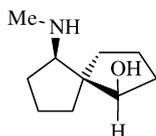


Stereochemistry abstracts

Wendy L. Benoit, Masood Parvez, Brian A. Keay *

Tetrahedron: Asymmetry 20 (2009) 69



$C_{10}H_{19}NO$

(1*R*,5*R*,6*R*)-6-Methylamino-spiro[4.4]nonan-1-ol

Ee = >98%

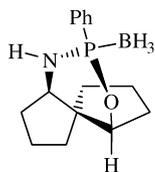
$[\alpha]_D^{20} = -9.6$ (c 0.4, $CHCl_3$)

Source of chirality: derivative of (1*R*,5*R*,6*R*)-aminospiro[4.4]nonan-1-ol

Absolute configuration: (1*R*,5*R*,6*R*)

Wendy L. Benoit, Masood Parvez, Brian A. Keay *

Tetrahedron: Asymmetry 20 (2009) 69



$C_{16}H_{25}BNOP$

(*S*_p)-(3*aR*,6*aR*,9*aR*)-6-Methyl-5-phenyl-1,2,3,3*a*,5,6,6*a*,7,8,9-decahydro-4-oxa-6-aza-5-phosphacyclopenta-[*d*]indene borane

Ee = >98%

$[\alpha]_D^{23} = +27.1$ (c 7.0, $CHCl_3$)

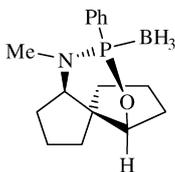
Source of chirality: derivative of (1*R*,5*R*,6*R*)-aminospiro[4.4]nonan-1-ol

Absolute configuration: (*S*_p)-(3*aR*,6*aR*,9*aR*)

(*S*_p)-confirmed by X-ray crystal structure

Wendy L. Benoit, Masood Parvez, Brian A. Keay *

Tetrahedron: Asymmetry 20 (2009) 69



$C_{15}H_{23}BNOP$

(*S*_p)-(3*aR*,6*aR*,9*aR*)-5-Phenyl-1,2,3,3*a*,5,6,6*a*,7,8,9-decahydro-4-oxa-6-aza-5-phosphacyclopenta[*d*]-indene borane

Ee = >98%

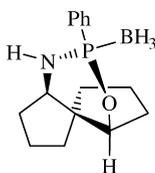
$[\alpha]_D^{20} = +11.75$ (c 0.4, $CHCl_3$)

Source of chirality: derivative of (1*R*,5*R*,6*R*)-aminospiro[4.4]nonan-1-ol

Absolute configuration: (*S*_p)-(3*aR*,6*aR*,9*aR*)

Wendy L. Benoit, Masood Parvez, Brian A. Keay *

Tetrahedron: Asymmetry 20 (2009) 69



$C_{15}H_{23}BNOP$

*R*_p-(3*aR*,6*aR*,9*aR*)-5-Phenyl-1,2,3,3*a*,5,6,6*a*,7,8,9-decahydro-4-oxa-6-aza-5-phosphacyclopenta-[*d*]indene borane

Ee = >98%

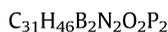
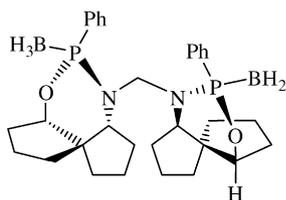
$[\alpha]_D^{20} = -2.6$ (c 0.4, $CHCl_3$)

Source of chirality: derivative of 1*R*,5*R*,6*R*-aminospiro[4.4]nonan-1-ol

Absolute configuration: (*R*_p)-(3*aR*,6*aR*,9*aR*)

Wendy L. Benoit, Masood Parvez, Brian A. Keay *

Tetrahedron: Asymmetry 20 (2009) 69



(*S_p*)-Bis[(3*aR*,6*aR*,9*aR*)-6-methyl-5-phenyl-1,2,3,3*a*,5,6,6*a*,7,8,9-decahydro-4-oxa-6-aza-5-phospha-cyclopenta[*d*]indene borane] methane

Ee = >98%

$[\alpha]_D^{20} = -54.5$ (c 0.5, $CHCl_3$)

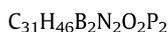
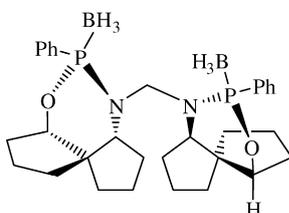
Source of chirality: derivative of (1*R*,5*R*,6*R*)-aminospiro[4.4]nonan-1-ol

Absolute configuration: (*S_p*)-(3*aR*,6*aR*,9*aR*)

(*S_p*)-confirmed by X-ray crystal structure

Wendy L. Benoit, Masood Parvez, Brian A. Keay *

Tetrahedron: Asymmetry 20 (2009) 69



(*R_p*)-Bis[(3*aR*,6*aR*,9*aR*)-6-methyl-5-phenyl-1,2,3,3*a*,5,6,6*a*,7,8,9-decahydro-4-oxa-6-aza-5-phospha-cyclopenta[*d*]indene borane] methane

Ee = >98%

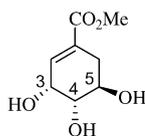
$[\alpha]_D^{20} = -19.1$ (c 1.1, $CHCl_3$)

Source of chirality: derivative of (1*R*,5*R*,6*R*)-aminospiro[4.4]nonan-1-ol

Absolute configuration: (*R_p*)-(3*aR*,6*aR*,9*aR*) confirmed by X-ray crystal structure

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78



(-)-Methyl shikimate

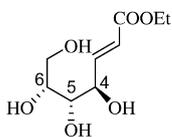
$[\alpha]_D^{25} = -131.5$ (c 0.75, EtOH)

Source of chirality: *D*-arabinose

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

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78



(*E*)-(4*R*,5*S*,6*R*)-Ethyl 4,5,6,7-tetrahydroxy-hept-2-enoate

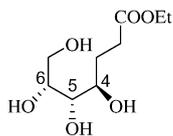
$[\alpha]_D^{25} = +15.1$ (c 0.4, MeOH)

Source of chirality: *D*-arabinose

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

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

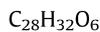
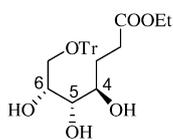


(4R,5S,6R)-Ethyl 4,5,6,7-tetrahydroxy-heptanoate

$[\alpha]_D^{25} = +9.2$ (c 0.5, H₂O)
Source of chirality: D-arabinose
Absolute configuration: (4R,5S,6R)

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

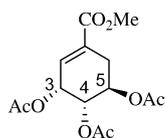


(4R,5S,6R)-Ethyl 4,5,6-trihydroxy-7-triphenylmethoxy-heptanoate

$[\alpha]_D^{25} = +6.8$ (c 2.6, EtOAc)
Source of chirality: D-arabinose
Absolute configuration: (4R,5S,6R)

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

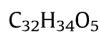
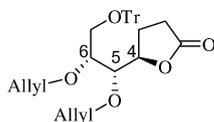


(-)-Methyl 3,4,5-O-triacetyl shikimate

$[\alpha]_D^{25} = -172.4$ (c 0.47, CHCl₃)
Source of chirality: D-arabinose
Absolute configuration: (3R,4S,5R)

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

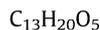
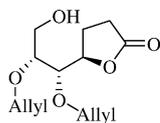


(4R,5S,6R)-5,6-Diallyloxy-7-triphenylmethoxy-heptano-1,4-lactone

$[\alpha]_D^{25} = -5.7$ (c 3, EtOAc)
Source of chirality: D-arabinose
Absolute configuration: (4R,5S,6R)

Shi-Ling Liu, Xiao-Xin Shi*, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

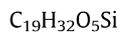
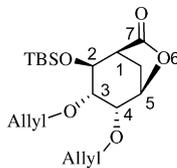


(4R,5S,6R)-5,6-Diallyloxy-7-hydroxy-heptano-1,4-lactone

$[\alpha]_D^{25} = -37.5$ (c 1.4, EtOAc)
Source of chirality: D-arabinose
Absolute configuration: (4R,5S,6R)

Shi-Ling Liu, Xiao-Xin Shi*, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

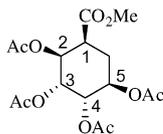


(1S,2S,3S,4S,5R)-2-(*tert*-Butyldimethylsilyloxy)-3,4-diallyloxy-6-oxa-bicyclo[3,2,1]octan-7-one

$[\alpha]_D^{25} = +56.0$ (c 1.05, EtOH)
Source of chirality: D-arabinose
Absolute configuration: (1S,2S,3S,4S,5R)

Shi-Ling Liu, Xiao-Xin Shi*, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

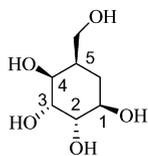


(1S,2S,3R,4S,5R)-Methyl 2,3,4,5-tetraacetoxy-cyclohexanecarboxylate

$[\alpha]_D^{25} = -3.3$ (c 1.5, $CHCl_3$)
Source of chirality: D-arabinose
Absolute configuration: (1S,2S,3R,4S,5R)

Shi-Ling Liu, Xiao-Xin Shi*, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78

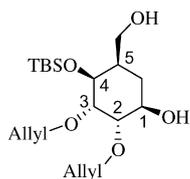


(1R,2S,3R,4S,5R)-5-Hydroxymethyl-cyclohexane-1,2,3,4-tetrol

$[\alpha]_D^{25} = -58.3$ (c 0.4, MeOH)
Source of chirality: D-arabinose
Absolute configuration: (1R,2S,3R,4S,5R)

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78



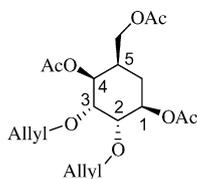
C₁₉H₃₆O₅Si

(1R,2S,3S,4S,5R)-4-(*tert*-Butyldimethylsilyloxy)-2,3-diallyloxy-5-hydroxymethyl cyclohexanol

$[\alpha]_D^{25} = -38.3$ (c 1.2, EtOH)
Source of chirality: D-arabinose
Absolute configuration: (1R,2S,3S,4S,5R)

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78



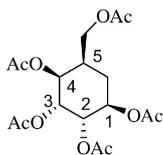
C₁₉H₂₈O₈

(1R,2S,3R,4S,5R)-5-Acetoxyethyl-1,4-diacetoxy-2,3-diallyloxy-cyclohexane

$[\alpha]_D^{25} = -43.7$ (c 1.1, MeOH)
Source of chirality: D-arabinose
Absolute configuration: (1R,2S,3R,4S,5R)

Shi-Ling Liu, Xiao-Xin Shi *, Yu-Lan Xu, Wei Xu, Jing Dong

Tetrahedron: Asymmetry 20 (2009) 78



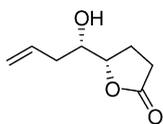
C₁₇H₂₄O₁₀

(1R,2S,3R,4S,5R)-1,2,3,4-O-Tetraacetyl-5-acetoxyethyl-cyclohexane-1,2,3,4-tetrol

$[\alpha]_D^{25} = -22.3$ (c 1, CHCl₃)
Source of chirality: D-arabinose
Absolute configuration: (1R,2S,3R,4S,5R)

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



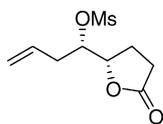
C₈H₁₂O₃

(*S*)-Dihydro-5-((*S*)-1-hydroxybut-3-enyl)furan-2(3*H*)-one

$[\alpha]_D^{25} = +42$ (c 0.6, CHCl₃)
Source of chirality: asymmetric dihydroxylation
Absolute configuration: (4*S*,5*S*)

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



(S)-1-((S)-Tetrahydro-5-oxofuran-2-yl)but-3-enyl methanesulfonate

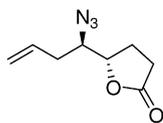
$$[\alpha]_D^{25} = +28 \text{ (c 1.4, CHCl}_3\text{)}$$

Source of chirality: asymmetric dihydroxylation

Absolute configuration: (4S,5S)

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



(S)-5-((R)-1-Azidobut-3-enyl)-dihydrofuran-2(3H)-one

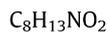
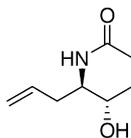
$$[\alpha]_D^{25} = -21 \text{ (c 0.5, CHCl}_3\text{)}$$

Source of chirality: asymmetric dihydroxylation

Absolute configuration: (4R,5R)

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



(5S,6R)-6-Allyl-5-hydroxypiperidin-2-one

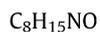
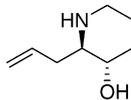
$$[\alpha]_D^{25} = +10 \text{ (c 0.8, CHCl}_3\text{)}$$

Source of chirality: asymmetric dihydroxylation

Absolute configuration: (5S,6R)

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



(2R,3S)-2-Allylpiperidin-3-ol

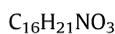
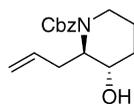
$$[\alpha]_D^{25} = -46 \text{ (c 1, MeOH)}$$

Source of chirality: asymmetric dihydroxylation

Absolute configuration: (2R,3S)

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



(2*R*,3*S*)-Benzyl 2-allyl-3-hydroxypiperidine-1-carboxylate

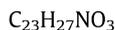
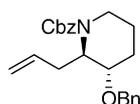
$$[\alpha]_D^{25} = -37 \text{ (c 1, CHCl}_3\text{)}$$

Source of chirality: asymmetric dihydroxylation

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

Lourdusamy Emmanuvel, Dayanand A. Kamble, Arumugam Sudalai *

Tetrahedron: Asymmetry 20 (2009) 84



(2*R*,3*S*)-Benzyl 2-allyl-3-(benzyloxy)piperidine-1-carboxylate

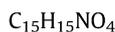
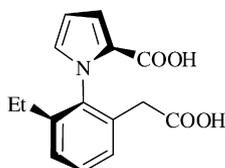
$$[\alpha]_D^{25} = -37 \text{ (c 0.8, CHCl}_3\text{)}$$

Source of chirality: asymmetric dihydroxylation

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

Ferenc Faigl *, Bernadett Vas-Feldhoffer, Miklós Kubinyi, Krisztina Pál,
Gábor Tárkányi, Máttyás Czugler

Tetrahedron: Asymmetry 20 (2009) 98



(*R*)-1-(2-carboxymethyl-6-ethylphenyl)-1*H*-pyrrole-2-carboxylic acid

ee = >99%

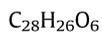
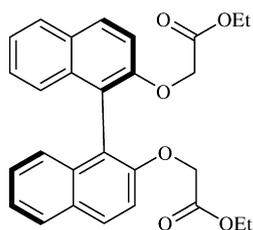
$$[\alpha]_D = -85.5 \text{ (c 1, ethanol)}$$

Source of chirality: resolution

Absolute configuration: (*R*)

Chenguang Hu, Yongbing He *, Zhihong Chen, Xiaohuan Huang

Tetrahedron: Asymmetry 20 (2009) 104



(*S*)-Diethyl 2,2'-(1,1'-binaphthyl-2,2'-diylbisloxy)diacetate

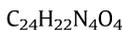
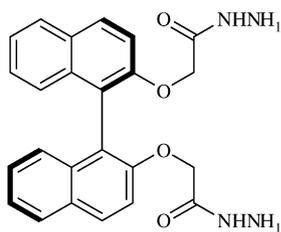
$$[\alpha]_D^{20} = +35 \text{ (c 0.2, CHCl}_3\text{)}$$

Source of chirality: binaphthol

Absolute configuration: *S*

Chenguang Hu, Yongbing He*, Zhihong Chen, Xiaohuan Huang

Tetrahedron: Asymmetry 20 (2009) 104

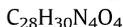
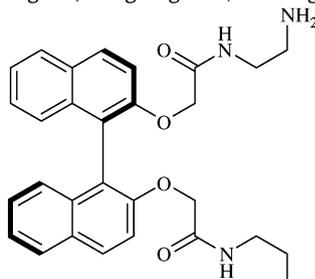


(S)-2,2'-(1,1'-Binaphthyl-2,2'-diyl)bis(oxy)diacetohydrazide

$[\alpha]_D^{20} = +177.5$ (c 0.2, $CHCl_3$)
Source of chirality: binaphthol
Absolute configuration: S

Chenguang Hu, Yongbing He*, Zhihong Chen, Xiaohuan Huang

Tetrahedron: Asymmetry 20 (2009) 104

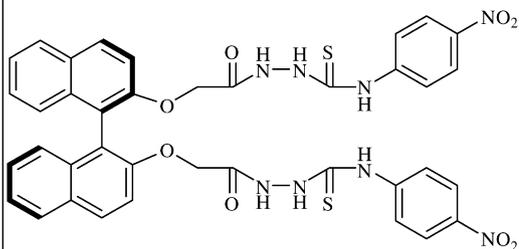


(S)-2,2'-(1,1'-Binaphthyl-2,2'-diyl)bis(oxy)bis(N-(2-aminoethyl)acetamide)

$[\alpha]_D^{20} = +145$ (c 0.4, $CHCl_3$)
Source of chirality: binaphthol
Absolute configuration: S

Chenguang Hu, Yongbing He*, Zhihong Chen, Xiaohuan Huang

Tetrahedron: Asymmetry 20 (2009) 104

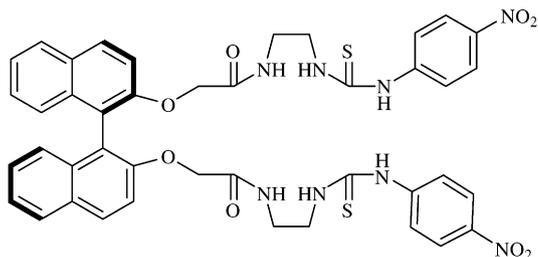


Bis(p-nitrophenylthioureylene-carbamoyl-methoxy)-2,2'-(S)-1,1'-binaphthalene

$[\alpha]_D^{20} = +19.75$ (c 0.05, DMSO)
Source of chirality: binaphthol
Absolute configuration: S

Chenguang Hu, Yongbing He*, Zhihong Chen, Xiaohuan Huang

Tetrahedron: Asymmetry 20 (2009) 104

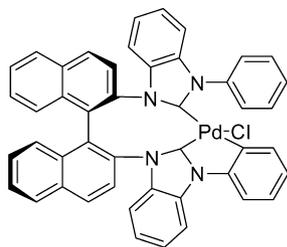


Bis(p-nitrophenylthioureylene-ethenecarbamoyl-methoxy)-2,2'-(S)-1,1'-binaphthalene

$[\alpha]_D^{20} = +39.5$ (c 0.05, DMSO)
Source of chirality: binaphthol
Absolute configuration: S

Zhen Liu, Min Shi *

Tetrahedron: Asymmetry 20 (2009) 119

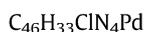
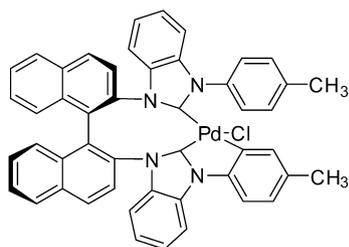


(R)-(+)-Axially chiral cyclometalated bidentate NHC-Pd(II) complex **1a**

Ee = 100%
 $[\alpha]_D^{20} = +126.1$ (c 0.95, $CHCl_3$).
Source of chirality: resolution
Absolute configuration: (R)

Zhen Liu, Min Shi *

Tetrahedron: Asymmetry 20 (2009) 119

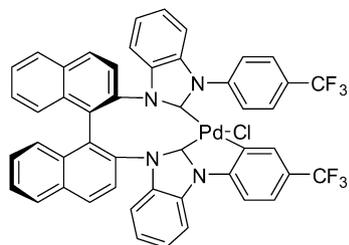


(R)-(+)-Axially chiral cyclometalated bidentate NHC-Pd(II) complex **1b**

Ee = 100%
 $[\alpha]_D^{20} = +247.6$ (c 1.01, $CHCl_3$)
Source of chirality: resolution
Absolute configuration: (R)

Zhen Liu, Min Shi *

Tetrahedron: Asymmetry 20 (2009) 119

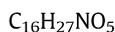
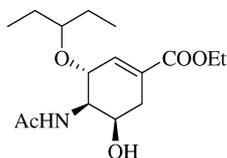


(R)-(+)-Axially chiral cyclometalated bidentate NHC-Pd(II) complex **1c**

Ee = 100%
 $[\alpha]_D^{20} = +218.3$ (c 1.08, $CHCl_3$)
Source of chirality: resolution
Absolute configuration: (R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

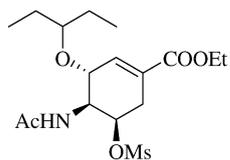


Ethyl (3R,4R,5R)-4-N-acetyl-3-(1-ethyl-propoxy)-5-hydroxy-cyclohex-1-ene-1-carboxylate

$[\alpha]_D^{25} = -104$ (c 3.0, EtOAc)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (3R,4R,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124



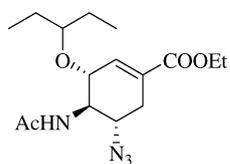
$C_{17}H_{29}NO_7S$

Ethyl (3R,4S,5R)-4-N-acetylamino-3-(1-ethyl-propoxy)-5-methansulfonyloxy-cyclohex-1-ene-1-carboxylate

$[\alpha]_D^{25} = -85$ (c 0.7, EtOAc)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (3R,4S,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124



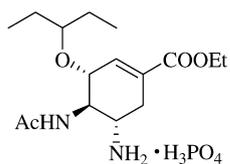
$C_{16}H_{26}N_4O_4$

Ethyl (3R,4R,5S)-4-N-acetylamino-5-azido-3-(1-ethyl-propoxy)-cyclohex-1-ene-1-carboxylate

$[\alpha]_D^{20} = -44$ (c 1.5, $CHCl_3$)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (3R,4R,5S)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124



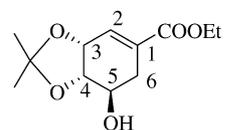
$C_{16}H_{31}N_2O_8P$

Osetamivir phosphate (Tamiflu)

$[\alpha]_D^{20} = -39$ (c 1, H_2O)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (3R,4R,5S)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124



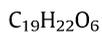
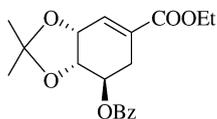
$C_{12}H_{18}O_5$

Ethyl (3R,4S,5R)-3,4-O-isopropylidene-shikimate

$[\alpha]_D^{20} = -31$ (c 3.0, EtOAc)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (3R,4S,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

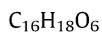
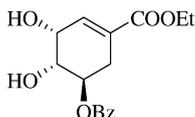


Ethyl (3R,4S,5R)-5-O-benzoyl-3,4-O-isopropylidene-shikimate

$[\alpha]_D^{25} = -55$ (c 3.4, EtOAc)
Source of chirality: (–)-Shikimic acid
Absolute configuration: (3R,4S,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

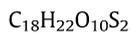
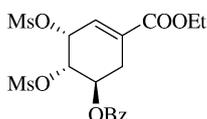


Ethyl (3R,4R,5R)-5-O-benzoyl-shikimate

$[\alpha]_D^{25} = -122$ (c 2.7, EtOAc)
Source of chirality: (–)-Shikimic acid
Absolute configuration: (3R,4R,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

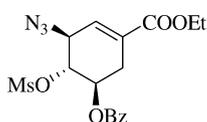


Ethyl (3R,4S,5R)-5-O-benzoyl-3,4-O-bismethanesulfonyl-shikimate

$[\alpha]_D^{25} = -135$ (c 1.9, EtOAc)
Source of chirality: (–)-Shikimic acid
Absolute configuration: (3R,4S,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

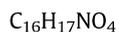
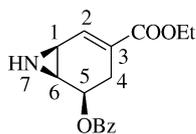


Ethyl (3S,4R,5R)-3-azido-5-benzoyloxy-4-methanesulfonyloxy-cyclohex-1-ene-1-carboxylate

$[\alpha]_D^{25} = -27$ (c 2.8, EtOAc)
Source of chirality: (–)-Shikimic acid
Absolute configuration: (3S,4R,5R)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

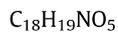
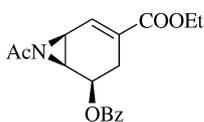


Ethyl (1S,5R,6S)-5-benzoyloxy-7-aza-bicyclo[4,1,0]hept-2-ene-3-carboxylate

$[\alpha]_D^{25} = -63$ (c 0.8, EtOAc)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (1S,5R,6S)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124

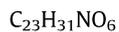
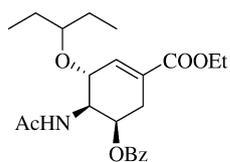


Ethyl (1S,5R,6S)-7-acetyl-5-benzoyloxy-7-aza-bicyclo[4,1,0]hept-2-ene-3-carboxylate

$[\alpha]_D^{25} = -41$ (c 1.6, EtOAc)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (1S,5R,6S)

Liang-Deng Nie, Xiao-Xin Shi *

Tetrahedron: Asymmetry 20 (2009) 124



Ethyl (3R,4R,5R)-4-N-acetyl-5-benzoyloxy-3-(1-ethyl-propoxy)-cyclohex-1-ene-1-carboxylate

$[\alpha]_D^{25} = -113$ (c 1.6, EtOAc)
Source of chirality: (-)-Shikimic acid
Absolute configuration: (3R,4R,5R)