c* 0.7, MeOH)

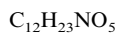
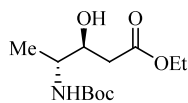
$[\alpha]_D^{20} = -36.4$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(3*S*,4*R*)-4-(*tert*-Butyloxycarbonylamino)-3-hydroxypentanoic acid ethyl ester

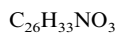
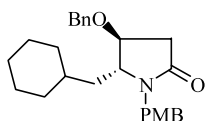
$[\alpha]_D^{20} = +10.0$  (*c* 0.58, MeOH)

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Benzyloxy-5-(cyclohexylmethyl)-1-(4-methoxybenzyl)-2-pyrrolidinone

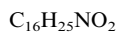
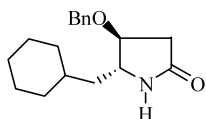
$[\alpha]_D^{20} = +33.5$  (*c* 2.1,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Benzyloxy-5-(cyclohexylmethyl)-2-pyrrolidinone

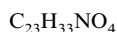
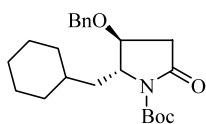
$[\alpha]_D^{20} = +50.0$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



(4*S*,5*R*)-4-Benzyloxy-1-(*tert*-butyloxycarbonyl)-5-(cyclohexylmethyl)-2-pyrrolidinone

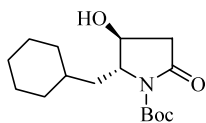
$[\alpha]_D^{20} = -34.8$  (*c* 0.9,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



$C_{16}H_{27}NO_4$

(4*S*,5*R*)-4-Hydroxy-1-(*tert*-butyloxycarbonyl)-5-(cyclohexylmethyl)-2-pyrrolidinone

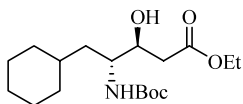
$[\alpha]_D^{20} = -48.4$  (*c* 1.1, MeOH)

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



$C_{12}H_{23}NO_5$

(3*S*,4*R*)-4-[(*tert*-Butyloxycarbonyl)amino]-5-cyclohexyl-3-hydroxypentanoic acid ethyl ester

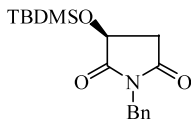
$[\alpha]_D^{20} = +21.5$  (*c* 1.0, MeOH)

Source of chirality: (*S*)-malic acid

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

Bi-Yan He, Tian-Jun Wu, Xian-Yong Yu and Pei-Qiang Huang\*

*Tetrahedron: Asymmetry 14 (2003) 2101*



$C_{17}H_{25}NO_3Si$

(*S*)-1-Benzyl-3-(*tert*-butyldimethylsilyloxy)pyrrolidine-2,5-dione

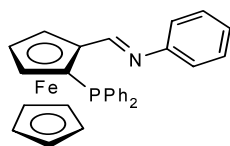
$[\alpha]_D^{20} = -42.1$  (*c* 1.2,  $CHCl_3$ )

Source of chirality: (*S*)-malic acid

Absolute configuration: (*S*)

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



$C_{29}H_{24}NPFe$

[(*S*)- $\alpha$ -(Diphenylphosphino)-(methylene-phenyl-amino)]ferrocene

E.e. >98% (by  $^1H$  NMR)

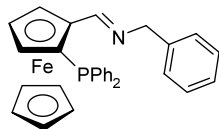
$[\alpha]_D^{20} = 134$  (*c* 0.50,  $CH_2Cl_2$ )

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration:  $S_p$

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



C<sub>30</sub>H<sub>26</sub>NPFe

[(*S*)- $\alpha$ -(Diphenylphosphino)-(methylene-benzyl-amino)]ferrocene

E.e. >98% (by <sup>1</sup>H NMR)

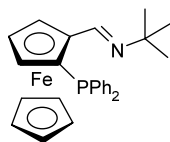
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = 342 (c 0.50, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration: *S<sub>p</sub>*

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



C<sub>27</sub>H<sub>28</sub>NPFe

[(*S*)- $\alpha$ -(Diphenylphosphino)-(methylene-*tert*-butyl-amino)]ferrocene

E.e. >98% (by <sup>1</sup>H NMR)

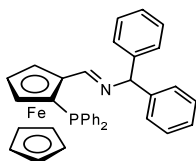
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = 242 (c 0.50, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration: *S<sub>p</sub>*

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*Tetrahedron: Asymmetry 14 (2003) 2109*



C<sub>36</sub>H<sub>30</sub>NPFe

[(*S*)- $\alpha$ -(Diphenylphosphino)-(methylene-diphenylmethyl-amino)]ferrocene

E.e. >98% (by <sup>1</sup>H NMR)

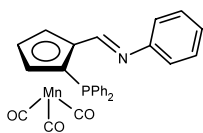
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = 174 (c 0.50, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration: *S<sub>p</sub>*

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



C<sub>27</sub>H<sub>19</sub>O<sub>3</sub>NPMn

Tricarbonyl[(*S*)- $\alpha$ -(diphenylphosphino)-(methylene-phenyl-amino)cyclopentadienyl]manganese

E.e. >98% (by <sup>1</sup>H NMR)

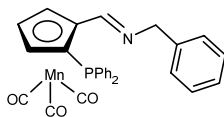
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = -390 (c 0.25, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration: *S<sub>p</sub>*

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



$C_{28}H_{21}O_3NPMn$

Tricarbonyl[(*S*)- $\alpha$ -(diphenylphosphino)-(methylene-benzyl-amino)cyclopentadienyl]manganese

E.e. >98% (by  $^1H$  NMR)

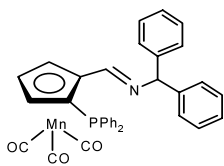
$[\alpha]_D^{20} = -590$  (*c* 0.25,  $CH_2Cl_2$ )

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration:  $S_p$

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



$C_{34}H_{25}O_3NPMn$

Tricarbonyl[(*S*)- $\alpha$ -(diphenylphosphino)-(methylene-diphenylmethyl-amino)cyclopentadienyl]manganese

E.e. >98% (by  $^1H$  NMR)

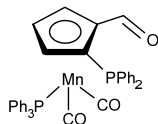
$[\alpha]_D^{20} = -253$  (*c* 0.50,  $CH_2Cl_2$ )

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration:  $S_p$

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



$C_{38}H_{29}O_3P_2Mn$

Dicarboxyl(triphenylphosphine)[(*S*)- $\alpha$ -(diphenylphosphino)-formyl-cyclopentadienyl]manganese

E.e. >98% (by  $^1H$  NMR)

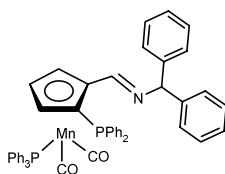
$[\alpha]_D^{20} = -224$  (*c* 0.50,  $CH_2Cl_2$ )

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration:  $S_p$

Jae Hoon Lee, Seung Uk Son and Young Keun Chung\*

*Tetrahedron: Asymmetry 14 (2003) 2109*



$C_{51}H_{40}O_2NP_2Mn$

Dicarboxyl(triphenylphosphine)[(*S*)- $\alpha$ -(diphenylphosphino)-(methylene-diphenylmethyl-amino)cyclopentadienyl]manganese

E.e. >98% (by  $^1H$  NMR)

$[\alpha]_D^{20} = -608$  (*c* 0.25,  $CH_2Cl_2$ )

Source of chirality: (*S*)-(-)-1,2,4-butanetriol

Absolute configuration:  $S_p$