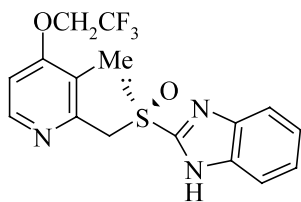


Vinay V. Thakur and A. Sudalai\*

*Tetrahedron: Asymmetry* 14 (2003) 407C<sub>16</sub>H<sub>14</sub>F<sub>3</sub>N<sub>3</sub>SO<sub>2</sub>*(R)*-(+)-Lansoprazole

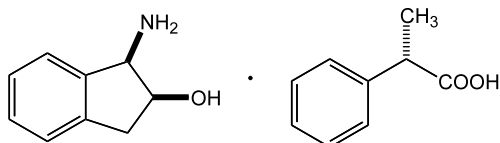
Ee = 88%

 $[\alpha]_D^{25} = +250.60$  (c 0.5, acetone)

Source of chirality: asymmetric synthesis

Absolute configuration: *R*

Rumiko Sakurai and Kenichi Sakai\*

*Tetrahedron: Asymmetry* 14 (2003) 411C<sub>18</sub>H<sub>23</sub>NO*(1R,2S)*-(+)-*cis*-1-Amino-2-indanol (*S*)-2-phenylpropionate

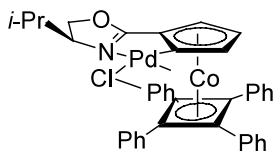
De &gt;99%

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

Source of chirality: resolution with chiral acid

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

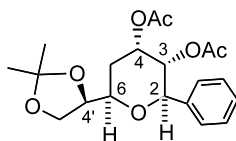
Jahyo Kang,\* Tae Hyung Kim, Kyoung Han Yew and Wook Ki Lee

*Tetrahedron: Asymmetry* 14 (2003) 415C<sub>78</sub>H<sub>66</sub>Co<sub>2</sub>N<sub>2</sub>O<sub>2</sub>Cl<sub>2</sub>Pd<sub>2</sub>Di- $\mu$ -chlorobis[( $\eta^5$ -(*S*)-(*R<sub>p</sub>*)-2-(2'-(4'-methyleneethyl)oxazoliny) cyclopentadienyl, 1-C, 3'-*N*)-( $\eta^4$ -tetraphenylcyclobutadiene) cobalt]dipalladium

Mp = 192–196°C (sublimation)

 $[\alpha]_D^{23} = +1064$  (c = 0.25, CHCl<sub>3</sub>)R<sub>T</sub> = 0.39 (20% Ethyl acetate/*n*-hexane)Anal. calcd for C<sub>78</sub>H<sub>66</sub>Co<sub>2</sub>N<sub>2</sub>O<sub>2</sub>Cl<sub>2</sub>Pd<sub>2</sub>: C, 61.9; H, 4.54; N, 1.91; Found: C, 60.3; H, 4.11; N, 1.67

Palakodety Radha Krishna,\* B. Lavanya and G. V. M. Sharma

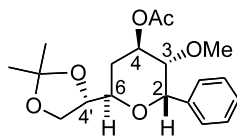
*Tetrahedron: Asymmetry* 14 (2003) 419C<sub>20</sub>H<sub>26</sub>O<sub>7</sub>6-[2',2'-Dimethyl-(4'*S*)-1',3'-dioxolan-4'-yl]-3-methoxycarbonyloxy-2-phenyl-(2*R*,3*S*,4*S*,6*R*)-tetrahydro-2*H*-4-pyranyl acetate $[\alpha]_D^{25} = +7.5$  (c 0.8, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

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

Palakodety Radha Krishna,\* B. Lavanya and G. V. M. Sharma

*Tetrahedron: Asymmetry* 14 (2003) 419



C<sub>19</sub>H<sub>26</sub>O<sub>6</sub>

6-[2',2'-Dimethyl-(4'S)-1',3'-dioxolan-4'-yl]-3-methoxy-2-phenyl-(2S,3S,4R,6R)-tetrahydro-2H-4-pyranil acetate

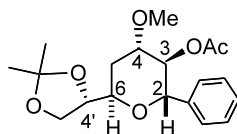
$[\alpha]_D^{25} = -20.5$  (c 1.0, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

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

Palakodety Radha Krishna,\* B. Lavanya and G. V. M. Sharma

*Tetrahedron: Asymmetry* 14 (2003) 419



C<sub>19</sub>H<sub>26</sub>O<sub>6</sub>

6-[2',2'-Dimethyl-(4'S)-1',3'-dioxolan-4'-yl]-4-methoxy-2-phenyl-(2S,3R,4S,6R)-tetrahydro-2H-3-pyranil acetate

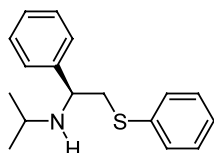
$[\alpha]_D^{25} = -6.4$  (c 0.5, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

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

Johan Granander, Richard Sott and Göran Hilmersson\*

*Tetrahedron: Asymmetry* 14 (2003) 439



C<sub>17</sub>H<sub>21</sub>NS

(S)-N-Isopropyl-2-amino-2-phenyl-1-thiophenyl-ethane

E<sub>e</sub> = 99%

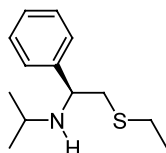
$[\alpha]_D^{20} = +7.8$  (c 1.03, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (S)-phenylglycine

Absolute configuration: (S)

Johan Granander, Richard Sott and Göran Hilmersson\*

*Tetrahedron: Asymmetry* 14 (2003) 439



C<sub>13</sub>H<sub>21</sub>NS

(S)-N-Isopropyl-2-amino-2-phenyl-1-thioethyl-ethane

E<sub>e</sub> = 99%

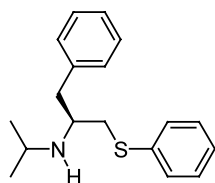
$[\alpha]_D^{20} = +90.0$  (c 1.12, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (S)-phenylglycine

Absolute configuration: (S)

Johan Granander, Richard Sott and Göran Hilmersson\*

*Tetrahedron: Asymmetry 14 (2003) 439*



C<sub>18</sub>H<sub>23</sub>NS

(*S*)-*N*-Isopropyl-2-amino-3-phenyl-1-thiophenyl-propane

Ee = 99%

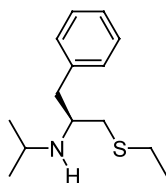
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +5.3 (c 1.22, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-phenylalanine

Absolute configuration: (*S*)

Johan Granander, Richard Sott and Göran Hilmersson\*

*Tetrahedron: Asymmetry 14 (2003) 439*



C<sub>14</sub>H<sub>23</sub>NS

(*S*)-*N*-Isopropyl-2-amino-3-phenyl-1-thioethyl-propane

Ee = 99%

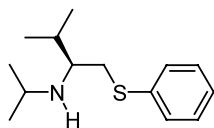
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +18.9 (c 1.14, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-phenylalanine

Absolute configuration: (*S*)

Johan Granander, Richard Sott and Göran Hilmersson\*

*Tetrahedron: Asymmetry 14 (2003) 439*



C<sub>14</sub>H<sub>23</sub>NS

(*S*)-*N*-Isopropyl-2-amino-3-methyl-1-thiophenyl-butane

Ee = 99%

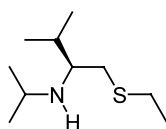
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +30.0 (c 0.96, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-valine

Absolute configuration: (*S*)

Johan Granander, Richard Sott and Göran Hilmersson\*

*Tetrahedron: Asymmetry 14 (2003) 439*



C<sub>14</sub>H<sub>23</sub>NS

(*S*)-*N*-Isopropyl-2-amino-3-methyl-1-thioethyl-butane

Ee = 99%

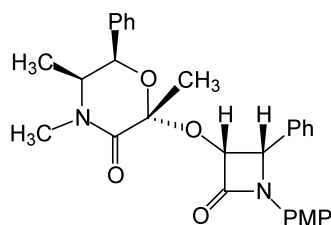
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +38.5 (c 0.96, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (*S*)-valine

Absolute configuration: (*S*)

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{29}H_{30}N_2O_5$

(3R,4S,2'S,5'S,6'R)-1-(4-Methoxyphenyl)-4-phenyl-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >98%

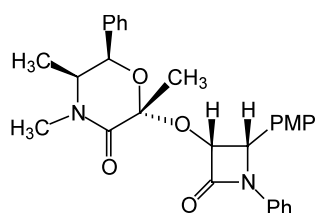
$[\alpha]_D = -51.0$  (c 0.9,  $CHCl_3$ )

Source of chirality: (-)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{29}H_{30}N_2O_5$

(3R,4S,2'S,5'S,6'R)-4-(4-Methoxyphenyl)-1-phenyl-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >97%

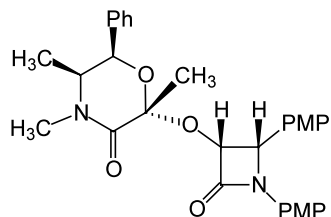
$[\alpha]_D = -64.4$  (c 0.9,  $CHCl_3$ )

Source of chirality: (-)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{30}H_{32}N_2O_6$

(3R,4S,2'S,5'S,6'R)-1,4-Di-(4-methoxyphenyl)-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >97%

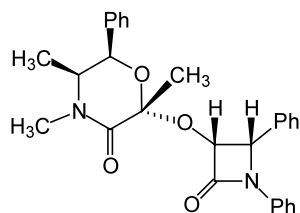
$[\alpha]_D = -78.5$  (c 1.3,  $CHCl_3$ )

Source of chirality: (-)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{28}H_{28}N_2O_4$

(3R,4S,2'S,5'S,6'R)-1,4-Diphenyl-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >97%

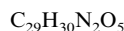
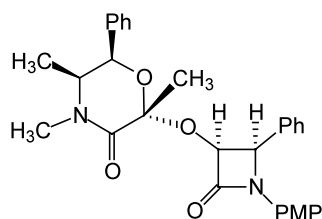
$[\alpha]_D = -61.0$  (c 1.0,  $CHCl_3$ )

Source of chirality: (-)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



(3*S*,4*R*,2'*S*,5',6'*R*)-1-(4-Methoxyphenyl)-4-phenyl-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >98%

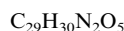
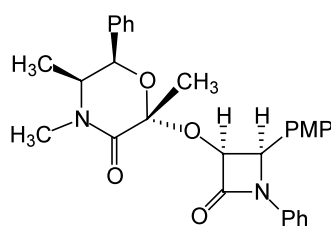
$[\alpha]_D = -189.4$  (*c* 1.4,  $CHCl_3$ )

Source of chirality: (–)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



(3*S*,4*R*,2'*S*,5',6'*R*)-4-(4-Methoxyphenyl)-1-phenyl-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >97%

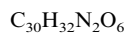
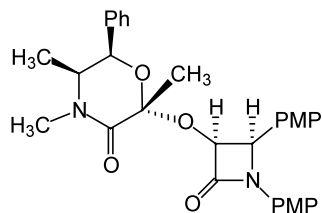
$[\alpha]_D = -181.5$  (*c* 0.6,  $CHCl_3$ )

Source of chirality: (–)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



(3*S*,4*R*,2'*S*,5',6'*R*)-1,4-Di-(4-methoxyphenyl)-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >97%

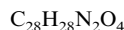
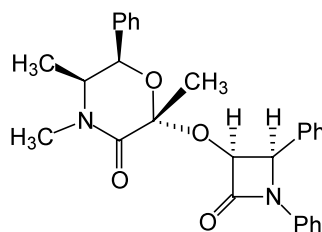
$[\alpha]_D = -170.9$  (*c* 2.0,  $CHCl_3$ )

Source of chirality: (–)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



(3*S*,4*R*,2'*S*,5',6'*R*)-1,4-Diphenyl-3-[(2',4',5'-trimethyl-3'-oxo-6'-phenylmorpholin-2'-yl)oxy]azetid-2-one

D.e. >97%

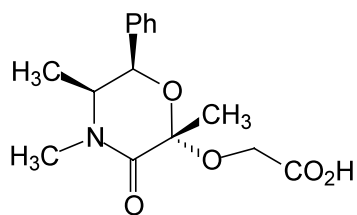
$[\alpha]_D = -194.6$  (*c* 1.5,  $CHCl_3$ )

Source of chirality: (–)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{15}H_{19}NO_5$

(2*S*,5*S*,6*R*)-[(2,4,6-Trimethyl-3-oxo-6-phenylmorpholin-2-yl)oxy]acetic acid

D.e. >97%

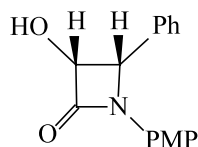
$[\alpha]_D = -64.9$  (*c* 0.9,  $CHCl_3$ )

Source of chirality: (-)-ephedrine

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{16}H_{15}NO_3$

(3*R*,4*S*)-1-(4-Methoxyphenyl)-4-phenyl-3-hydroxyazetidin-2-one

D.e. >99%

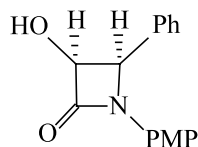
$[\alpha]_D = +180.0$  (*c* 0.4,  $CHCl_3$ )

Source of chirality: synthesis

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{16}H_{15}NO_3$

(3*S*,4*R*)-1-(4-Methoxyphenyl)-4-phenyl-3-hydroxyazetidin-2-one

D.e. >99%

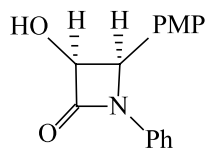
$[\alpha]_D = -178.0$  (*c* 0.9,  $CHCl_3$ )

Source of chirality: synthesis

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*



$C_{16}H_{15}NO_3$

(3*S*,4*R*)-4-(4-Methoxyphenyl)-1-phenyl-3-hydroxyazetidin-2-one

D.e. >99%

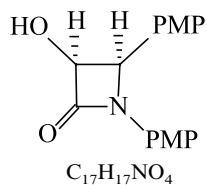
$[\alpha]_D = -173.7$  (*c* 1.0,  $CHCl_3$ )

Source of chirality: synthesis

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

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*

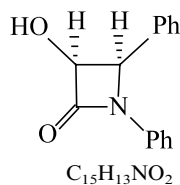


(3*S*,4*R*)-1,4-Di-(4-methoxyphenyl)-3-hydroxyazetidin-2-one

D.e. >99%  
 $[\alpha]_D = -179.1$  (*c* 2.2,  $CHCl_3$ )  
Source of chirality: synthesis  
Absolute configuration: 3*S*,4*R*

Bidhan A. Shinkre, Vedavati G. Puranik, B. M. Bhawal  
and A. R. A. S. Deshmukh\*

*Tetrahedron: Asymmetry 14 (2003) 453*

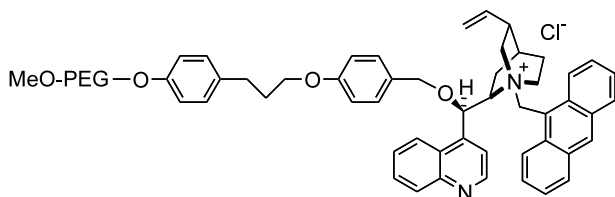


(3*S*,4*R*)-1,4-Diphenyl-3-hydroxyazetidin-2-one

D.e. >99%  
 $[\alpha]_D = -188.4$  (*c* 0.9,  $CHCl_3$ )  
Source of chirality: synthesis  
Absolute configuration: 3*S*,4*R*

Tamara Danelli, Rita Annunziata, Maurizio Benaglia,\*  
Mauro Cinquini, Franco Cozzi and Graziella Tocco

*Tetrahedron: Asymmetry 14 (2003) 461*

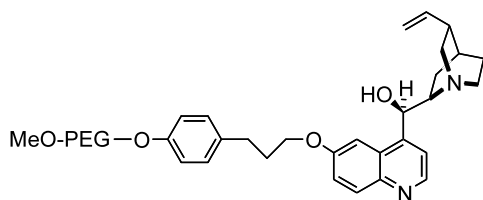


PEG-supported *N*-(9-anthracenylmethyl)cinchoninium chloride

Ee = 100%  
 $[\alpha]_D^{23} = +3.3$  (*c* 0.8,  $CHCl_3$ )  
Source of chirality: natural product

Tamara Danelli, Rita Annunziata, Maurizio Benaglia,\*  
Mauro Cinquini, Franco Cozzi and Graziella Tocco

*Tetrahedron: Asymmetry 14 (2003) 461*

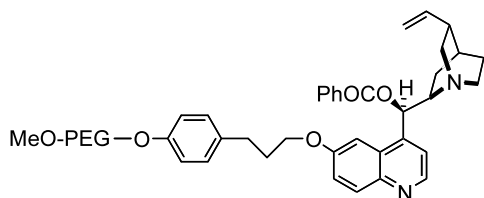


PEG-supported quinine

Ee = 100%  
 $[\alpha]_D^{23} = -3.7$  (*c* 0.15,  $CHCl_3$ )  
Source of chirality: natural product

Tamara Danelli, Rita Annunziata, Maurizio Benaglia,\*  
Mauro Cinquini, Franco Cozzi and Graziella Tocco

*Tetrahedron: Asymmetry 14 (2003) 461*



PEG-supported quinine benzoate

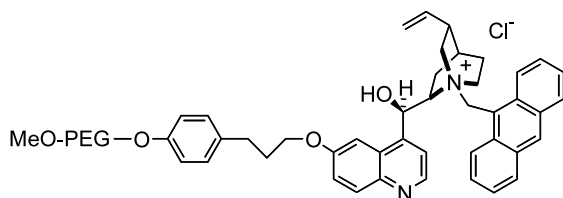
Ee = 100%

$[\alpha]_D^{25} = +6.6$  (c 0.3, CHCl<sub>3</sub>)

Source of chirality: natural product

Tamara Danelli, Rita Annunziata, Maurizio Benaglia,\*  
Mauro Cinquini, Franco Cozzi and Graziella Tocco

*Tetrahedron: Asymmetry 14 (2003) 461*



PEG-supported *N*-(9-anthracenylmethyl)quininium chloride

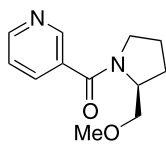
E.e. = 100%

$[\alpha]_D^{25} = -7.75$  (c 0.3, CHCl<sub>3</sub>)

Source of chirality: natural product

M.-Lluïsa Bennasar,\* Ester Zulaica, Yolanda Alonso and Joan Bosch

*Tetrahedron: Asymmetry 14 (2003) 469*



C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>

3-[(2*S*)-(Methoxymethyl)pyrrolidinylcarbonyl]pyridine

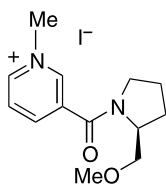
$[\alpha]_D^{25} = -187$  (c 1, CHCl<sub>3</sub>)

Source of chirality: (*S*)-prolinol

Absolute configuration: *S*

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C<sub>13</sub>H<sub>19</sub>N<sub>2</sub>O<sub>2</sub>I

3-[(2*S*)-(Methoxymethyl)pyrrolidinylcarbonyl]-1-methylpyridinium iodide

$[\alpha]_D^{25} = -98$  (c 1, CHCl<sub>3</sub>)

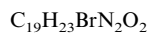
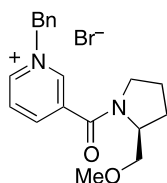
Source of chirality: (*S*)-prolinol

Absolute configuration: *S*



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1-Benzyl-3-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]pyridinium bromide

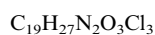
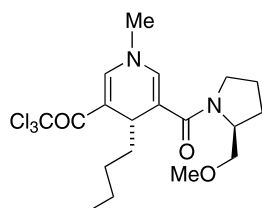
$$[\alpha]_D^{22} = -106 \text{ (} c \text{ 1.7, CHCl}_3\text{)}$$

Source of chirality: (*S*)-prolinol

Absolute configuration: *S*

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(*R*)-4-Butyl-3-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]-1-methyl-5-(trichloroacetyl)-1,4-dihydropyridine

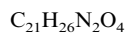
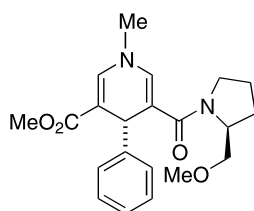
$$[\alpha]_D^{22} = +102 \text{ (} c \text{ 0.6, CHCl}_3\text{)}$$

Source of chirality: (*S*)-prolinol

Absolute configuration: 4*R*,2'*S*

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(*S*)-3-(Methoxycarbonyl)-5-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]-1-methyl-4-phenyl-1,4-dihydropyridine

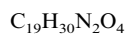
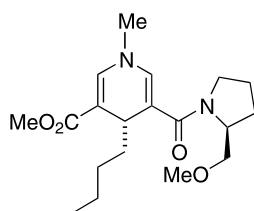
$$[\alpha]_D^{22} = +25 \text{ (} c \text{ 1, CHCl}_3\text{)}$$

Source of chirality: (*S*)-prolinol

Absolute configuration: 4*S*,2'*S*

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(*S*)-4-Butyl-3-(methoxycarbonyl)-5-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]-1-methyl-1,4-dihydropyridine

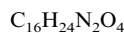
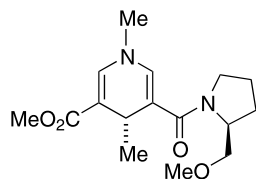
$$[\alpha]_D^{22} = -64 \text{ (} c \text{ 1.3, CHCl}_3\text{)}$$

Source of chirality: (*S*)-prolinol

Absolute configuration: 4*S*,2'*S*

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(*S*)-3-(Methoxycarbonyl)-5-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]-1,4-dimethyl-1,4-dihydropyridine

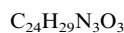
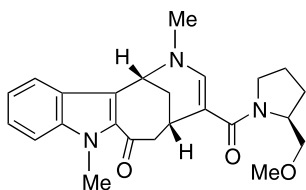
$[\alpha]_D^{22} = -110$  (*c* 1.5,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 4*S*,2'*S*

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(1*R*,5*S*)-4-[(2*S*)-(Methoxymethyl)pyrrolidinylcarbonyl]-2,8-dimethyl-7-oxo-2,5,6,7-tetrahydro-1*H*-1,5-methanoazonino[4,3-*b*]indole

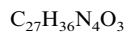
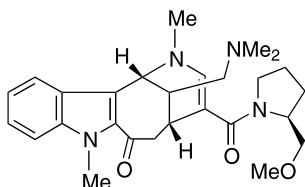
$[\alpha]_D^{22} = -264$  (*c* 0.5,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*S*,2'*S*

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(1*R*,5*R*,13*R*)-13-[(Dimethylamino)methyl]-4-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]-2,8-dimethyl-7-oxo-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

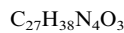
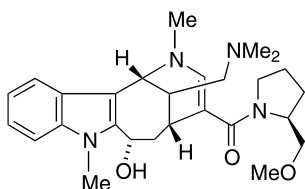
$[\alpha]_D^{22} = -83$  (*c* 1.3,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*R*,13*R*,2'*S*

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(1*R*,5*R*,7*S*,13*S*)-4-[(2*S*)-(Methoxymethyl)pyrrolidinylcarbonyl]-13-[(dimethylamino)methyl]-7-hydroxy-2,8-dimethyl-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

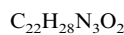
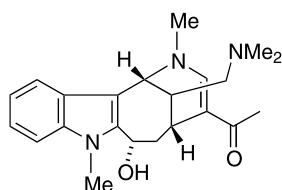
$[\alpha]_D^{22} = -172$  (*c* 0.5,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*R*,7*S*,13*S*,2'*S*

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(1*R*,5*R*,7*S*,13*S*)-4-Acetyl-13-[(dimethylamino)methyl]-7-hydroxy-2,8-dimethyl-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

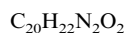
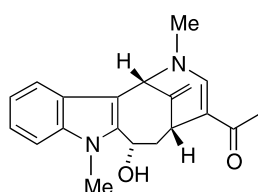
$[\alpha]_D^{22} = -563$  (*c* 1,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*R*,7*S*,13*S*

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(1*R*,5*R*,7*S*)-4-Acetyl-7-hydroxy-2,8-dimethyl-13-methylene-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

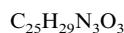
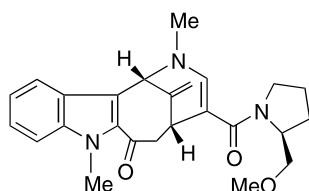
$[\alpha]_D^{22} = -633$  (*c* 0.4,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*R*,7*S*

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(1*R*,5*R*)-4-[(2*S*)-(Methoxymethyl)pyrrolidinylcarbonyl]-2,8-dimethyl-13-methylene-7-oxo-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

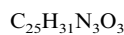
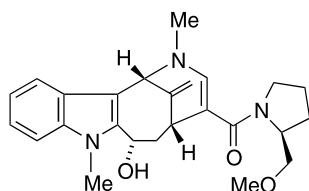
$[\alpha]_D^{22} = -142$  (*c* 1,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*R*,2'*S*

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(1*R*,5*R*,7*S*)-7-Hydroxy-2,8-dimethyl-13-methylene-4-[(2*S*)-(methoxymethyl)pyrrolidinylcarbonyl]-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

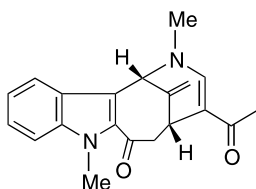
$[\alpha]_D^{22} = -218$  (*c* 0.5,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

Absolute configuration: 1*R*,5*R*,7*S*,2'*S*

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$C_{20}H_{20}N_2O_2$

(1*R*,5*R*)-4-Acetyl-2,8-dimethyl-13-methylene-7-oxo-2,5,6,7-tetrahydro-1,5-methano-1*H*-azonino[4,3-*b*]indole

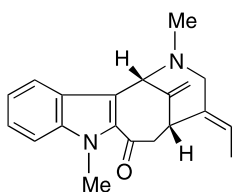
$[\alpha]_D^{22} = -885$  (*c* 0.5,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

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

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$C_{20}H_{22}N_2O$

(-)-*N*<sub>α</sub>-Methylervitsine

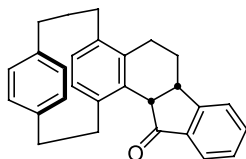
$[\alpha]_D^{22} = -60$  (*c* 0.1,  $CHCl_3$ )

Source of chirality: (*S*)-prolinol

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

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$C_{27}H_{24}O$

(*R*)-(+)-2,3,8,9,11,12,12*a*,17*a*-Octahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

E.e. >99%

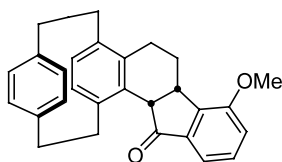
$[\alpha]_D^{25} = +346$  (*c* 1.73,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-paracyclophane

Absolute configuration: *R*

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{28}H_{26}O_2$

(*R*)-(+)-13-Methoxy-2,3,8,9,11,12,12*a*,17*a*-octahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

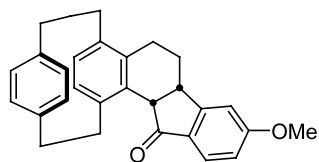
E.e. >99%

$[\alpha]_D^{25} = +315$  (*c* 0.26,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{28}H_{26}O_2$

(*R*)-(+)-14-Methoxy-2,3,8,9,11,12,12a,17a-octahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

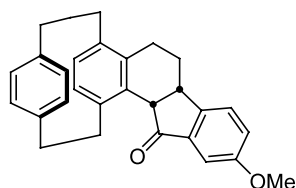
E.e. >99%

$[\alpha]_D^{25} = +230$  (*c* 0.55,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{28}H_{26}O_3$

(*R*)-(+)-15-Methoxy-2,3,8,9,11,12,12a,17a-octahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

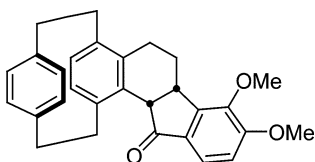
E.e. >99%

$[\alpha]_D^{25} = +318$  (*c* 1.21,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{29}H_{28}O_3$

(*R*)-(+)-13,14-Dimethoxy-2,3,8,9,11,12,12a,17a-octahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

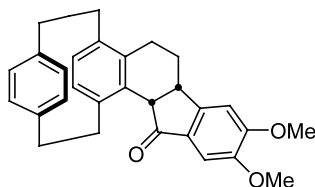
E.e. >99%

$[\alpha]_D^{25} = +323$  (*c* 0.50,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{29}H_{28}O_3$

(*R*)-(+)-14,15-Dimethoxy-2,3,8,9,11,12,12a,17a-octahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

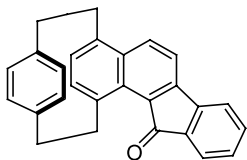
E.e. >99%

$[\alpha]_D^{25} = +302$  (*c* 0.20,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{27}H_{20}O$

(*R*)-(+)-2,3,8,9-Tetrahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

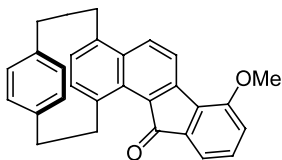
E.e. >99%

$[\alpha]_D^{25} = +1273$  (*c* 0.35,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-  
paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{28}H_{22}O_2$

(*R*)-(+)-13-Methoxy-2,3,8,9-tetrahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

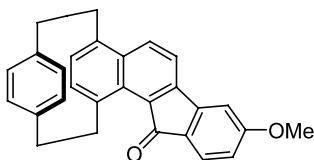
E.e. >99%

$[\alpha]_D^{25} = +1314$  (*c* 0.16,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-  
paracyclophane

Lucio Minuti,\* Aldo Taticchi,\* Assunta Marrocchi, Daniela Lanari,  
Alessandra Broggi and Eszter Gacs-Baitz

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$C_{28}H_{22}O_2$

(*R*)-(+)-14-Methoxy-2,3,8,9-tetrahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

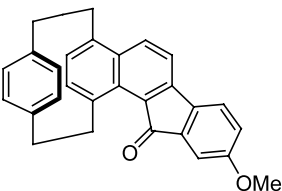
E.e. >99%

$[\alpha]_D^{25} = +1093$  (*c* 0.59,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-  
paracyclophane

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Alessandra Broggi and Eszter Gacs-Baitz

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$C_{28}H_{22}O_2$

(*R*)-(+)-15-Methoxy-2,3,8,9-tetrahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

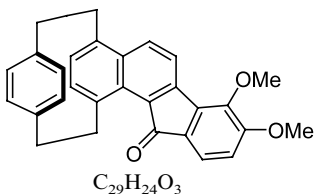
E.e. >99%

$[\alpha]_D^{25} = +1692$  (*c* 0.15,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-  
paracyclophane

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(*R*)-(+)-13,14-Dimethoxy-2,3,8,9-tetrahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

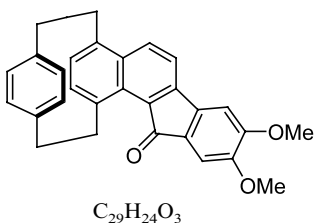
E.e. >99%

$[\alpha]_D^{25} = +1040$  (*c* 0.45,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-  
paracyclophane

Lucio Minuti,\* Aldo Taticchi,\* Assunta Marrocchi, Daniela Lanari,  
Alessandra Broggi and Eszter Gacs-Baitz

*Tetrahedron: Asymmetry 14 (2003) 481*



(*R*)-(+)-14,15-Dimethoxy-2,3,8,9-tetrahydro-17*H*-1,10:4,7-diethenocyclododeca[*a*]fluoren-17-one

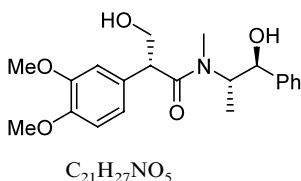
E.e. >99%

$[\alpha]_D^{25} = +1952$  (*c* 0.14,  $CHCl_3$ )

Source of chirality: (*S*)-(+)-4-ethenyl[2.2]-  
paracyclophane

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



[2*S*,1'*S*,2'*S*]-(+)-2-(3,4-Dimethoxyphenyl)-3-hydroxy-*N*-methyl-*N*-(2'-phenyl-2'-hydroxy-1'-methylethyl)propanamide

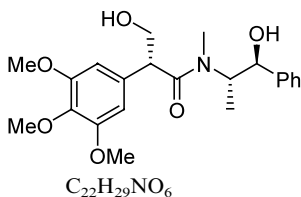
$[\alpha]_D^{20} = +31.2$  (*c* 0.7,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

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

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



[2*S*,1'*S*,2'*S*]-(+)-3-Hydroxy-*N*-methyl-*N*-(2'-phenyl-2'-hydroxy-1'-methylethyl)-2-(3,4,5-trimethoxyphenyl)propanamide

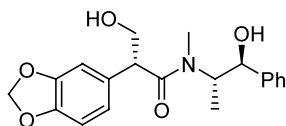
$[\alpha]_D^{20} = +69.4$  (*c* 0.3,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

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

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



$C_{20}H_{23}NO_5$

[2*S*,1'*S*,2'*S*]-(+)-3-Hydroxy-*N*-methyl-2-(3,4-methylenedioxyphenyl)-*N*-(2'-phenyl-2'-hydroxy-1'-methylethyl)propanamide

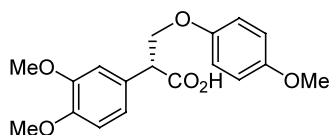
$[\alpha]_D^{20} = +55.6$  (*c* 0.3,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

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

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



$C_{18}H_{20}O_6$

[2*S*]-(+)-2-(3,4-Dimethoxyphenyl)-3-(4-methoxyphenoxy)propanoic acid

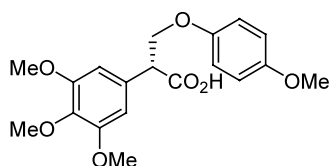
$[\alpha]_D^{20} = +23.5$  (*c* 0.1,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



$C_{19}H_{22}O_7$

[2*S*]-(+)-3-(4-Methoxyphenoxy)-2-(3,4,5-trimethoxyphenyl)propanoic acid

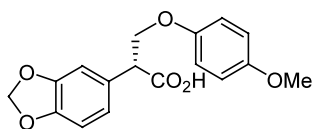
$[\alpha]_D^{20} = +21.8$  (*c* 0.1,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



$C_{17}H_{16}O_6$

[2*S*]-(+)-3-(4-Methoxyphenoxy)-2-(3,4-methylenedioxyphenyl)propanoic acid

$[\alpha]_D^{20} = +33.4$  (*c* 0.1,  $CH_2Cl_2$ )

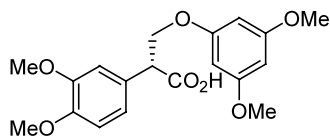
Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*



Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



[2S]-(+)-2-(3,4-Dimethoxyphenyl)-3-(3,5-dimethoxyphenoxy)propanoic acid

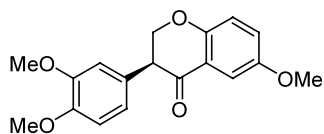
$[\alpha]_D^{20} = +41.3$  (*c* 0.1,  $CH_2Cl_2$ ).

Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



[2S]-(+)-3',4',6-Trimethoxyisoflavanone

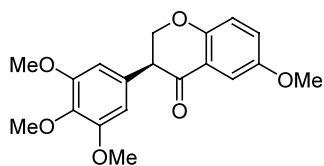
$[\alpha]_D^{20} = +51.8$  (*c* 0.1,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



[2S]-(+)-3',4',5',6-Tetramethoxyisoflavanone

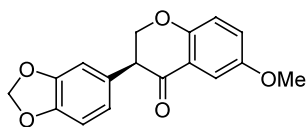
$[\alpha]_D^{20} = +64.4$  (*c* 0.2,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



[2S]-(+)-6-Methoxy-3',4'-methylenedioxyisoflavanone

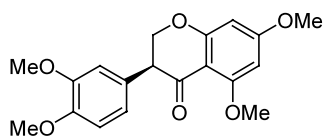
$[\alpha]_D^{20} = +58.3$  (*c* 0.2,  $CH_2Cl_2$ )

Source of chirality: (*S,S*)-(+)-pseudoephedrine

Absolute configuration: 2*S*

Jose L. Vicario, Dolores Badía\* and Luisa Carrillo

*Tetrahedron: Asymmetry 14 (2003) 489*



C<sub>19</sub>H<sub>20</sub>O<sub>6</sub>

[2S]-(+)-3',4',5,7-Tetramethoxyisoflavanone

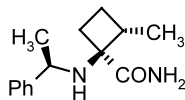
$[\alpha]_D^{20} = +54.6$  (c 0.2, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: (S,S)-(+)-pseudoephedrine

Absolute configuration: 2S

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O

*trans*-( $\alpha R,1S,2S$ )-2-Methyl-1-(1-phenylethylamino)cyclobutanecarboxamide

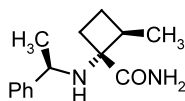
$[\alpha]_D^{25} = +61.9$  (c 0.88, methanol)

Source of chirality: (R)-1-phenylethylamine

Absolute configuration:  $\alpha R,1S,2S$

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O

*trans*-( $\alpha R,1R,2R$ )-2-Methyl-1-(1-phenylethylamino)cyclobutanecarboxamide

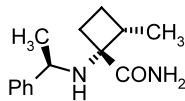
$[\alpha]_D^{25} = -19.3$  (c 0.85, methanol)

Source of chirality: (R)-1-phenylethylamine

Absolute configuration:  $\alpha R,1R,2R$

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O

*cis*-( $\alpha R,1R,2S$ )-2-Methyl-1-(1-phenylethylamino)cyclobutanecarboxamide

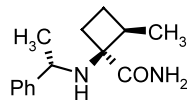
$[\alpha]_D^{25} = +2.6$  (c 0.74, methanol)

Source of chirality: (R)-1-phenylethylamine

Absolute configuration:  $\alpha R,1R,2S$

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O

*cis*-( $\alpha$ S,1S,2R)-2-Methyl-1-(1-phenylethylamino)cyclobutanecarboxamide

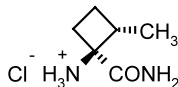
$[\alpha]_D^{25} = -3.0$  (c 1.01, methanol)

Source of chirality: (*S*)-1-phenylethylamine

Absolute configuration:  $\alpha$ S,1S,2R

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>6</sub>H<sub>13</sub>ClN<sub>2</sub>O

*trans*-(1S,2S)-1-Amino-2-methylcyclobutanecarboxamide hydrochloride

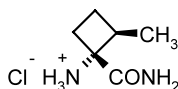
$[\alpha]_D^{25} = +86.1$  (c 1.02, methanol)

Source of chirality: (*R*)-1-phenylethylamine

Absolute configuration: 1S,2S

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>6</sub>H<sub>13</sub>ClN<sub>2</sub>O

*trans*-(1R,2R)-1-Amino-2-methylcyclobutanecarboxamide hydrochloride

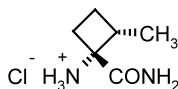
$[\alpha]_D^{25} = -86.8$  (c 0.88, methanol)

Source of chirality: (*R*)-1-phenylethylamine

Absolute configuration: 1R,2R

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



C<sub>6</sub>H<sub>13</sub>ClN<sub>2</sub>O

*cis*-(1R,2S)-1-Amino-2-methylcyclobutanecarboxamide hydrochloride

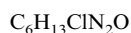
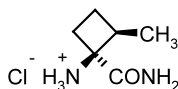
$[\alpha]_D^{25} = +7.1$  (c 1.03, methanol)

Source of chirality: (*R*)-1-phenylethylamine

Absolute configuration: 1R,2S

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



*cis*-(1*S*,2*R*)-1-Amino-2-methylcyclobutanecarboxamide hydrochloride

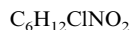
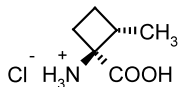
$[\alpha]_D^{25} = -7.4$  (*c* 1.02, methanol)

Source of chirality: (*S*)-1-phenylethylamine

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

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



*trans*-(1*S*,2*S*)-1-Amino-2-methylcyclobutanecarboxylic acid hydrochloride

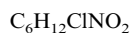
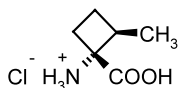
$[\alpha]_D^{25} = +13.8$  (*c* 0.11, water)

Source of chirality: (*R*)-1-phenylethylamine

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

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



*trans*-(1*R*,2*R*)-1-Amino-2-methylcyclobutanecarboxylic acid hydrochloride

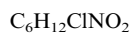
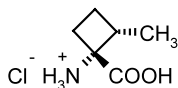
$[\alpha]_D^{25} = -14.5$  (*c* 0.10, water)

Source of chirality: (*R*)-1-phenylethylamine

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

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



*cis*-(1*R*,2*S*)-1-Amino-2-methylcyclobutanecarboxylic acid hydrochloride

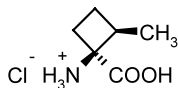
$[\alpha]_D^{25} = +23.5$  (*c* 0.19, water)

Source of chirality: (*R*)-1-phenylethylamine

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

Franz-J. Volk, Marita Wagner and August W. Frahm\*

*Tetrahedron: Asymmetry 14 (2003) 497*



$C_6H_{12}ClNO_2$

*cis*-(1*S*,2*R*)-1-Amino-2-methylcyclobutanecarboxylic acid hydrochloride

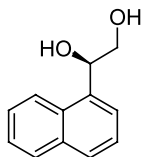
$[\alpha]_D^{25} = -24.0$  (*c* 0.09, water)

Source of chirality: (*S*)-1-phenylethylamine

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

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{12}H_{12}O_2$

(1*R*)-1-Naphthalen-1-ylethane-1,2-diol

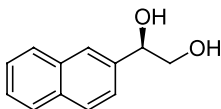
$[\alpha]_D^{20} = -84.0$  (*c* 0.11,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{12}H_{12}O_2$

(1*R*)-1-Naphthalen-2-ylethane-1,2-diol

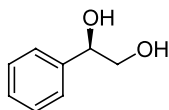
$[\alpha]_D^{20} = -47.1$  (*c* 0.07,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_8H_{10}O_2$

(1*R*)-1-Phenylethane-1,2-diol

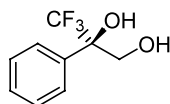
$[\alpha]_D^{20} = -62.7$  (*c* 0.11,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_9H_9F_3O_2$

(2*R*)-3,3,3-Trifluoro-2-phenylpropane-1,2-diol

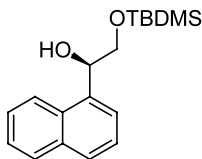
$[\alpha]_D^{20} = -18.0$  (*c* 0.35,  $CH_3OH$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{18}H_{26}O_2Si$

(1*R*)-2-(*tert*-Butyldimethylsilyloxy)-1-naphthalen-1-ylethanol

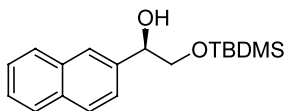
$[\alpha]_D^{20} = -40.2$  (*c* 0.09,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{18}H_{26}O_2Si$

(1*R*)-2-(*tert*-Butyldimethylsilyloxy)-1-naphthalen-2-ylethanol

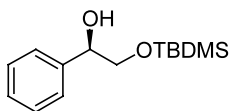
$[\alpha]_D^{20} = -31.9$  (*c* 0.48,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{14}H_{24}O_2Si$

(1*R*)-2-(*tert*-Butyldimethylsilyloxy)-1-phenylethanol

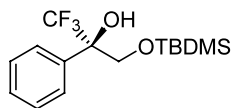
$[\alpha]_D^{20} = -28.2$  (*c* 0.11,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{15}H_{23}F_3O_2Si$

(2*R*)-3-(*tert*-Butyldimethylsilyloxy)-1,1,1-trifluoro-2-phenylpropan-2-ol

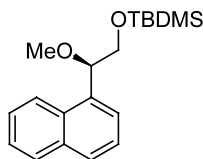
$[\alpha]_D^{20} = -9.7$  (*c* 0.26,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{19}H_{28}O_2Si$

(1*R*)-2-(*tert*-Butyldimethylsilyloxy)-1-methoxy-1-naphthalen-1-ylethane

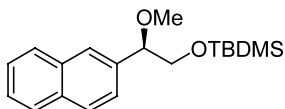
$[\alpha]_D^{20} = -85.5$  (*c* 0.11,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

F. Javier Moreno-Dorado, Francisco M. Guerra,  
María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{19}H_{28}O_2Si$

(1*R*)-2-(*tert*-Butyldimethylsilyloxy)-1-methoxy-1-naphthalen-2-ylethane

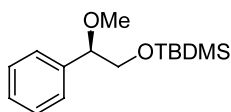
$[\alpha]_D^{20} = -46.7$  (*c* 0.91,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

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*Tetrahedron: Asymmetry 14 (2003) 503*



$C_{15}H_{26}O_2Si$

(1*R*)-2-(*tert*-Butyldimethylsilyloxy)-1-methoxy-1-phenylethane

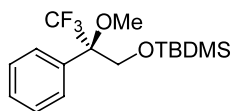
$[\alpha]_D^{20} = -51.2$  (*c* 0.21,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 1*R*

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$C_{16}H_{25}F_3O_2Si$

(2*R*)-3-(*tert*-Butyltrimethylsilyloxy)-1,1,1-trifluoro-2-methoxy-2-phenylpropane

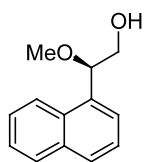
$[\alpha]_D^{20} = +3.0$  (*c* 0.29,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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$C_{13}H_{14}O_2$

(2*R*)-2-Methoxy-2-naphthalen-1-ylethanol

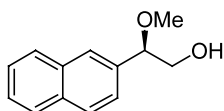
$[\alpha]_D^{20} = -122.3$  (*c* 0.11,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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$C_{13}H_{14}O_2$

(2*R*)-2-Methoxy-2-naphthalen-2-ylethanol

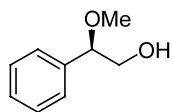
$[\alpha]_D^{20} = -123.2$  (*c* 0.74,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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$C_9H_{12}O_2$

(2*R*)-2-Methoxy-2-phenylethanol

$[\alpha]_D^{20} = -99.0$  (*c* 0.10,  $CHCl_3$ )

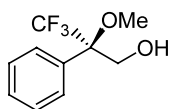
Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*



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$C_{10}H_{11}F_3O_2$

(2*R*)-3,3,3-Trifluoro-2-methoxy-2-phenylpropanol

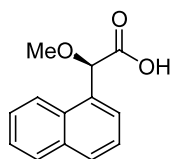
$[\alpha]_D^{20} = -17.9$  (*c* 0.35,  $CHCl_3$ )

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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$C_{13}H_{12}O_3$

(2*R*)- $\alpha$ -Methoxynaphthalen-1-ylacetic acid

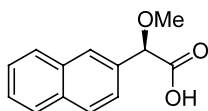
$[\alpha]_D^{20} = -132.6$  (*c* 0.10, EtOH)

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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$C_{13}H_{12}O_3$

(2*R*)- $\alpha$ -Methoxynaphthalen-2-ylacetic acid

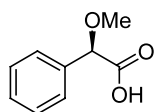
$[\alpha]_D^{20} = -133.0$  (*c* 0.01, EtOH)

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

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$C_9H_{10}O_3$

(2*R*)- $\alpha$ -Methoxyphenylacetic acid

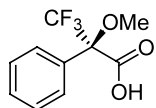
$[\alpha]_D^{20} = -144.0$  (*c* 1.03, EtOH)

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

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María J. Ortega, Eva Zubía and Guillermo M. Massanet\*

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

(2*R*)- $\alpha$ -Methoxy- $\alpha$ -(trifluoromethyl)phenylacetic acid

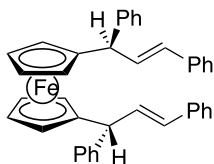
$[\alpha]_D^{20} = +69.8$  (*c* 0.22, EtOH)

Source of chirality: Sharpless' asymmetric dihydroxylation

Absolute configuration: 2*R*

Toshimasa Suzuka, Motoi Kawatsura, Atsushi Okada  
and Tamio Hayashi\*

*Tetrahedron: Asymmetry 14 (2003) 511*



C<sub>40</sub>H<sub>34</sub>Fe

1,1'-Bis((*R*)-1,3-diphenyl-2-propenyl)ferrocene

E.e. >99% (by preparation method)

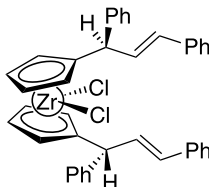
$[\alpha]_D^{20} = -249$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: chiral catalyst

Absolute configuration: *R,R*

Toshimasa Suzuka, Motoi Kawatsura, Atsushi Okada  
and Tamio Hayashi\*

*Tetrahedron: Asymmetry 14 (2003) 511*



C<sub>40</sub>H<sub>34</sub>Cl<sub>2</sub>Zr

1,1'-Bis((*R*)-1,3-diphenyl-2-propenyl)zirconocene dichloride

E.e. >99% (by preparation method)

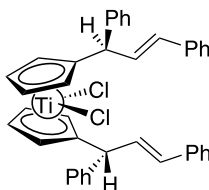
$[\alpha]_D^{20} = -119$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: chiral catalyst

Absolute configuration: *R,R*

Toshimasa Suzuka, Motoi Kawatsura, Atsushi Okada  
and Tamio Hayashi\*

*Tetrahedron: Asymmetry 14 (2003) 511*



C<sub>40</sub>H<sub>34</sub>Cl<sub>2</sub>Ti

1,1'-Bis((*R*)-1,3-diphenyl-2-propenyl)titanocene dichloride

E.e. >99% (by preparation method)

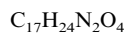
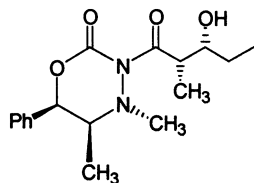
$[\alpha]_D^{20} = +133$  (*c* 1.0, CHCl<sub>3</sub>)

Source of chirality: chiral catalyst

Absolute configuration: *R,R*

David M. Casper and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 14 (2003) 517*



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

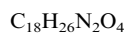
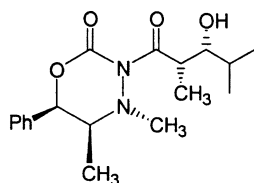
$[\alpha]_D^{25} = +5.2$  (c 0.97, MeOH)

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

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

David M. Casper and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 14 (2003) 517*



(2'S,3'R,5S,6R)-3,4,5,6-Tetrahydro-3-(3-hydroxy-2,4-dimethylpentanoyl)-4,5-dimethyl-6-phenyl-1,3,4-oxadiazin-2-one

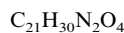
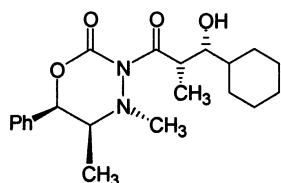
$[\alpha]_D^{24} = +7.4$  (c 1.02, MeOH)

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

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

David M. Casper and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 14 (2003) 517*



(2'S,3'R,5S,6R)-3-(3-Cyclohexyl-3-hydroxy-2-methylpropionyl)-3,4,5,6-tetrahydro-4,5-dimethyl-6-phenyl-1,3,4-oxadiazin-2-one

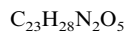
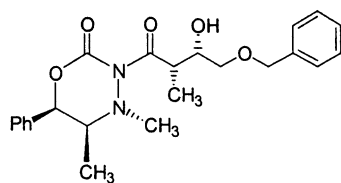
$[\alpha]_D^{24} = +3.0$  (c 1.20, MeOH)

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

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

David M. Casper and Shawn R. Hitchcock\*

*Tetrahedron: Asymmetry 14 (2003) 517*

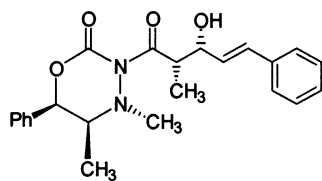


(2'S,3'S,5S,6R)-3-(4-Benzyloxy-3-hydroxy-2-methylbutyryl)-3,4,5,6-tetrahydro-4,5-dimethyl-6-phenyl-1,3,4-oxadiazin-2-one

$[\alpha]_D^{24} = -1.3$  (c 0.98, MeOH)

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

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



$[\alpha]_D^{24} = -2.3$  (*c* 1.00, MeOH)

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

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

$C_{23}H_{26}N_2O_4$

(2'*S*,3'*R*,5*S*,6*R*)-3-(3-Hydroxy-2-methyl-5-phenylpent-4-enoyl)-4,5-dimethyl-6-phenyl-[1,3,4]oxadiazinan-2-one