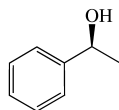


Stereochemistry abstracts

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry* 17 (2006) 1769



$C_8H_{10}O$

(S)-(-)-1-Phenylethanol

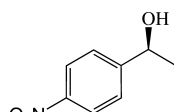
Ee = 99%

$[\alpha]_D = -59.2$  (c 0.658,  $CHCl_3$ )

Absolute configuration: (S)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry* 17 (2006) 1769



$C_8H_9NO_3$

(S)-(-)-1-(4-Nitrophenyl)ethanol

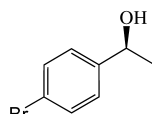
Ee = >99%

$[\alpha]_D = -30.5$  (c 1.083, EtOH)

Absolute configuration: (S)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry* 17 (2006) 1769



$C_8H_9BrO$

(S)-(-)-1-(4-Bromophenyl)ethanol

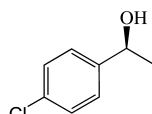
Ee = >99%

$[\alpha]_D = -36.0$  (c 0.775,  $CHCl_3$ )

Absolute configuration: (S)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry* 17 (2006) 1769



$C_8H_9ClO$

(S)-(-)-1-(4-Chlorophenyl)ethanol

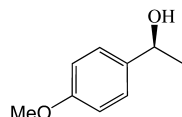
Ee = >99%

$[\alpha]_D = -47.8$  (c 0.758,  $Et_2O$ )

Absolute configuration: (S)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



$C_9H_{12}O_2$

(*S*)-(-)-1-(4-Methoxyphenyl)ethanol

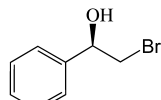
Ee = >99%

$[\alpha]_D = -56.4$  (*c* 0.442,  $CHCl_3$ )

Absolute configuration: (*S*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



$C_8H_9BrO$

(*R*)-(-)-2-Bromo-1-phenylethanol

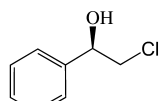
Ee = >99%

$[\alpha]_D = -39.5$  (*c* 0.592,  $CHCl_3$ )

Absolute configuration: (*R*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



$C_8H_9ClO$

(*R*)-(-)-2-Chloro-1-phenylethanol

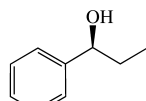
Ee = >99%

$[\alpha]_D = -50.7$  (*c* 0.225, cyclohexane)

Absolute configuration: (*R*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



$C_9H_{12}O$

(*S*)-(-)-1-Phenyl-1-propanol

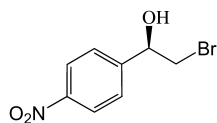
Ee = >99%

$[\alpha]_D = -50.8$  (*c* 1.03,  $CHCl_3$ )

Absolute configuration: (*S*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



(R)-(-)-2-Bromo-1-(4-nitrophenyl)ethanol

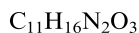
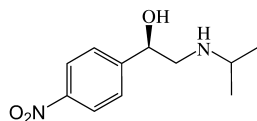
Ee = 97%

$[\alpha]_D = -35.4$  (c 0.942,  $CHCl_3$ )

Absolute configuration: (R)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



(R)-(-)-2-Isopropylamino-1-(4-nitrophenyl)ethanol

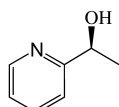
Ee = 97%

$[\alpha]_D = -41.5$  (c 0.286,  $H_2O$ )

Absolute configuration: (R)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



(S)-(-)-2-Pyridyl-1-ethanol

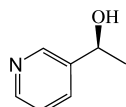
Ee = >99%

$[\alpha]_D = -25.0$  (c 1.39,  $CHCl_3$ )

Absolute configuration: (S)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



(S)-(-)-3-Pyridyl-1-ethanol

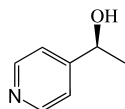
Ee = 99%

$[\alpha]_D = -47.0$  (c 0.625, MeOH)

Absolute configuration: (S)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



C<sub>7</sub>H<sub>9</sub>NO

(*S*)-(-)-4-Pyridyl-1-ethanol

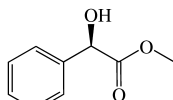
Ee = 97%

[ $\alpha$ ]<sub>D</sub> = -44.0 (*c* 1.03, MeOH)

Absolute configuration: (*S*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



C<sub>9</sub>H<sub>10</sub>O<sub>3</sub>

(*R*)-(-)-Methyl mandelate

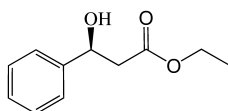
Ee = 86%

[ $\alpha$ ]<sub>D</sub> = -124.8 (*c* 0.8, MeOH)

Absolute configuration: (*R*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



C<sub>11</sub>H<sub>14</sub>O<sub>3</sub>

(*S*)-(-)-3-Hydroxy-3-phenylpropionic acid ethylester

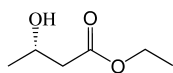
Ee = >99%

[ $\alpha$ ]<sub>D</sub> = -52.7 (*c* 1.0, CHCl<sub>3</sub>)

Absolute configuration: (*S*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



C<sub>6</sub>H<sub>12</sub>O<sub>3</sub>

(*S*)-(+)-Ethyl 3-hydroxybutyrate

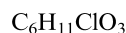
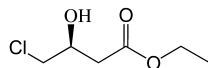
Ee = 74%

[ $\alpha$ ]<sub>D</sub> = +22.2 (*c* 0.442, CHCl<sub>3</sub>)

Absolute configuration: (*S*)

Wei Yang, Jian-He Xu,\* Yan Xie, Yi Xu, Gang Zhao  
and Guo-Qiang Lin

*Tetrahedron: Asymmetry 17 (2006) 1769*



(S)-(-)-Ethyl 4-chloro-3-hydroxybutanoate

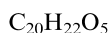
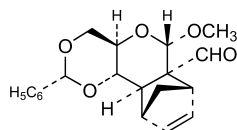
Ee = 64%

$[\alpha]_D = -11.4$  (c 1.59,  $CHCl_3$ )

Absolute configuration: (S)

María I. Mangione, Sebastián A. Testero, Alejandra G. Suárez,  
Rolando A. Spanevello\* and Jean-Pierre Tuchagues

*Tetrahedron: Asymmetry 17 (2006) 1780*



(1S,2S,3S,5R,8R,10S,11R,12R)-3-Methoxy-8-phenyl-4,7,9-trioxatetracyclo-[10.2.1.0<sup>2,11</sup>.0<sup>5,10</sup>]pentadec-13-ene-2-carbaldehyde

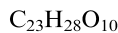
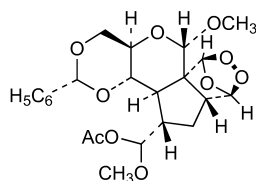
$[\alpha]_D^{25} = +35.8$  (c 8.54,  $CHCl_3$ )

Source of chirality: methyl  $\alpha$ -D-glucopyranoside

Absolute configuration: (1S,2S,3S,5R,8R,10S,  
11R,12R)

María I. Mangione, Sebastián A. Testero, Alejandra G. Suárez,  
Rolando A. Spanevello\* and Jean-Pierre Tuchagues

*Tetrahedron: Asymmetry 17 (2006) 1780*



(1S,2S,3S,5R,8R,10S,11R,12S,14R,15S,19undefined) 12-(Acetoxymethoxy)methyl-3-methoxy-8-phenyl-4,7,9,16,17,18-hexoxapentacyclo[13.2.1.0<sup>2,11</sup>.0<sup>2,14</sup>.0<sup>5,10</sup>]octadecane

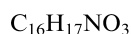
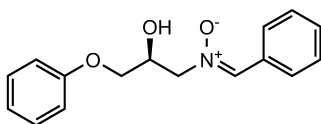
$[\alpha]_D^{25} = +21.5$  (c 0.44,  $CHCl_3$ )

Source of chirality: methyl  $\alpha$ -D-glucopyranoside

Absolute configuration: (1S,2S,3S,5R,8R,10S,11R,  
12S,14R,15S,19undefined)

Monika Wielechowska, Paulina Dąbrowska and Jan Plenkiewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



(S)-(-)-1-Benzylideneamino-3-phenoxypropan-2-ol-N-oxide

Ee = 69%

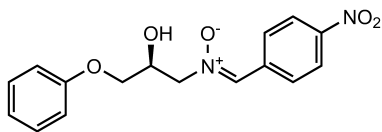
$[\alpha]_D^{22} = -53.3$  (c 1.05,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (S)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{16}H_{16}N_2O_5$

(*S*)-(-)-1-(4-Nitrobenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide

Ee = 95%

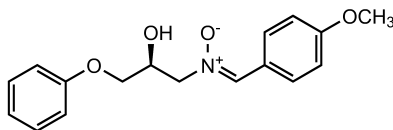
$[\alpha]_D^{22} = -92.7$  (*c* 0.75,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*S*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{17}H_{19}NO_4$

(*S*)-(-)-1-(4-Methoxybenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide

Ee = 30%

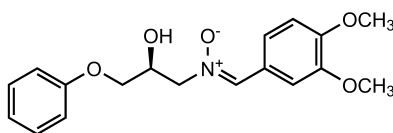
$[\alpha]_D^{22} = -22.6$  (*c* 0.97,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*S*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{18}H_{21}NO_5$

(*S*)-(-)-1-(3,4-Dimethoxybenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide

Ee = 80%

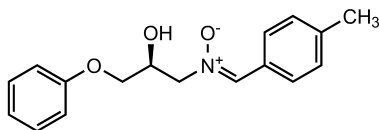
$[\alpha]_D^{22} = -56.0$  (*c* 1.035,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*S*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{17}H_{19}NO_3$

(*S*)-(-)-1-(4-Methylbenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide

Ee = 65%

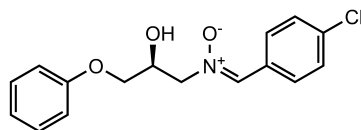
$[\alpha]_D^{22} = -38.6$  (*c* 0.72,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*S*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



(S)-(-)-1-(4-Chlorobenzylideneamino)-3-phenoxypropan-2-ol-N-oxide

Ee = 74%

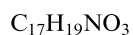
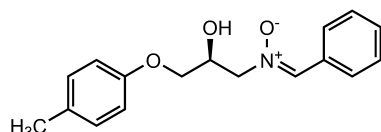
$[\alpha]_D^{22} = -50.0$  (c 0.96,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (S)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



(S)-(-)-1-Benzylideneamino-3-(4-methylphenoxy)propan-2-ol-N-oxide

Ee = 64%

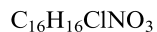
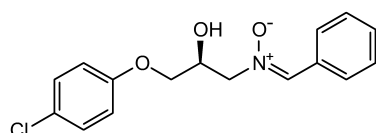
$[\alpha]_D^{22} = -46.0$  (c 1.00,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (S)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



(S)-(-)-1-Benzylideneamino-3-(4-chlorophenoxy)propan-2-ol-N-oxide

Ee = 60%

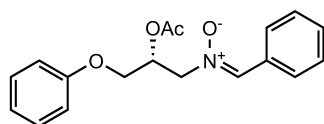
$[\alpha]_D^{22} = -46.2$  (c 0.72,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (S)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



(R)-(+)-1-Benzylideneamino-3-phenoxypropan-2-ol-N-oxide acetate

Ee = 77%

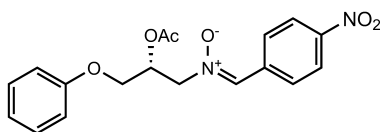
$[\alpha]_D^{22} = +27.4$  (c 1.56,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (R)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{18}H_{18}N_2O_6$

(*R*)-(+)-1-(4-Nitrobenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide acetate

Ee = 73%

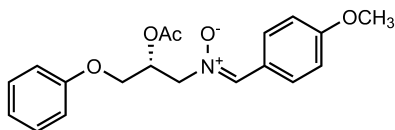
$[\alpha]_D^{22} = +30.8$  (*c* 0.85,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*R*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{19}H_{21}NO_5$

(*R*)-(+)-1-(4-Methoxybenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide acetate

Ee = 93%

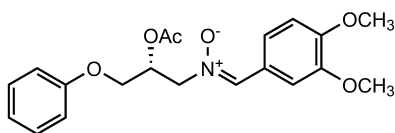
$[\alpha]_D^{22} = +16.7$  (*c* 1.20,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*R*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{20}H_{23}NO_6$

(*R*)-(+)-1-(3,4-Dimethoxybenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide acetate

Ee = 88%

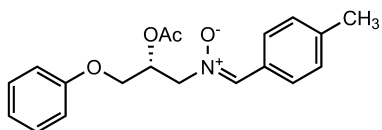
$[\alpha]_D^{22} = +22.1$  (*c* 0.73,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*R*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{19}H_{21}NO_4$

(*R*)-(+)-1-(4-Methylbenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide acetate

Ee = 80%

$[\alpha]_D^{22} = +31.6$  (*c* 1.90,  $CHCl_3$ )

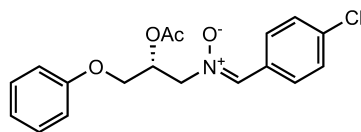
Source of chirality: enzymatic reaction

Configuration: (*R*)



Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{18}H_{18}ClNO_4$

(*R*)-(+)-1-(4-Chlorobenzylideneamino)-3-phenoxy-propan-2-ol-*N*-oxide acetate

Ee = 84%

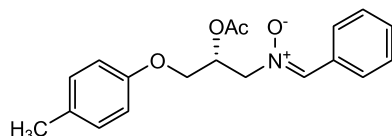
$[\alpha]_D^{22} = +35.2$  (*c* 1.25,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*R*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{19}H_{21}NO_4$

(*R*)-(+)-1-Benzylideneamino-3-(4-methylphenoxy)-propan-2-ol-*N*-oxide acetate

Ee = 73%

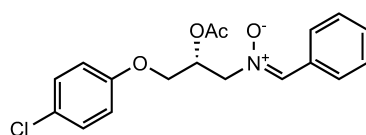
$[\alpha]_D^{22} = +34.6$  (*c* 0.92,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*R*)

Monika Wielechowska, Paulina Dąbrowska and Jan Pleniewicz\*

*Tetrahedron: Asymmetry 17 (2006) 1786*



$C_{18}H_{18}ClNO_4$

(*R*)-(+)-1-Benzylideneamino-3-(4-chlorophenoxy)-propan-2-ol-*N*-oxide acetate

Ee = 84%

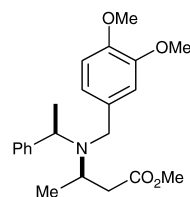
$[\alpha]_D^{22} = +28.2$  (*c* 1.17,  $CHCl_3$ )

Source of chirality: enzymatic reaction

Configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



$C_{22}H_{29}NO_4$

Methyl (*3R*, $\alpha$ *R*)-3-(*N*-3,4-dimethoxybenzyl-*N*- $\alpha$ -methylbenzylamino)butanoate

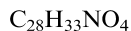
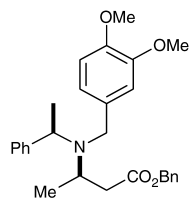
$[\alpha]_D^{20} = -5.2$  (*c* 1.1,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*3R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*R*, $\alpha$ *R*)-3-(*N*-3,4-dimethoxybenzyl-*N*- $\alpha$ -methylbenzylamino)butanoate

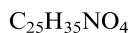
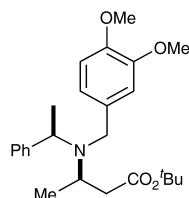
$$[\alpha]_D^{20} = +13.3 (c 1.3, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*R*, $\alpha$ *R*)-3-(*N*-3,4-dimethoxybenzyl-*N*- $\alpha$ -methylbenzylamino)butanoate

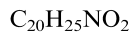
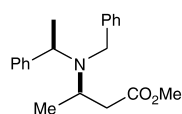
$$[\alpha]_D^{20} = +2.3 (c 1.7, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
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*Tetrahedron: Asymmetry 17 (2006) 1793*



Methyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)butanoate

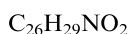
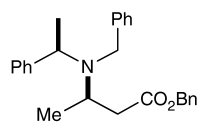
$$[\alpha]_D^{20} = -3.4 (c 1.2, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
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*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)butanoate

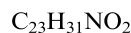
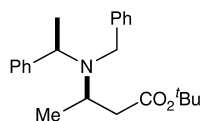
$$[\alpha]_D^{20} = +12.0 (c 1.2, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

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*tert*-Butyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)butanoate

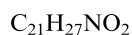
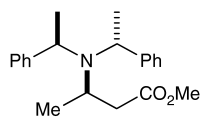
$$[\alpha]_D^{20} = -3.7 (c 1.1, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Methyl (3*R*, $\alpha$ *R*, $\alpha'$ *R*)-3-(*N,N*-bis( $\alpha$ -methylbenzyl)amino)butanoate

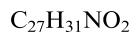
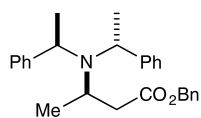
$$[\alpha]_D^{20} = -7.6 (c 1.1, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*, $\alpha'$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*R*, $\alpha$ *R*, $\alpha'$ *R*)-3-(*N,N*-bis( $\alpha$ -methylbenzyl)amino)butanoate

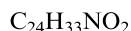
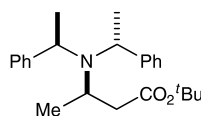
$$[\alpha]_D^{20} = +9.6 (c 1.1, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*, $\alpha'$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*R*, $\alpha$ *R*, $\alpha'$ *R*)-3-(*N,N*-bis( $\alpha$ -methylbenzyl)amino)butanoate

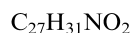
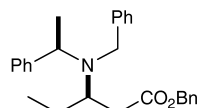
$$[\alpha]_D^{20} = +2.6 (c 1.2, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*, $\alpha'$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)pentanoate

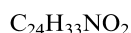
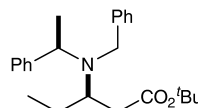
$$[\alpha]_D^{20} = +23.6 (c 1.1, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

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Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)pentanoate

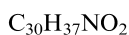
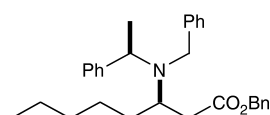
$$[\alpha]_D^{20} = +22.4 (c 1.1, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)octanoate

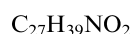
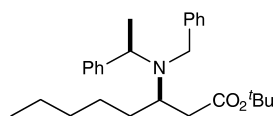
$$[\alpha]_D^{20} = +11.9 (c 1.6, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

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*tert*-Butyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)octanoate

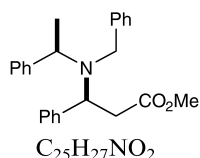
$$[\alpha]_D^{20} = +7.6 (c 1.4, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

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Methyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-phenylpropanoate

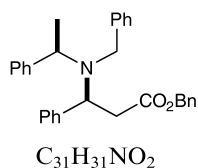
$$[\alpha]_D^{20} = -4.2 (c 1.1, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

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Benzyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-phenylpropanoate

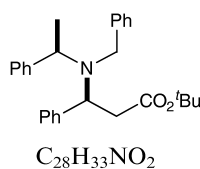
$$[\alpha]_D^{20} = +3.8 (c 1.0, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-phenylpropanoate

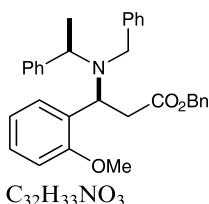
$$[\alpha]_D^{20} = +3.9 (c 0.7, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-(2-methoxyphenyl)propanoate

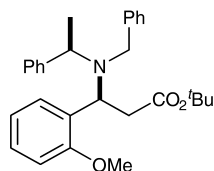
$$[\alpha]_D^{20} = +8.6 (c 0.6, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>29</sub>H<sub>35</sub>NO<sub>3</sub>

*tert*-Butyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-(2-methoxyphenyl)propanoate

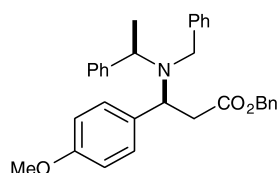
$[\alpha]_D^{20} = +15.0$  (*c* 0.9, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>32</sub>H<sub>33</sub>NO<sub>3</sub>

Benzyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-(4-methoxyphenyl)propanoate

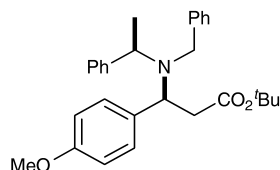
$[\alpha]_D^{20} = +7.1$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>29</sub>H<sub>35</sub>NO<sub>3</sub>

*tert*-Butyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-(4-methoxyphenyl)propanoate

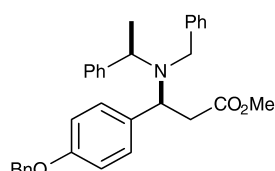
$[\alpha]_D^{20} = +2.2$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>32</sub>H<sub>33</sub>NO<sub>3</sub>

Methyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-(4-benzyloxyphenyl)propanoate

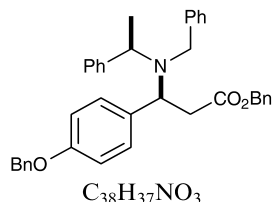
$[\alpha]_D^{20} = -0.8$  (*c* 2.0, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-3-(4-benzyloxyphenyl)propanoate

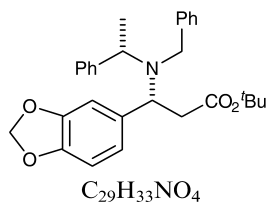
$$[\alpha]_D^{20} = -3.5 (c 1.7, CH_2Cl_2)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*R*, $\alpha$ *S*)-3-(3,4-methylenedioxyphenyl)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)propanoate

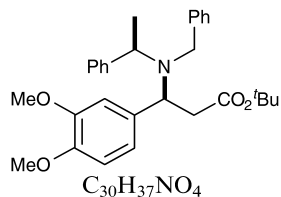
$$[\alpha]_D^{23} = -0.3 (c 1.5, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*R*, $\alpha$ *S*)-3-(3,4-dimethoxyphenyl)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)propanoate

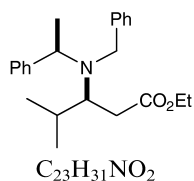
$$[\alpha]_D^{22} = -0.07 (c 0.95, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Ethyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-4-methyl-pentanoate

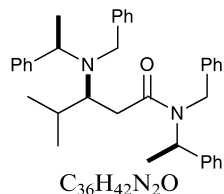
$$[\alpha]_D^{20} = -2.5 (c 1.0, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(3*S*, $\alpha$ *R*, $\alpha$ '*R*')-*N*-Benzyl-*N*- $\alpha$ -methylbenzyl 3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-4-methyl pentamide

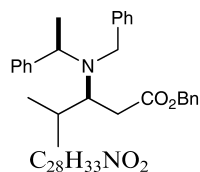
$[\alpha]_D^{21} = +89.3$  (*c* 1.8,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*, $\alpha$ '*R*')

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



Benzyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-4-methyl-pentanoate

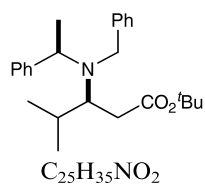
$[\alpha]_D^{20} = -4.8$  (*c* 1.3,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*S*, $\alpha$ *R*)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)-4-methyl-pentanoate

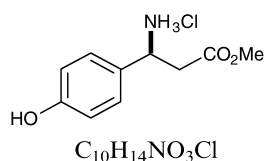
$[\alpha]_D^{24} = -1.9$  (*c* 1.4,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*S*)- $\beta$ -Tyrosine methyl ester hydrochloride

$[\alpha]_D^{20} = +10.6$  (*c* 1.9,  $H_2O$ )

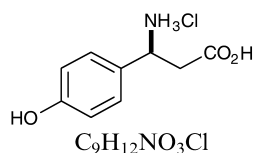
Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)



Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



$C_9H_{12}NO_3Cl$   
(*S*)- $\beta$ -Tyrosine hydrochloride

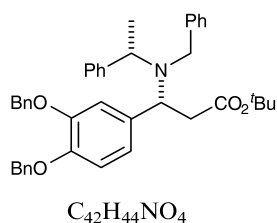
$$[\alpha]_D^{25} = +3.6 (c 1.4, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



$C_{42}H_{44}NO_4$   
*tert*-Butyl (*3R, \alpha S*)-3-(3,4-dibenzyloxyphenyl)-3-(*N*-benzyl-*N*- $\alpha$ -methylbenzylamino)propanoate

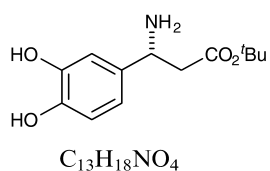
$$[\alpha]_D^{22} = -2.0 (c 1.4, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*3R, \alpha S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



$C_{13}H_{18}NO_4$   
*tert*-Butyl (*R*)-3-(3,4-dihydroxyphenyl)-3-aminopropanoate

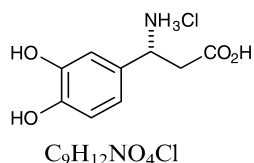
$$[\alpha]_D^{23} = +1.0 (c 0.70, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



$C_9H_{12}NO_4Cl$   
(*R*)- $\beta$ -DOPA hydrochloride

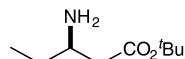
$$[\alpha]_D^{23} = +1.0 (c 0.70, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>9</sub>H<sub>19</sub>NO<sub>2</sub>

*tert*-Butyl (*R*)-3-aminopentanoate

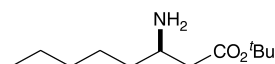
$[\alpha]_D^{20} = -22.3$  (*c* 1.5, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>12</sub>H<sub>25</sub>NO<sub>2</sub>

*tert*-Butyl (*R*)-3-aminooctanoate

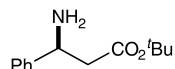
$[\alpha]_D^{20} = -14.3$  (*c* 0.7, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>13</sub>H<sub>19</sub>NO<sub>2</sub>

*tert*-Butyl (*S*)-3-phenyl-3-aminopropanoate

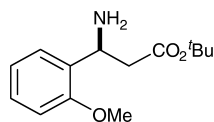
$[\alpha]_D^{20} = -21.0$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>14</sub>H<sub>21</sub>NO<sub>3</sub>

*tert*-Butyl (*S*)-3-(2-methoxyphenyl)-3-aminopropanoate

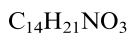
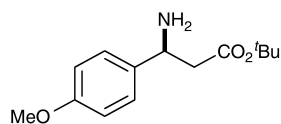
$[\alpha]_D^{20} = -20.0$  (*c* 0.7, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (*S*)-3-(4-methoxyphenyl)-3-aminopropanoate

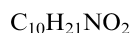
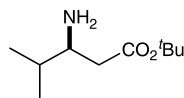
$$[\alpha]_D^{20} = -14.1 (c 0.8, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (*S*)-4-methyl-3-aminopentanoate

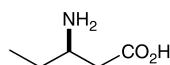
$$[\alpha]_D^{20} = -25.8 (c 3.4, CHCl_3)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*R*)- $\beta$ -Aminopentanoic acid

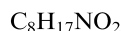
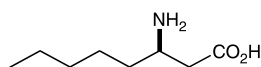
$$[\alpha]_D^{20} = -40.8 (c 0.8, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*R*)- $\beta$ -Aminooctanoic acid

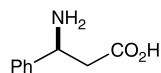
$$[\alpha]_D^{24} = -28.3 (c 0.5, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>9</sub>H<sub>11</sub>NO<sub>2</sub>

(*S*)-β-Phenylalanine

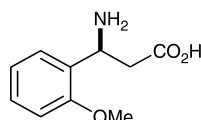
$[\alpha]_D^{20} = -7.0$  (*c* 1.0, H<sub>2</sub>O)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>10</sub>H<sub>13</sub>NO<sub>3</sub>

(*S*)-β-(2-Methoxyphenyl)-β-amino propionic acid

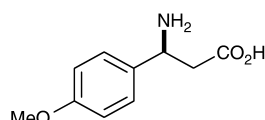
$[\alpha]_D^{20} = +15.5$  (*c* 1.0, H<sub>2</sub>O)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>10</sub>H<sub>13</sub>NO<sub>3</sub>

(*S*)-β-Tyrosine methyl ether

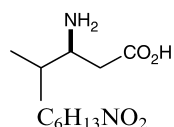
$[\alpha]_D^{20} = -1.4$  (*c* 0.2, H<sub>2</sub>O)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



C<sub>6</sub>H<sub>13</sub>NO<sub>2</sub>

(*S*)-β-Leucine

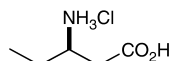
$[\alpha]_D^{24} = -48.2$  (*c* 1.1, H<sub>2</sub>O)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*R*)-3-Aminopentanoic acid hydrochloride

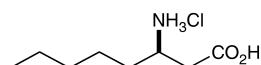
$$[\alpha]_D^{20} = -22.9 (c 0.8, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*R*)- $\beta$ -Aminooctanoic acid hydrochloride

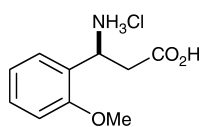
$$[\alpha]_D^{20} = -16.6 (c 1.1, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*S*)- $\beta$ -(2-Methoxyphenyl)- $\beta$ -aminopropionic acid hydrochloride

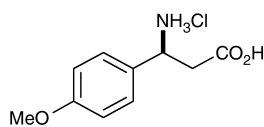
$$[\alpha]_D^{20} = +20.0 (c 0.5, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*S*)- $\beta$ -(4-Methoxyphenyl)- $\beta$ -aminopropionic acid hydrochloride

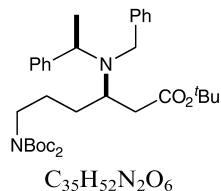
$$[\alpha]_D^{20} = +2.7 (c 0.5, H_2O)$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (3*R*, $\alpha$ *R*)-3-(*N*-benzyl)-*N*-[ $\alpha$ -methylbenzyl]amino)-6-(*N'*,*N'*-di-*tert*-butoxycarbonylamino)hexanoate

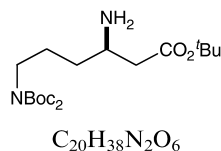
$$[\alpha]_D^{22} = +6.4 \text{ (} c \text{ 0.75, CHCl}_3\text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (3*R*, $\alpha$ *R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



*tert*-Butyl (*R*)-3-amino-6-(*N,N*-di-*tert*-butoxycarbonylamino)hexanoate

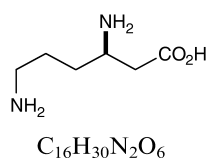
$$[\alpha]_D^{23} = -5.7 \text{ (} c \text{ 1.08, CHCl}_3\text{)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Stephen G. Davies,\* Narciso M. Garrido, Dennis Kruchinin,  
Osamu Ichihara, Luke J. Kotchie, Paul D. Price,  
Anne J. Price Mortimer, Angela J. Russell and Andrew D. Smith

*Tetrahedron: Asymmetry 17 (2006) 1793*



(*R*)- $\beta$ -Lysine

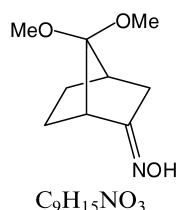
$$[\alpha]_D^{21} = -19.3 \text{ (} c \text{ 0.63, 1 M HCl)}$$

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and  
Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(-)-7,7-Dimethoxy-2-oximo-norbornane

Ee >99%

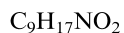
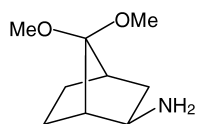
$$[\alpha]_D^{20} = -35.5 \text{ (} c \text{ 1.1, EtOAc)}$$

Source of chirality: enzymatic resolution

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

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(-)-7,7-Dimethoxy-2-exo-amino-norbornane

Ee >99%

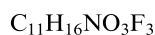
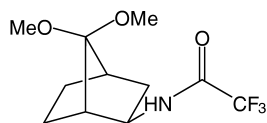
$[\alpha]_D^{20} = -18.0$  (c 1.0, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(-)-7,7-Dimethoxy-2-exo-trifluoroacetamide-norbornane

Ee >99%

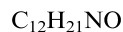
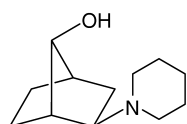
$[\alpha]_D^{20} = -7.4$  (c 1.2, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(-)-2-exo-Piperidine-7-syn-hydroxy-norbornane

Ee >99%

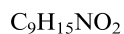
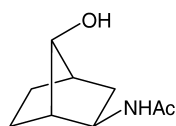
$[\alpha]_D^{20} = -30.0$  (c 1.0, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(+)-2-exo-Acetamido-7-syn-hydroxy-norbornane

Ee >99%

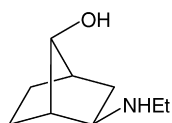
$[\alpha]_D^{20} = +5.4$  (c 1.1, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



$C_9H_{17}NO$

(-)-2-*exo*-Ethylamino-7-*syn*-hydroxy-norbornane

Ee >99%

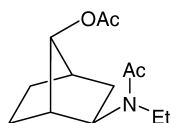
$[\alpha]_D^{20} = -20.0$  (c 1.0, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



$C_{13}H_{21}NO_3$

(+)-2-*exo*-Acetyethylamino-7-*syn*-acetate-norbornane

Ee >99%

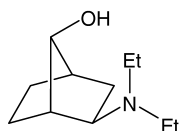
$[\alpha]_D^{20} = +2.0$  (c 1.1, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

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$C_{11}H_{21}NO$

(-)-2-*exo*-*N,N*-Diethylamino-7-*syn*-hydroxy-norbornane

Ee >99%

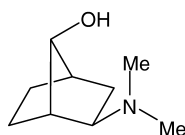
$[\alpha]_D^{20} = -41.0$  (c 1.1, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

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$C_9H_{17}NO$

(-)-2-*exo*-*N,N*-Dimethylamino-7-*syn*-hydroxy-norbornane

Ee >99%

$[\alpha]_D^{20} = -25.0$  (c 1.2, EtOAc)

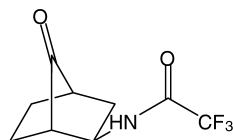
Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)



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*Tetrahedron: Asymmetry 17 (2006) 1817*



(+)-2-*exo*-Trifluoroacetamide-7-one-norbornane

Ee >99%

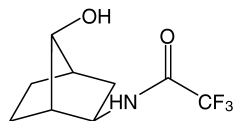
$[\alpha]_D^{20} = +8.5$  (c 2.0, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(-)-2-*exo*-Trifluoroacetamide-7-*syn*-hydroxy-norbornane

Ee >99%

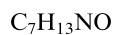
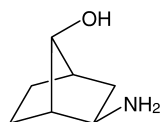
$[\alpha]_D^{20} = -3.6$  (c 1.1,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(-)-2-*exo*-Amino-7-*syn*-hydroxy-norbornane

Ee >99%

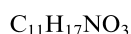
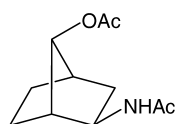
$[\alpha]_D^{20} = -5.0$  (c 1.2,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

José E. D. Martins, Clarissa M. Mehlecke, Muriell Gamba and Valentim E. U. Costa\*

*Tetrahedron: Asymmetry 17 (2006) 1817*



(+)-2-*exo*-Acetamido-7-*syn*-acetate-norbornane

Ee >99%

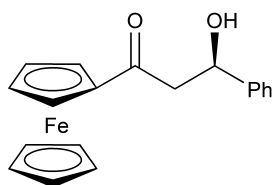
$[\alpha]_D^{20} = +22.3$  (c 1.2, EtOAc)

Source of chirality: enzymatic resolution

Absolute configuration: (1*S*,2*R*,4*R*,7*S*)

Angela Patti\* and Sonia Pedotti

*Tetrahedron: Asymmetry 17 (2006) 1824*



(*R*)-1-Ferrocenyl-3-phenyl-3-hydroxypropane-1 one

Ee = >99% (by chiral HPLC)

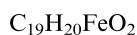
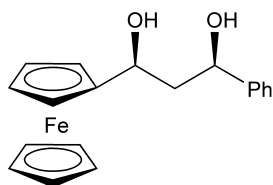
$[\alpha]_D = +18.2$  (*c* 0.88,  $CHCl_3$ )

Source of chirality: asymmetric reduction of 1-ferrocenyl-3-phenylpropane-1,3-dione

Absolute configuration: *R*

Angela Patti\* and Sonia Pedotti

*Tetrahedron: Asymmetry 17 (2006) 1824*



(1*S*,3*R*)-1-Ferrocenyl-3-phenyl-1,3-dihydroxypropane

Ee = >99% (by chiral HPLC)

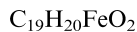
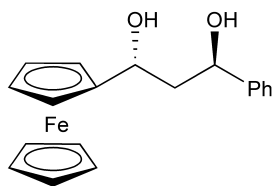
$[\alpha]_D = +29.3$  (*c* 0.15,  $CHCl_3$ )

Source of chirality: (*R*)-1-ferrocenyl-3-phenyl-3-hydroxypropane-1-one

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

Angela Patti\* and Sonia Pedotti

*Tetrahedron: Asymmetry 17 (2006) 1824*



(1*R*,3*R*)-1-Ferrocenyl-3-phenyl-1,3-dihydroxypropane

Ee = >99% (by chiral HPLC)

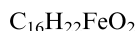
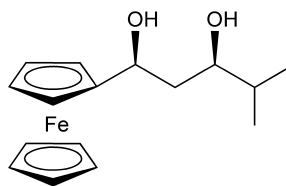
$[\alpha]_D = +15.2$  (*c* 0.21,  $CHCl_3$ )

Source of chirality: (*R*)-1-ferrocenyl-3-phenyl-3-hydroxypropane-1-one

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

Angela Patti\* and Sonia Pedotti

*Tetrahedron: Asymmetry 17 (2006) 1824*



(1*S*,3*R*)-1-Ferrocenyl-1,3-dihydroxy-4-methylpentane

Ee = 94% (by chiral HPLC)

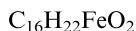
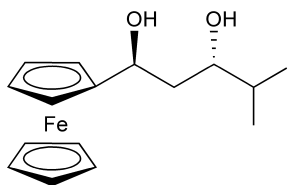
$[\alpha]_D = +35.3$  (*c* 0.36,  $CHCl_3$ )

Source of chirality: asymmetric reduction of (±)-1-ferrocenyl-3-hydroxy-4-methylpentane-1-one

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

Angela Patti\* and Sonia Pedotti

*Tetrahedron: Asymmetry 17 (2006) 1824*



(1*S*,3*S*)-1-Ferrocenyl-1,3-dihydroxy-4-methylpentane

Ee = 87% (by chiral HPLC)

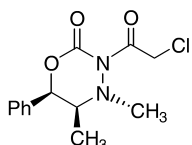
$[\alpha]_D^{25} = +7.8$  (*c* 0.65,  $CHCl_3$ )

Source of chirality: asymmetric reduction of ( $\pm$ )-1-ferrocenyl-3-hydroxy-4-methylpentane-1-one

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

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II, Seshanand P. Chandrashekar, Jennifer M. Finefield, Alexandro Dominguez and Shawn R. Hitchcock\*

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(4*R*,5*S*,6*R*)-3-(2-Chloroacetyl)-4,5-dimethyl-6-phenyl-2*H*-1,3,4-oxadiazinan-2-one

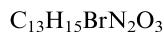
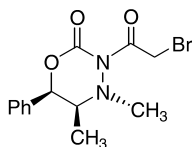
$[\alpha]_D^{25} = -28.3$  (*c* 0.53,  $CHCl_3$ )

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

Absolute configuration: (4*R*,5*S*,6*R*)

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*Tetrahedron: Asymmetry 17 (2006) 1831*



(4*R*,5*S*,6*R*)-3-(2-Bromoacetyl)-4,5-dimethyl-6-phenyl-2*H*-1,3,4-oxadiazinan-2-one

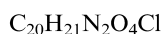
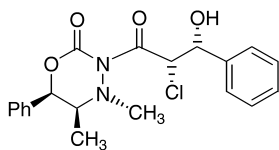
$[\alpha]_D^{25} = -19.6$  (*c* 0.58,  $CHCl_3$ )

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

Absolute configuration: (4*R*,5*S*,6*R*)

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(2'*S*,3'*R*,4*R*,5*S*,6*R*)-3-(2-Chloro-3-hydroxy-3-phenylpropanoyl)-4,5-dimethyl-6-phenyl-2*H*-1,3,4-oxadiazinan-2-one

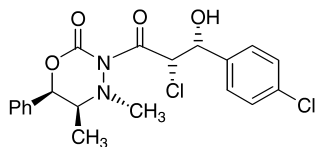
$[\alpha]_D^{25} = -20.3$  (*c* 0.48,  $CHCl_3$ )

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

Absolute configuration: (2'*S*,3'*R*,4*R*,5*S*,6*R*)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
Seshanand P. Chandrashekar, Jennifer M. Finefield,  
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(2'S,3'R,4R,5S,6R)-3-[2-Chloro-3-(4-chlorophenyl)-3-hydroxypropanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

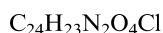
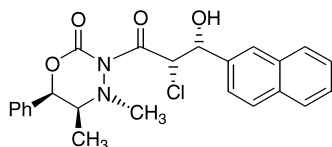
$$[\alpha]_D^{25} = -17.2 (c 0.31, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

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(2'S,3'R,4R,5S,6R)-3-[2-Chloro-3-hydroxy-3-naphthalen-2-yl-propanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

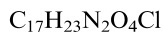
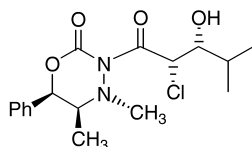
$$[\alpha]_D^{25} = -30.0 (c 0.33, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

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Seshanand P. Chandrashekar, Jennifer M. Finefield,  
Alexandro Dominguez and Shawn R. Hitchcock\*

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(2'S,3'R,4R,5S,6R)-3-(2-Chloro-3-hydroxy-4-methylpentanoyl)-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

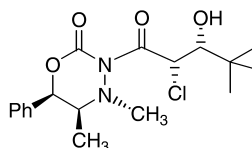
$$[\alpha]_D^{25} = -31.9 (c 0.25, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
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Alexandro Dominguez and Shawn R. Hitchcock\*

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(2'S,3'R,4R,5S,6R)-3-(2-Chloro-3-hydroxy-4,4-dimethylpentanoyl)-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

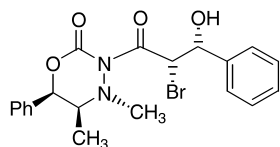
$$[\alpha]_D^{25} = -20.5 (c 0.48, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

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(2'S,3'R,4R,5S,6R)-3-(2-Bromo-3-hydroxy-3-phenylpropanoyl)-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

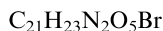
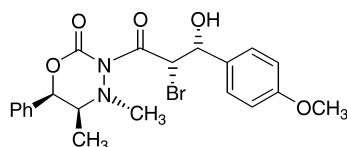
$$[\alpha]_D^{25} = -22.7 (c 0.29, CH_3OH)$$

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

Absolute configuration: (2'*S*,3'*R*,4*R*,5*S*,6*R*)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
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(2'S,3'R,4R,5S,6R)-3-[2-Bromo-3-hydroxy-3-(4-methoxyphenyl)propanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

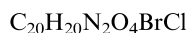
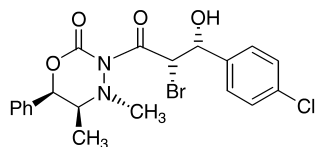
$$[\alpha]_D^{25} = -16.5 (c 0.53, CHCl_3)$$

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

Absolute configuration: (2'*S*,3'*R*,4*R*,5*S*,6*R*)

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*Tetrahedron: Asymmetry 17 (2006) 1831*



(2'S,3'R,4R,5S,6R)-3-[2-Bromo-3-hydroxy-3-(4-chlorophenyl)propanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

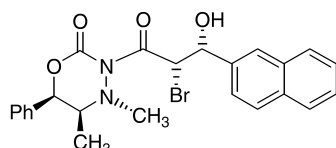
$$[\alpha]_D^{25} = -27.4 (c 0.49, CHCl_3)$$

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

Absolute configuration: (2'*S*,3'*R*,4*R*,5*S*,6*R*)

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*Tetrahedron: Asymmetry 17 (2006) 1831*



(2'S,3'R,4R,5S,6R)-3-(2-Bromo-3-hydroxy-3-naphthalen-2-ylpropanoyl)-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

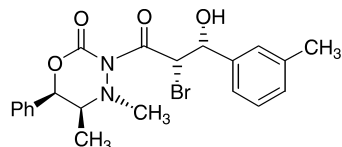
$$[\alpha]_D^{25} = -27.4 (c 0.32, CHCl_3)$$

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

Absolute configuration: (2'*S*,3'*R*,4*R*,5*S*,6*R*)

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Alexandro Dominguez and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 17 (2006) 1831*



(2'S,3'R,4R,5S,6R)-3-(2-bromo-3-hydroxy-3-m-tolylpropanoyl)-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

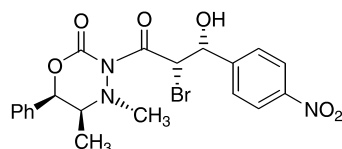
$$[\alpha]_D^{25} = -19.6 (c 0.30, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

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*Tetrahedron: Asymmetry 17 (2006) 1831*



(2'S,3'R,4R,5S,6R)-3-[2-bromo-3-hydroxy-3-(4-nitrophenyl)propanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

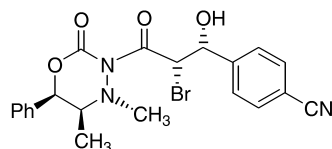
$$[\alpha]_D^{25} = -23.2 (c 0.38, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
Seshanand P. Chandrashekar, Jennifer M. Finefield,  
Alexandro Dominguez and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 17 (2006) 1831*



(2'S,3'R,4R,5S,6R)-3-[2-bromo-3-(4-cyanophenyl)-3-hydroxypropanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

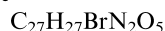
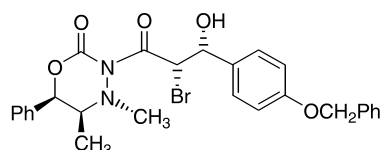
$$[\alpha]_D^{25} = -16.5 (c 0.40, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
Seshanand P. Chandrashekar, Jennifer M. Finefield,  
Alexandro Dominguez and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 17 (2006) 1831*



(2'S,3'R,4R,5S,6R)-3-[2-bromo-3-hydroxy-3-(4-benzyloxyphenyl)propanoyl]-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazinan-2-one

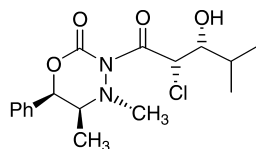
$$[\alpha]_D^{25} = -16.8 (c 0.27, CHCl_3)$$

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
Seshanand P. Chandrashekar, Jennifer M. Finefield,  
Alexandro Dominguez and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 17 (2006) 1831*



$C_{17}H_{23}N_2O_4Br$

(2'S,3'R,4R,5S,6R)-3-(2-Bromo-3-hydroxy-4-methylpentanoyl)-4,5-dimethyl-6-phenyl-2H-1,3,4-oxadiazin-2-one

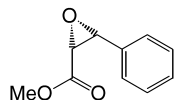
$[\alpha]_D^{25} = -25.6$  (c 0.30,  $CHCl_3$ )

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

Absolute configuration: (2'S,3'R,4R,5S,6R)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
Seshanand P. Chandrashekar, Jennifer M. Finefield,  
Alexandro Dominguez and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 17 (2006) 1831*



$C_{10}H_{10}O_3$

Methyl (2R,3R)-phenylglycidate

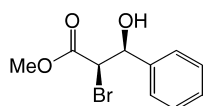
$[\alpha]_D = +10.0$  (c 0.25,  $CHCl_3$ )

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

Absolute configuration: (2R,3R)

Trisha R. Hoover, Jonathan A. Groeper, Raleigh W. Parrott, II,  
Seshanand P. Chandrashekar, Jennifer M. Finefield,  
Alexandro Dominguez and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 17 (2006) 1831*



$C_{10}H_{11}BrO_3$

Methyl (2R,3S)-2-Bromo-3-hydroxy-3-phenylpropanoate

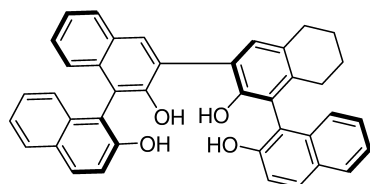
$[\alpha]_D = +29.1$  (c 0.42,  $CHCl_3$ )

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

Absolute configuration: (2R,3S)

Yong-Na Lu, Qun-Sheng Guo, Fu-Yong Jiang and Jin-Shan Li\*

*Tetrahedron: Asymmetry 17 (2006) 1842*



$C_{40}H_{30}O_4$

(S,S)-3-(1,1'-Bi-2-naphthol-3-yl)-5,6,7,8-tetrahydro-1,1'-bi-2-naphthol

Ee = 100%

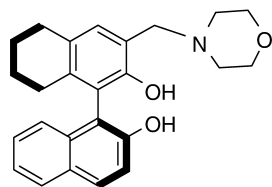
$[\alpha]_D^{25} = -19.3$  (c 1.01,  $CHCl_3$ )

Source of chirality: resolution

Absolute configuration: (S,S)

Yong-Na Lu, Qun-Sheng Guo, Fu-Yong Jiang and Jin-Shan Li\*

*Tetrahedron: Asymmetry* 17 (2006) 1842



$C_{25}H_{27}NO_3$

(*S*)-3-(Morpholin-4-ylmethyl)-5,6,7,8-tetrahydro-1,1'-bi-2-naphthol

Ee = 100%

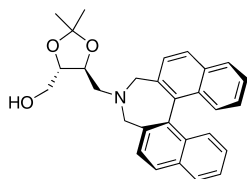
$[\alpha]_D^{25} = -30.8$  (*c* 1.06,  $CHCl_3$ )

Source of chirality: resolution

Absolute configuration: (*S*)

Igor Mikhael, Catherine Goux-Henry and Denis Sinou\*

*Tetrahedron: Asymmetry* 17 (2006) 1853



$C_{29}H_{28}NO_3$

(*R*<sub>A</sub>,4*S*,5*S*)-5-(3,5-Dihydro-4*H*-dinaphtho[1,2-*e*:2',1'-*c*]azepin-4-ylmethyl)-2,2-dimethyl-1,3-dioxolan-4-yl]methanol

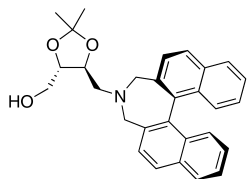
$[\alpha]_D^{20} = -275$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (2*S*,3*S*)-2,3-*O*-isopropylidene-threitol and (*R*)-binaphthol

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

Igor Mikhael, Catherine Goux-Henry and Denis Sinou\*

*Tetrahedron: Asymmetry* 17 (2006) 1853



$C_{29}H_{28}NO_3$

(*S*<sub>A</sub>,4*S*,5*S*)-5-(3,5-Dihydro-4*H*-dinaphtho[1,2-*e*:2',1'-*c*]azepin-4-ylmethyl)-2,2-dimethyl-1,3-dioxolan-4-yl]methanol

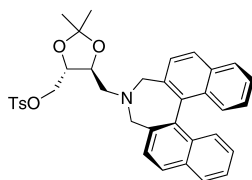
$[\alpha]_D^{20} = +250$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (2*S*,3*S*)-2,3-*O*-isopropylidene-threitol and (*S*)-binaphthol

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

Igor Mikhael, Catherine Goux-Henry and Denis Sinou\*

*Tetrahedron: Asymmetry* 17 (2006) 1853



$C_{36}H_{35}NO_5S$

(*R*<sub>A</sub>,4*S*,5*S*)-5-(3,5-Dihydro-4*H*-dinaphtho[1,2-*e*:2',1'-*c*]azepin-4-ylmethyl)-2,2-dimethyl-1,3-dioxolan-4-yl]methyl 4-methylbenzene sulfonate

$[\alpha]_D^{20} = -190$  (*c* 1.0,  $CHCl_3$ )

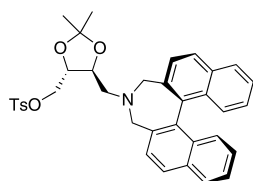
Source of chirality: (2*S*,3*S*)-2,3-*O*-isopropylidene-threitol and (*R*)-binaphthol

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



Igor Mikhael, Catherine Goux-Henry and Denis Sinou\*

*Tetrahedron: Asymmetry 17 (2006) 1853*



$C_{36}H_{35}NO_5S$

( $S_A,4S,5S$ )-5-(3,5-Dihydro-4H-dinaphtho[1,2-*e*:2',1'-*c*]azepin-4-ylmethyl)-2,2-dimethyl-1,3-dioxolan-4-ylmethyl 4-methylbenzene sulfonate

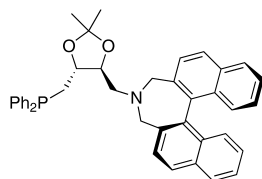
$[\alpha]_D^{20} = +197$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: (2*S*,3*S*)-2,3-*O*-isopropylidene-threitol and (*S*)-binaphthol

Absolute configuration: ( $S_A,4S,5S$ )

Igor Mikhael, Catherine Goux-Henry and Denis Sinou\*

*Tetrahedron: Asymmetry 17 (2006) 1853*



$C_{41}H_{38}NO_2P$

( $R_A,4S,5R$ )-4-({5-[(Diphenylphosphino)methyl]-2,2-dimethyl-1,3-dioxolan-4-yl}methyl)-4,5-dihydro-3H-dinaphtho[1,2-*e*:2',1'-*c*]azepine

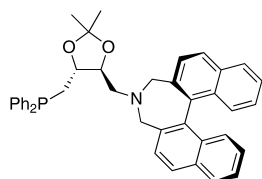
$[\alpha]_D^{20} = -147$  (*c* 0.7,  $CHCl_3$ )

Source of chirality: (2*S*,3*S*)-2,3-*O*-isopropylidene-threitol and (*R*)-binaphthol

Absolute configuration: ( $R_A,4S,5R$ )

Igor Mikhael, Catherine Goux-Henry and Denis Sinou\*

*Tetrahedron: Asymmetry 17 (2006) 1853*



$C_{41}H_{38}NO_2P$

( $S_A,4S,5R$ )-4-({5-[(Diphenylphosphino)methyl]-2,2-dimethyl-1,3-dioxolan-4-yl}methyl)-4,5-dihydro-3H-dinaphtho[1,2-*e*:2',1'-*c*]azepine

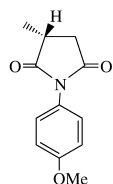
$[\alpha]_D^{20} = +235$  (*c* 0.7,  $CHCl_3$ )

Source of chirality: (2*S*,3*S*)-2,3-*O*-isopropylidene-threitol and (*S*)-binaphthol

Absolute configuration: ( $S_A,4S,5R$ )

Mohamed-Elamir F. Hegazy, Kozo Shishido and Toshifumi Hirata\*

*Tetrahedron: Asymmetry 17 (2006) 1859*



$C_{12}H_{13}O_3N$

*N*-*p*-Methoxyphenyl-2-methylsuccinimide

Ee = 99%

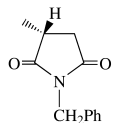
$[\alpha]_D = +4.0$  (*c* 0.13,  $CHCl_3$ )

Source of chirality: asymm. hydrogenation with the cultured suspension cells of *M. polymorpha*

Absolute configuration: *R*

Mohamed-Elamir F. Hegazy, Kozo Shishido and Toshifumi Hirata\*

*Tetrahedron: Asymmetry 17 (2006) 1859*



C<sub>12</sub>H<sub>13</sub>O<sub>2</sub>N

*N*-Benzyl-2-methylsuccinimide

Ee = >99%

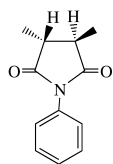
[ $\alpha$ ]<sub>D</sub> = +14.0 (c 0.18, CHCl<sub>3</sub>)

Source of chirality: asymm. hydrogenation with the cultured suspension cells of *M. polymorpha*

Absolute configuration: *R*

Mohamed-Elamir F. Hegazy, Kozo Shishido and Toshifumi Hirata\*

*Tetrahedron: Asymmetry 17 (2006) 1859*



C<sub>12</sub>H<sub>13</sub>O<sub>2</sub>N

*N*-Phenyl-2,3-dimethylsuccinimide

Ee = 99%

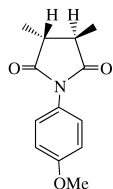
[ $\alpha$ ]<sub>D</sub> = +21.0 (c 0.03, CHCl<sub>3</sub>)

Source of chirality: asymm. hydrogenation with the cultured suspension cells of *M. polymorpha*

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

Mohamed-Elamir F. Hegazy, Kozo Shishido and Toshifumi Hirata\*

*Tetrahedron: Asymmetry 17 (2006) 1859*



C<sub>13</sub>H<sub>15</sub>O<sub>3</sub>N

*N*-*p*-Methoxyphenyl-2,3-dimethylsuccinimide

Ee = >99%

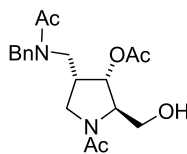
[ $\alpha$ ]<sub>D</sub> = +15.0 (c 0.08, CHCl<sub>3</sub>)

Source of chirality: asymm. hydrogenation with the cultured suspension cells of *M. polymorpha*

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

Luis Álvarez de Cienfuegos and Nicole Langlois\*

*Tetrahedron: Asymmetry 17 (2006) 1863*



C<sub>19</sub>H<sub>26</sub>N<sub>2</sub>O<sub>5</sub>

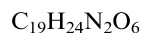
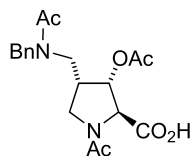
(2*R*,3*S*,4*S*)-3-Acetoxy-1-acetyl-4-(benzylacetamidomethyl)-2-hydroxymethylpyrrolidine

[ $\alpha$ ]<sub>D</sub><sup>24</sup> = -60.2 (c 1.34, CHCl<sub>3</sub>)

Source of chirality: (*S*)-pyroglutaminol

Luis Álvarez de Cienfuegos and Nicole Langlois\*

*Tetrahedron: Asymmetry 17 (2006) 1863*



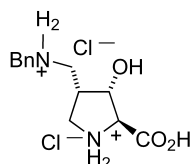
(2*S*,3*S*,4*S*)-3-Acetoxy-1-acetyl-4-(benzylacetamidomethyl)pyrrolidine-2-carboxylic acid

$$[\alpha]_D^{24} = -56.3 (c 1.37, CHCl_3)$$

Source of chirality: (*S*)-pyroglutaminol

Luis Álvarez de Cienfuegos and Nicole Langlois\*

*Tetrahedron: Asymmetry 17 (2006) 1863*



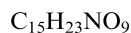
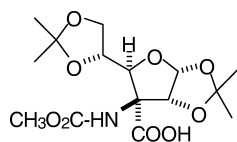
(2*S*,3*S*,4*S*)-4-(Benzylaminomethyl)-3-hydroxypyrrolidine-2-carboxylic acid dihydrochloride

$$[\alpha]_D^{24} = +2.2 (c 1.22, MeOH)$$

Source of chirality: (*S*)-pyroglutaminol

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



3-Deoxy-1,2:5,6-di-*O*-isopropylidene-3-methoxycarbonylamino- $\alpha$ -D-glucofuranose 3-*C*-carboxylic acid

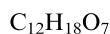
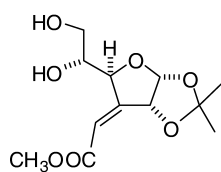
$$[\alpha]_D^{25} = +86 (c 0.195, CHCl_3)$$

Source of chirality: D-glucose

1*R*,2*R*,3*R*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



3-*C*-(*Z*)-Carbomethoxymethylene-3-deoxy-1,2-*O*-isopropylidene- $\alpha$ -D-glucofuranose

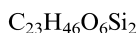
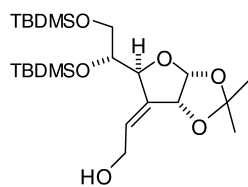
$$[\alpha]_D^{25} = +126.5 (c 0.29, CHCl_3)$$

Source of chirality: D-glucose

1*R*,2*R*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



5,6-Bis(*O-tert*-butyldimethylsilyl)-3-deoxy-3-*C*-(*Z*)-(2-hydroxyethylidene)-1,2-*O*-isopropylidene- $\alpha$ -D-glucofuranose

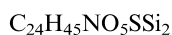
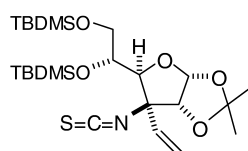
$$[\alpha]_D^{25} = +67.3 \text{ (} c \text{ 0.13, CHCl}_3\text{)}$$

Source of chirality: D-glucose

1*R*,2*R*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



5,6-Bis(*O-tert*-butyldimethylsilyl)-3-deoxy-1,2-*O*-isopropylidene-3-isothiocyanato-3-*C*-vinyl- $\alpha$ -D-glucofuranose

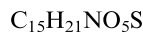
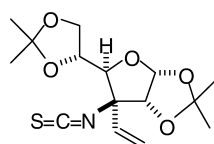
$$[\alpha]_D^{25} = +21.3 \text{ (} c \text{ 0.13, CHCl}_3\text{)}$$

Source of chirality: D-glucose

1*R*,2*R*,3*R*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



3-Deoxy-1,2:5,6-di-*O*-isopropylidene-3-isothiocyanato-3-*C*-vinyl- $\alpha$ -D-glucofuranose

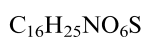
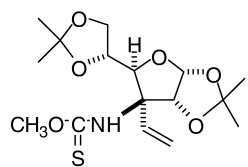
$$[\alpha]_D^{25} = +51.1 \text{ (} c \text{ 0.23, CHCl}_3\text{)}$$

Source of chirality: D-glucose

1*R*,2*R*,3*S*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



3-Deoxy-1,2:5,6-di-*O*-isopropylidene-3-methoxythiocarbonylamino-3-*C*-vinyl- $\alpha$ -D-glucofuranose

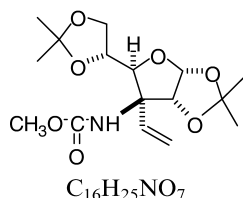
$$[\alpha]_D^{25} = +16.3 \text{ (} c \text{ 0.18, CHCl}_3\text{)}$$

Source of chirality: D-glucose

1*R*,2*R*,3*S*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



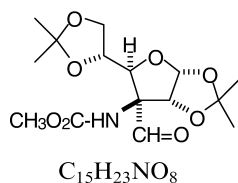
3-Deoxy-1,2:5,6-di-*O*-isopropylidene-3-methoxycarbonylamino-3-*C*-vinyl- $\alpha$ -D-glucofuranose

$$[\alpha]_D^{25} = +31.4 (c 0.26, CHCl_3)$$

Source of chirality: D-glucose  
1*R*,2*R*,3*S*,4*S*,5*R*

Jozef Gonda,\* Miroslava Martinková, Jana Raschmanová  
and Eva Balentová

*Tetrahedron: Asymmetry 17 (2006) 1875*



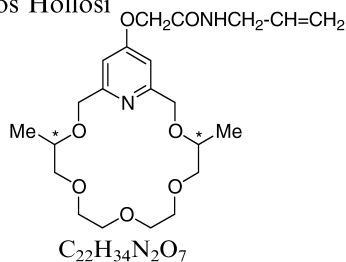
3-Deoxy-1,2:5,6-di-*O*-isopropylidene-3-methoxycarbonylamino- $\alpha$ -D-glucopyranose 3-*C*-carbaldehyde

$$[\alpha]_D^{25} = +46.3 (c 0.16, CHCl_3)$$

Source of chirality: D-glucose  
1*R*,2*R*,3*R*,4*S*,5*R*

Viktor Farkas, Tünde Tóth, György Orosz, Péter Huszthy\* and  
Miklós Hollósi

*Tetrahedron: Asymmetry 17 (2006) 1883*



2-[(4*S*,14*S*)-4,14-Dimethyl-3,6,9,12,15-pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-trien-19-yloxy]-*N*-(2-propenyl)-acetamide

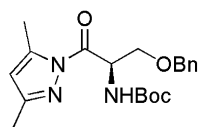
$E_e > 98\%$

$$[\alpha]_D^{25} = +12.7 (c 0.84, CH_2Cl_2)$$

Source of chirality: (*S*)-(-)-ethyl lactate  
Absolute configuration: 4*S*,14*S*

Makoto Oba,\* Akira Iwasaki, Hiroshi Hitokawa, Toshinori Ikegame,  
Hiroyuki Banba, Kozo Ura, Tadashi Takamura and  
Kozaburo Nishiyama\*

*Tetrahedron: Asymmetry 17 (2006) 1890*



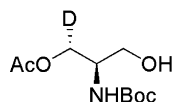
(1*R*)-[1-[(3,5-Dimethylpyrazol-1-yl)carbonyl]-2-benzyloxyethyl]carbamic acid *tert*-butyl ester

$$[\alpha]_D^{26} = +18.2 (c 1.0, CHCl_3)$$

Source of chirality: D-Ser  
Absolute configuration: (1*R*)

Makoto Oba,\* Akira Iwasaki, Hiroshi Hitokawa, Toshinori Ikegame, Hiroyuki Banba, Kozo Ura, Tadashi Takamura and Kozaburo Nishiyama\*

*Tetrahedron: Asymmetry 17 (2006) 1890*



$C_{10}H_{18}^2HNO_5$   
(2*R*,3*R*)-*N*-*tert*-Butoxycarbonyl-*O*<sup>3</sup>-acetyl[3-<sup>2</sup>H]serinol

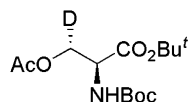
$[\alpha]_D^{26} = +3.2$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: *D*-Ser and *S*-Alpine-Borane

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

Makoto Oba,\* Akira Iwasaki, Hiroshi Hitokawa, Toshinori Ikegame, Hiroyuki Banba, Kozo Ura, Tadashi Takamura and Kozaburo Nishiyama\*

*Tetrahedron: Asymmetry 17 (2006) 1890*



$C_{14}H_{24}^2HNO_6$   
(2*S*,3*R*)-*N*-*tert*-Butoxycarbonyl-*O*<sup>3</sup>-acetyl[3-<sup>2</sup>H]serine *tert*-butyl ester

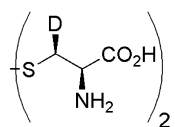
$[\alpha]_D^{26} = +24.05$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: *D*-Ser and *S*-Alpine-Borane

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

Makoto Oba,\* Akira Iwasaki, Hiroshi Hitokawa, Toshinori Ikegame, Hiroyuki Banba, Kozo Ura, Tadashi Takamura and Kozaburo Nishiyama\*

*Tetrahedron: Asymmetry 17 (2006) 1890*



$C_6H_{10}^2H_2N_2O_4S_2$   
(2*R*,2'*R*,3*S*,3'*S*)-[3,3'-<sup>2</sup>H<sub>2</sub>]Cystine

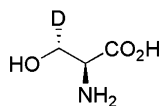
$[\alpha]_D^{23} = -220.0$  (*c* 0.1, 1 M HCl)

Source of chirality: *D*-Ser and *S*-Alpine-Borane

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

Makoto Oba,\* Akira Iwasaki, Hiroshi Hitokawa, Toshinori Ikegame, Hiroyuki Banba, Kozo Ura, Tadashi Takamura and Kozaburo Nishiyama\*

*Tetrahedron: Asymmetry 17 (2006) 1890*



$C_3H_6^2HNO_3$   
(2*S*,3*R*)-[3-<sup>2</sup>H]Serine

Ee = 94%

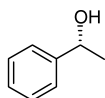
$[\alpha]_D^{23} = +15.4$  (*c* 1.0, 1 M HCl)

Source of chirality: *D*-Ser and *S*-Alpine-Borane

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

Shang-Dong Yang, Yun Shi, Zhen-Hua Sun, Ya-Bin Zhao and Yong-Min Liang\*

*Tetrahedron: Asymmetry 17 (2006) 1895*



$C_8H_{10}O$   
(*R*)-1-Phenylethanol

Ee = 73%

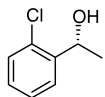
$[\alpha]_D^{25} = -38.4$  (*c* 1.32,  $CHCl_3$ )

Source of chirality: asymmetric reduction

Absolute configuration: *R*

Shang-Dong Yang, Yun Shi, Zhen-Hua Sun, Ya-Bin Zhao and Yong-Min Liang\*

*Tetrahedron: Asymmetry 17 (2006) 1895*



$C_8H_9OCl$   
(*R*)-1-(2-Chlorophenyl)-ethanol

Ee = 94%

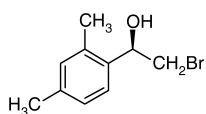
$[\alpha]_D^{25} = -49.3$  (*c* 1.12,  $CHCl_3$ )

Source of chirality: asymmetric reduction

Absolute configuration: *R*

Shang-Dong Yang, Yun Shi, Zhen-Hua Sun, Ya-Bin Zhao and Yong-Min Liang\*

*Tetrahedron: Asymmetry 17 (2006) 1895*



$C_{10}H_{13}OBr$   
(*S*)-2-Bromo-1-(2,4-dimethylphenyl)-ethanol

Ee = 95%

$[\alpha]_D^{25} = +41.5$  (*c* 1.06,  $CHCl_3$ )

Source of chirality: asymmetric reduction

Absolute configuration: *S*