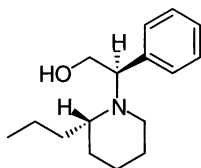


J. L. Terán, D. Gnecco,* A. Galindo, J. Juárez,
S. Bernès and R. G. Enríquez

Tetrahedron: Asymmetry 12 (2001) 357



$C_{16}H_{25}NO$

(2*R*,2'*S*)-(+)-2-Phenyl-2-(2'-propyl-piperidin-1'-yl)-ethanol

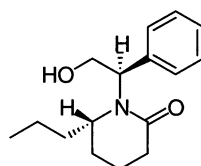
$[\alpha]_D = +17.0$ ($c = 1.0$, CH_2Cl_2)

Source of chirality: (*R*)-(-)-amino-phenyl-ethanol

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

J. L. Terán, D. Gnecco,* A. Galindo, J. Juárez,
S. Bernès and R. G. Enríquez

Tetrahedron: Asymmetry 12 (2001) 357



$C_{16}H_{23}NO_2$

(1'*R*,6*S*)-(+)-1-(2'-Hydroxy-1'-phenyl-ethyl)-6-propyl-piperidin-2-one

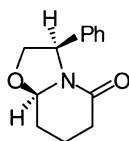
$[\alpha]_D = +21.0$ ($c = 1.0$, CH_2Cl_2)

Source of chirality: (*R*)-(-)-amino-phenyl-ethanol

Absolute configuration: (1'*R*,6*S*)

J. L. Terán, D. Gnecco,* A. Galindo, J. Juárez,
S. Bernès and R. G. Enríquez

Tetrahedron: Asymmetry 12 (2001) 357



$C_{13}H_{15}NO_2$

(3*R*,2*aR*)-(-)-3-Phenyl-hexahydro-oxazolo[3,2-*a*]pyridin-5-one

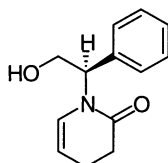
$[\alpha]_D = -92.0$ ($c = 1.0$, CH_2Cl_2)

Source of chirality: (*R*)-(-)-amino-phenyl-ethanol

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

J. L. Terán, D. Gnecco,* A. Galindo, J. Juárez,
S. Bernès and R. G. Enríquez

Tetrahedron: Asymmetry 12 (2001) 357



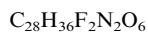
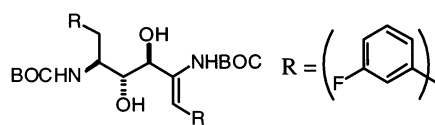
$C_{13}H_{15}NO_2$

(1'*R*)-(-)-1-(2'-Hydroxy-1'-phenyl-ethyl)-3,4-dihydro-(1*H*)-pyridin-2-one

$[\alpha]_D = -49.0$ ($c = 1.0$, CH_2Cl_2)

Source of chirality: (*R*)-(-)-amino-phenyl-ethanol

Absolute configuration: (1'*R*)



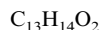
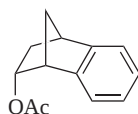
trans-2-(5*S*)-Bis-(*tert*-butoxycarbonylamino)-1,6-bis-(3-fluorophenyl)-(3*S*,4*R*)-dihydroxy-hex-1-ene

Ee = 100%

$[\alpha]_{\text{D}} = -40.6$ (*c* 0.88, MeOH)

Source of chirality: BOC *S*-(3-fluorophenyl)alanine

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



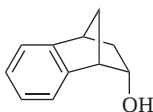
(1*R*,2*R*)-(+)-*endo*-2-Benzonorbornenyl acetate

Ee = 100% [by NMR]

$[\alpha]_{\text{D}}^{25} = +110.0$ (*c* 1.0, CHCl₃)

Source of chirality: lipase catalysed resolution

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



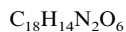
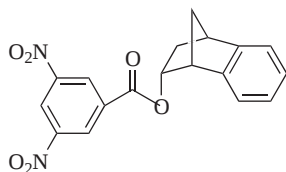
(1*S*,2*S*)-(-)-*endo*-2-Benzonorbornenol

Ee = 100% [by NMR]

$[\alpha]_{\text{D}}^{25} = -82.80$ (*c* 1.0, CHCl₃)

Source of chirality: lipase catalysed resolution

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



(1'*R*,2'*R*)-(+)-*endo*-2-Benzonorbornenyl 3,5-dinitrobenzoate

Ee = 100% [by NMR]

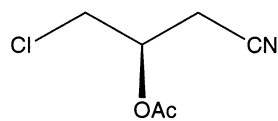
$[\alpha]_{\text{D}}^{25} = +113.0$ (*c* 1.0, CHCl₃)

Source of chirality: lipase catalysed resolution

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

Hideaki Idogaki, Naoya Kasai,* Motoko Takeuchi, Miki Hatada and Toshio Suzuki*

Tetrahedron: Asymmetry 12 (2001) 369



$C_6H_8ClNO_2$

(*R*)-4-Chloro-3-acetoxybutyronitrile

Ee = 99.2% by GC analysis

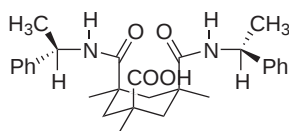
$[\alpha]_D^{20} = -11.43$ ($c = 1.187$, $CHCl_3$)

Source of chirality: microbial resolution

Absolute configuration: *R*

Takuji Hirose,* Kumiko Naito, Hiroaki Shitara, Hiroyuki Nohira and Bruce W. Baldwin

Tetrahedron: Asymmetry 12 (2001) 375



$C_{28}H_{36}N_2O_4$

cis,cis-1,3,5-Trimethyl-3,5-bis[(*S*)- α -methylbenzylcarbamoyl]cyclohexane-1-carboxylic acid

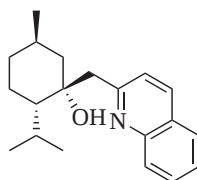
$[\alpha]_D = -77.4$ (c 1.0 EtOH)

Source of chirality: (*S*)-(-)- α -methylbenzylamine

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

Qianying Xu, Guoxing Wang, Xinfu Pan* and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 381



$C_{20}H_{27}NO$

(1*S*,2*R*,5*R*)-1-Hydroxy-1-(2-quinolylmethyl)-2-(1-methylethyl)-5-methyl-cyclohexane

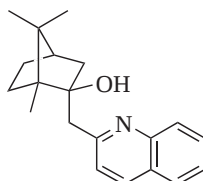
$[\alpha]_D^{20} = -61.6$ (c 1.14, $CHCl_3$)

Source of chirality: (-)-menthone

Absolute configuration: (1*S*,2*R*,5*R*)

Qianying Xu, Guoxing Wang, Xinfu Pan* and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 381



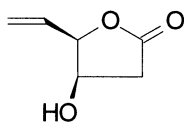
$C_{20}H_{25}NO$

(1*R*,2*S*)-2-*exo*-Hydroxy-2-*endo*-(2-quinolylmethyl)-1,7,7-trimethyl bicyclo[2.2.1]heptane

$[\alpha]_D^{20} = -37.8$ (c 1.01, $CHCl_3$)

Source of chirality: (+)-camphor

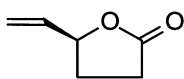
Absolute configuration: (1*R*,2*S*)

(3*R*,4*R*)-3-Hydroxy-4-vinyl-4-butyrolactone

Ee = >99%

 $[\alpha]_{\text{D}}^{20} = +43$ (*c* 1.15, CHCl_3)

Source of chirality: carbohydrate chiral pool

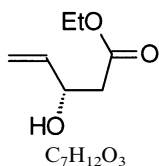
Absolute configuration: (3*R*,4*R*)

(S)-4-Vinyl-4-butyrolactone

 $[\alpha]_{\text{D}}^{20} = +28$ (*c* 1.48, CHCl_3)

Source of chirality: carbohydrate chiral pool

Absolute configuration: (S)



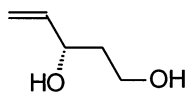
(S)-3-Hydroxy-4-pentenyl ethyl ester

Ee = >99%

 $[\alpha]_{\text{D}}^{20} = -5$ (*c* 0.98, CHCl_3)

Source of chirality: carbohydrate chiral pool

Absolute configuration: (S)



(S)-4-Pentene-1,3-diol

Ee = >99%

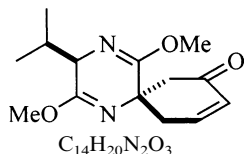
 $[\alpha]_{\text{D}}^{20} = +11$ (*c* 1, MeOH)

Source of chirality: carbohydrate chiral pool

Absolute configuration: (S)

Sonata Krikstolaityté, Algirdas Sackus,* Christian Rømming and Kjell Undheim*

Tetrahedron: Asymmetry 12 (2001) 393



2,5-Dihydro-2-isopropyl-3,6-dimethoxypyrazine-5-spiro(4'-cyclohexen-3'-one)

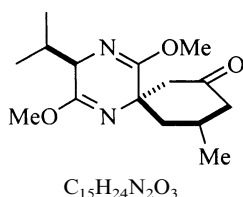
$[\alpha]_D = +167.0$ ($c = 1.43$, $CHCl_3$)

Source of chirality: chiral substrate

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

Sonata Krikstolaityté, Algirdas Sackus,* Christian Rømming and Kjell Undheim*

Tetrahedron: Asymmetry 12 (2001) 393



2,5-Dihydro-2-isopropyl-3,6-dimethoxypyrazine-5-spiro(5'-methyl-3'-cyclohexanone)

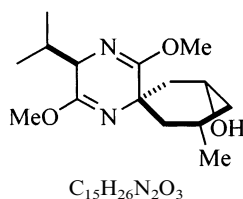
$[\alpha]_D = -21.8$ ($c = 1.57$, $CHCl_3$)

Source of chirality: chiral substrate

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

Sonata Krikstolaityté, Algirdas Sackus,* Christian Rømming and Kjell Undheim*

Tetrahedron: Asymmetry 12 (2001) 393



2,5-Dihydro-2-isopropyl-3,6-dimethoxypyrazine-5-spiro(5'-methylcyclohexan-3'-ol)

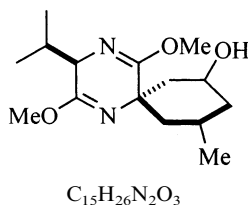
$[\alpha]_D = -44.0$ ($c = 1.17$, $CHCl_3$)

Source of chirality: separation of diastereomers

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

Sonata Krikstolaityté, Algirdas Sackus,* Christian Rømming and Kjell Undheim*

Tetrahedron: Asymmetry 12 (2001) 393



2,5-Dihydro-2-isopropyl-3,6-dimethoxypyrazine-5-spiro(5'-methylcyclohexan-3'-ol)

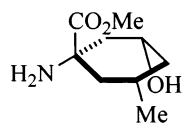
$[\alpha]_D = -40.0$ ($c = 1.10$, $CHCl_3$)

Source of chirality: separation of diastereomers

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

Sonata Krikstolaitytė, Algirdas Sackus,* Christian Rømming and Kjell Undheim*

Tetrahedron: Asymmetry 12 (2001) 393



$C_9H_{17}NO_3$

Methyl-1-amino-3-hydroxy-5-methylcyclohexane-1-carboxylate

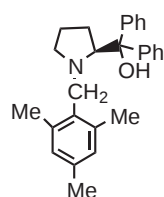
$[\alpha]_D = +6.4$ ($c = 0.31$, $CHCl_3$)

Source of chirality: chiral substrate

Absolute configuration: (1*S*,3*R*,5*R*)

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



$C_{27}H_{31}NO$

(*S*)-1-(2',4',6'-Trimethylbenzyl)-2-(1',1'-diphenylpyrrolidin-2-yl)-methanol

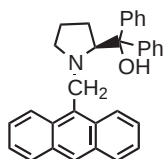
Ee = 100%

$[\alpha]_D^{24} = -7.1$ ($c = 1.39$, $CHCl_3$)

Source of chirality: (*S*)-proline

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



$C_{32}H_{29}NO$

(*S*)-1-(9'-Anthracenylmethyl)-2-(1',1'-diphenylpyrrolidin-2-yl)-methanol

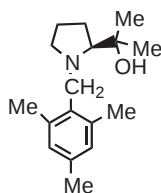
Ee = 100%

$[\alpha]_D^{20} = +47.6$ ($c = 0.98$, $CHCl_3$)

Source of chirality: (*S*)-proline

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



$C_{17}H_{27}NO$

(*S*)-1-(2',4',6'-Trimethylbenzyl)-2-(1',1'-dimethylpyrrolidin-2-yl)-methanol

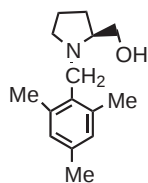
Ee = 100%

$[\alpha]_D^{20} = -3.0$ ($c = 1.40$, $CHCl_3$)

Source of chirality: (*S*)-proline

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



$C_{15}H_{23}NO$

(*S*)-1-(2',4',6'-Trimethylbenzyl)-2-(pyrrolidin-2-yl)-methanol

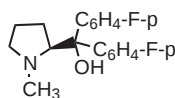
Ee = 100%

$[\alpha]_D^{20} = -12.3$ ($c = 1.68$, $CHCl_3$)

Source of chirality: (*S*)-proline

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



$C_{18}H_{19}F_2NO$

(*S*)-1-(Methyl)-2-di(4'-fluorophenyl)-pyrrolidin-2-yl-methanol

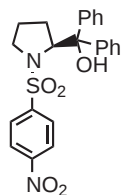
Ee = 100%

$[\alpha]_D^{20} = +41.0$ ($c = 1.75$, $CHCl_3$)

Source of chirality: (*S*)-proline

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



$C_{23}H_{22}N_2O_5S$

(*S*)-1-(4'-Nitrobenzenesulfonyl)-2-(1',1'-diphenylpyrrolidin-2-yl)-methanol

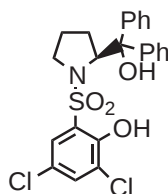
Ee = 100%

$[\alpha]_D^{20} = -49.7$ ($c = 0.70$, $CHCl_3$)

Source of chirality: (*S*)-proline

Gang Zhao,* Xiang-Guo Li and Xiu-Ran Wang

Tetrahedron: Asymmetry 12 (2001) 399



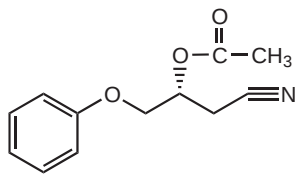
$C_{23}H_{21}Cl_2NO_4S$

(*S*)-1-(2'-Hydroxy-3',5'-dichlorobenzenesulfonyl)-2-(1',1'-diphenylpyrrolidin-2-yl)-methanol

Ee = 100%

$[\alpha]_D^{25} = -91.9$ ($c = 3.15$, $CHCl_3$)

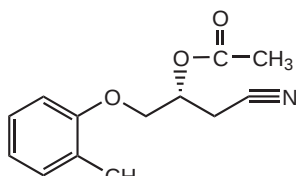
Source of chirality: (*S*)-proline

3-Acetyloxy-4-phenoxy-(3*R*)-butanenitrile

Ee > 99.0%

 $[\alpha]_{\text{D}}^{25} = +30.5$ (c 1.0, CHCl₃)

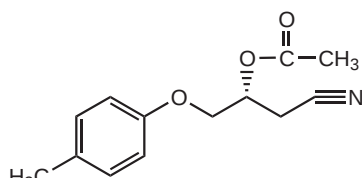
Source of chirality: enzymatic acetylation

Absolute configuration: *R*3-Acetyloxy-4-(2-methylphenoxy)-(3*R*)-butanenitrile

Ee = 91.1%

 $[\alpha]_{\text{D}}^{25} = +23.4$ (c 1.0, CHCl₃)

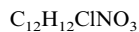
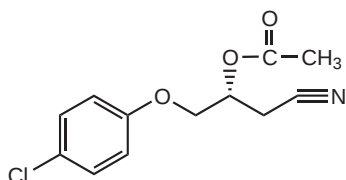
Source of chirality: enzymatic acetylation

Absolute configuration: *R*3-Acetyloxy-4-(4-methylphenoxy)-(3*R*)-butanenitrile

Ee > 99.0%

 $[\alpha]_{\text{D}}^{25} = +27.05$ (c 1.0, CHCl₃)

Source of chirality: enzymatic acetylation

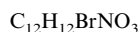
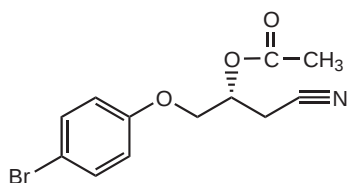
Absolute configuration: *R*3-Acetyloxy-4-(4-chlorophenoxy)-(3*R*)-butanenitrile

Ee = 92.1%

 $[\alpha]_{\text{D}}^{25} = +26.7$ (c 1.0, CHCl₃)

Source of chirality: enzymatic acetylation

Absolute configuration: *R*

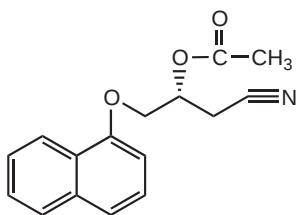


3-Acetyloxy-4-(4-bromophenoxy)-(3R)-butanenitrile

Ee = 88.7%

 $[\alpha]_{\text{D}}^{25} = +29.45$ (c 0.5, CHCl_3)

Source of chirality: enzymatic acetylation

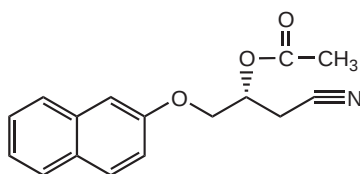
Absolute configuration: *R*

3-Acetyloxy-4-(1-naphthyloxy)-(3R)-butanenitrile

Ee > 98.0%

 $[\alpha]_{\text{D}}^{25} = +26.8$ (c 1.0, CHCl_3)

Source of chirality: enzymatic acetylation

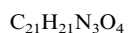
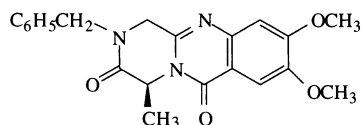
Absolute configuration: *R*

3-Acetyloxy-4-(2-naphthyloxy)-(3R)-butanenitrile

Ee > 99.0%

 $[\alpha]_{\text{D}}^{25} = +34.1$ (c 0.8, CHCl_3)

Source of chirality: enzymatic acetylation

Absolute configuration: *R*(+)-(4*S*)-2-Benzyl-8,9-dimethoxy-4-methyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-quinazoline-3,6-dione

Ee > 98% (by NMR)

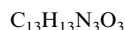
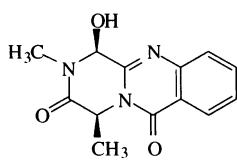
 $[\alpha]_{\text{D}}^{25} = +52$ (c 0.15, CHCl_3)

Source of chirality: natural

Absolute configuration: 4*S*

María Luisa Heredia, María Fernández, Elena de la Cuesta
and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



(+)-(1*S*,4*S*)-2,4-Dimethyl-1-hydroxy-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-
quinazoline-3,6-dione

Ee >98% (by NMR)

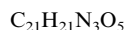
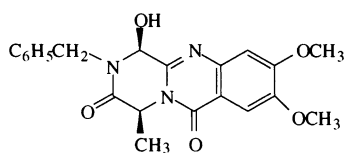
$[\alpha]_D^{25} = +55$ (*c* 0.35, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



(+)-(1*S*,4*S*)-2-Benzyl-1-hydroxy-8,9-dimethoxy-4-methyl-2,4-dihydro-1*H*-pyrazino-
[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

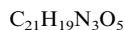
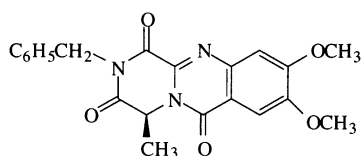
$[\alpha]_D^{25} = +56$ (*c* 0.17, $CHCl_3$)

Source of chirality: natural and synthesis

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

María Luisa Heredia, María Fernández, Elena de la Cuesta
and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



(-)-(4*S*)-2-Benzyl-8,9-dimethoxy-4-methyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-
quinazoline-1,3,6-trione

Ee >98% (by NMR)

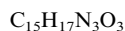
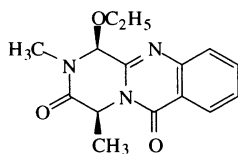
$[\alpha]_D^{25} = -24$ (*c* 0.05, $CHCl_3$)

Source of chirality: natural

Absolute configuration: 4*S*

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Tetrahedron: Asymmetry 12 (2001) 411



(+)-(1*S*,4*S*)-1-Ethoxy-2,4-dimethyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-
quinazoline-3,6-dione

Ee >98% (by NMR)

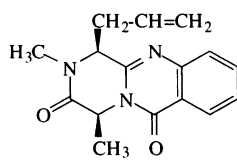
$[\alpha]_D^{25} = +120$ (*c* 0.26, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



$C_{16}H_{17}N_3O_2$

(+)-(1*S*,4*S*)-1-Allyl-2,4-dimethyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-
quinazoline-3,6-dione

Ee >98% (by NMR)

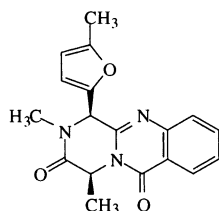
$[\alpha]_D^{25} = +49$ (*c* 0.12, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



$C_{18}H_{17}N_3O_3$

(+)-(1*R*,4*S*)-2,4-Dimethyl-1(5-methylfuryl)-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-
quinazoline-3,6-dione

Ee >98% (by NMR)

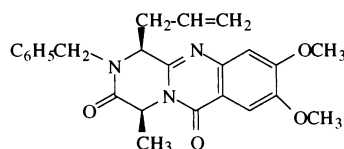
$[\alpha]_D^{25} = +31$ (*c* 0.17, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



$C_{24}H_{25}N_3O_4$

(+)-(1*S*,4*S*)-1-Allyl-2-benzyl-8,9-dimethoxy-4-methyl-2,4-dihydro-1*H*-
pyrazino[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

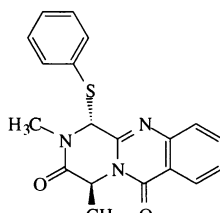
$[\alpha]_D^{25} = +16$ (*c* 0.15, $CHCl_3$)

Source of chirality: natural and synthesis

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

María Luisa Heredia, María Fernández, Elena de la Cuesta
and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



$C_{19}H_{17}N_3O_2S$

(+)-(1*R*,4*S*)-2,4-Dimethyl-1-phenylthio-2,4-dihydro-1*H*-pyrazino[2,1-*b*]-
quinazoline-3,6-dione

Ee >98% (by NMR)

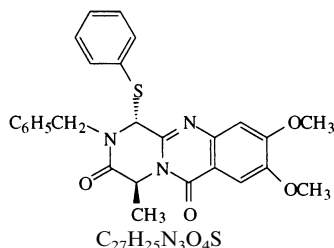
$[\alpha]_D^{25} = +227$ (*c* 0.22, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

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(+)-(1*R*,4*S*)-2-Benzyl-8,9-dimethoxy-4-methyl-1-phenylthio-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

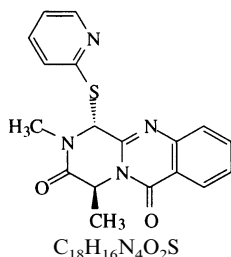
$[\alpha]_D^{25} = +179$ (*c* 0.23, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

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(+)-(1*R*,4*S*)-2,4-Dimethyl-1-(2'-pyridylthio)-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

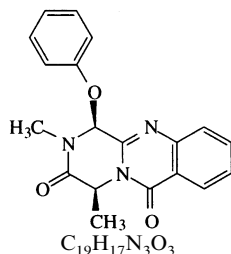
$[\alpha]_D^{25} = +405$ (*c* 0.27, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



(+)-(1*S*,4*S*)-2,4-Dimethyl-1-phenoxy-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

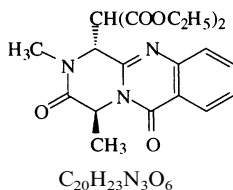
$[\alpha]_D^{25} = +164$ (*c* 0.29, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



(+)-(1*R*,4*S*)-1-Bis(ethoxycarbonylmethyl)-2,4-dimethyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

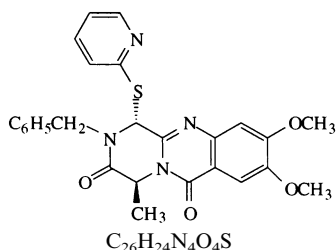
$[\alpha]_D^{25} = +49$ (*c* 0.21, $CHCl_3$)

Source of chirality: natural and synthesis

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

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and Carmen Avendaño*

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(+)-(1*R*,4*S*)-2-Benzyl-8,9-dimethoxy-4-methyl-1-(2'-pyridylthio)-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-dione

Ee >98% (by NMR)

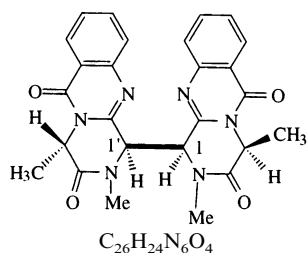
$[\alpha]_D^{25} = +520$ (*c* 0.06, $CHCl_3$)

Source of chirality: natural and synthesis

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

María Luisa Heredia, María Fernández, Elena de la Cuesta
and Carmen Avendaño*

Tetrahedron: Asymmetry 12 (2001) 411



(+)-(1'*R*,1*S*)-1,1'-Bi[(4*S*)-2,4-dimethyl-3,6-dioxo-2,3,4,6-tetrahydro-1*H*-pyrazino[2,1-*b*]quinazoliny]

Ee >98% (by NMR)

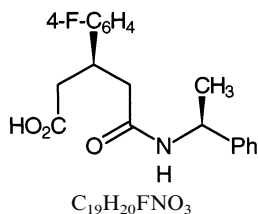
$[\alpha]_D^{25} = +41$ (*c* 0.19, $CHCl_3$)

Source of chirality: natural and synthesis

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

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419



(3*S*,1'*S*)-3-(4-Fluorophenyl)-5-oxo-5-(1'-phenylethylamino)pentanoic acid

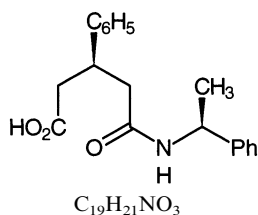
$[\alpha]_D^{25} = -78.8$ (*c* 1.0, CH_3OH)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419



(3*S*,1'*S*)-5-Oxo-3-phenyl-5-(1'-phenylethylamino)pentanoic acid

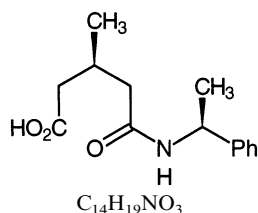
$[\alpha]_D^{25} = -81.2$ (*c* 1.0, CH_3OH)

Source of chirality: asymmetric synthesis

Absolute configuration: (3*S*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

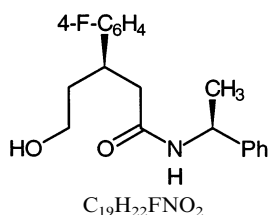


(3*S*,1'*S*)-3-Methyl-5-oxo-5-(1'-phenylethylamino)pentanoic acid

$[\alpha]_D^{25} = -88.8$ (*c* 1.0, CH_3OH)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

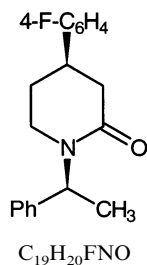


(3*R*)-3-(4-Fluorophenyl)-5-hydroxypentanoic acid (1'*S*)-1'-phenylethylamide

$[\alpha]_D^{25} = -86.4$ (*c* 1.0, CH_3OH)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

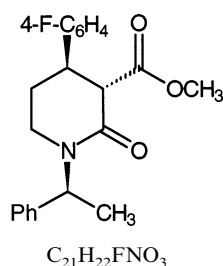


(4*R*,1'*S*)-4-(4-Fluorophenyl)-1-(1'-phenylethyl)piperidin-2-one

$[\alpha]_D^{25} = -108.4$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

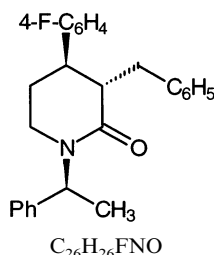


(3*S*,4*R*,1'*S*)-4-(4-Fluorophenyl)-3-methoxycarbonyl-1-(1'-phenylethyl)piperidin-2-one

$[\alpha]_D^{25} = -181.2$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

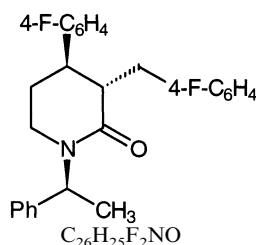


(3*S*,4*R*,1'*S*)-4-(4-Fluorophenyl)-1-(1'-phenylethyl)-3-phenylmethylpiperidin-2-one

$[\alpha]_D^{25} = -90.0$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

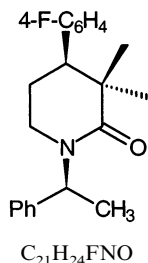


(3*S*,4*R*,1'*S*)-4-(4-Fluorophenyl)-3-(4-fluorophenyl)methyl-1-(1'-phenylethyl)-piperidin-2-one

$[\alpha]_D^{25} = -89.6$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

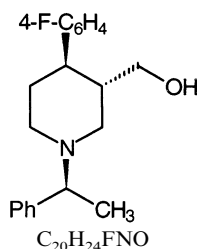


(4*R*,1'*S*)-3,3-Dimethyl-4-(4-fluorophenyl)-1-(1'-phenylethyl)piperidin-2-one

$[\alpha]_D^{25} = -31.6$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

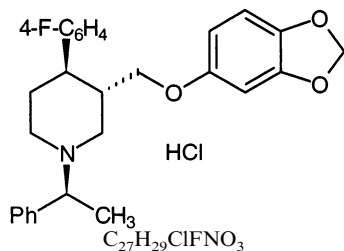


(3*S*,4*R*,1'*S*)-4-(4-Fluorophenyl)-3-hydroxymethyl-1-(1'-phenylethyl)piperidine

$[\alpha]_D^{25} = -17.4$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

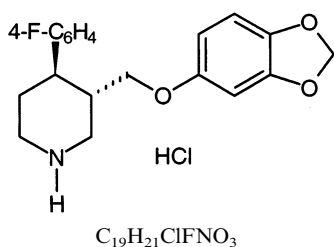


(3*S*,4*R*,1'*S*)-3-(1,3-Benzodioxol-5-yloxy)methyl-4-(4-fluorophenyl)-1-(1'-phenylethyl)piperidine hydrochloride

$[\alpha]_D^{25} = -87.4$ (*c* 1.0, CH_3OH)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*R*,1'*S*)

Lee Tai Liu,* Pao-Chiung Hong, Hsiang-Ling Huang,
Shyh-Fong Chen, Chia-Lin Jeff Wang and Yuh-Sheng Wen

Tetrahedron: Asymmetry 12 (2001) 419

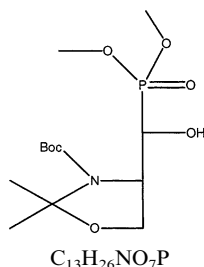


Paroxetine hydrochloride or (3*S*,4*R*)-3-(1,3-benzodioxol-5-yloxy)methyl-4-(4-fluorophenyl)piperidine hydrochloride

$[\alpha]_D^{25} = -88.6$ (*c* 1.0, CH_3OH)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*R*)

Andrzej E. Wróblewski* and Katarzyna B. Balcerzak

Tetrahedron: Asymmetry 12 (2001) 427

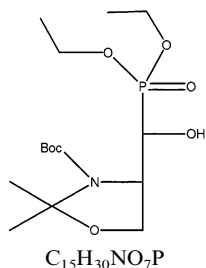


Dimethyl *N*-(*tert*-butoxycarbonyl)-2,3-*N*,*O*-isopropylidene-2-amino-1,3-dihydroxypropylphosphonate

Ee = 80%
 $[\alpha]_D^{20} = -30.4$ (*c* 2.1, $CHCl_3$)
Source of chirality: L-serine
Absolute configuration: (1*S*,2*S*)

Andrzej E. Wróblewski* and Katarzyna B. Balcerzak

Tetrahedron: Asymmetry 12 (2001) 427

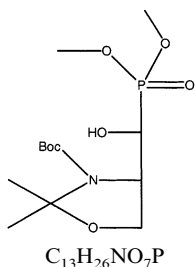


Diethyl *N*-(*tert*-butoxycarbonyl)-2,3-*N*,*O*-isopropylidene-2-amino-1,3-dihydroxypropylphosphonate

Ee = 95%
 $[\alpha]_D^{20} = -54.9$ (*c* 1.3, $CHCl_3$)
Source of chirality: L-serine
Absolute configuration: (1*S*,2*S*)

Andrzej E. Wróblewski* and Katarzyna B. Balcerzak

Tetrahedron: Asymmetry 12 (2001) 427



Dimethyl *N*-(*tert*-butoxycarbonyl)-2,3-*N*,*O*-isopropylidene-2-amino-1,3-dihydroxypropylphosphonate

Ee = 95%

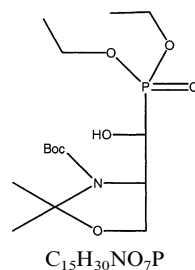
$[\alpha]_D^{20} = -35.7$ (c 1.7, $CHCl_3$)

Source of chirality: L-serine

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

Andrzej E. Wróblewski* and Katarzyna B. Balcerzak

Tetrahedron: Asymmetry 12 (2001) 427



Diethyl *N*-(*tert*-butoxycarbonyl)-2,3-*N*,*O*-isopropylidene-2-amino-1,3-dihydroxypropylphosphonate

Ee = 94%

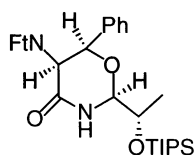
$[\alpha]_D^{20} = -27.3$ (c 1.4, $CHCl_3$)

Source of chirality: L-serine

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

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*S*,5*S*,6*R*)-6-Phenyl-5-phthalimido-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

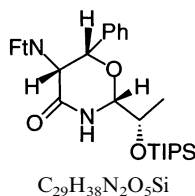
$[\alpha]_D^{20} = -104.7$ (c 0.64, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*S*,6*R*) [1(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-Phenyl-5-phthalimido-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

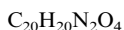
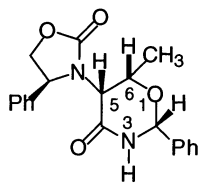
$[\alpha]_D^{20} = +97.4$ (c 0.44, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [1(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-Methyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

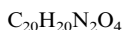
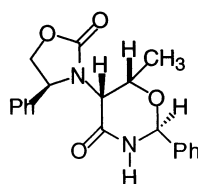
$[\alpha]_D^{20} = +132.89$ (*c* 0.90, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*S*,5*R*,6*S*)-6-Methyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

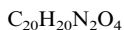
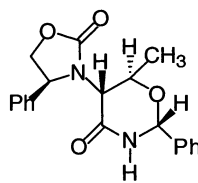
$[\alpha]_D^{20} = +112.4$ (*c* 0.76, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*S*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
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(2*R*,5*R*,6*R*)-6-Methyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

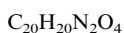
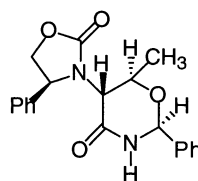
$[\alpha]_D^{20} = +57.9$ (*c* 0.38, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*S*,5*R*,6*R*)-6-Methyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

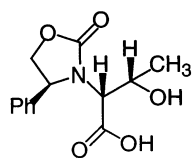
$[\alpha]_D^{20} = +153.4$ (*c* 0.76, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,3*R*)-2-[(4*S*)-2-Oxo-4-phenyloxazolidin-3-yl]-3-hydroxy-butanoic acid

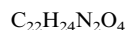
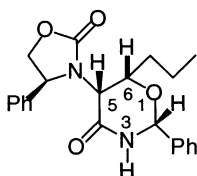
$[\alpha]_{\text{D}}^{20} = +57.9$ (*c* 0.21, CHCl_3)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,3*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*R*,5*R*,6*S*)-6-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

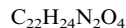
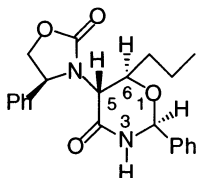
$[\alpha]_{\text{D}}^{20} = +149.0$ (*c* 0.31, CHCl_3)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4(*S*)]

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(2*S*,5*R*,6*R*)-6-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

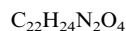
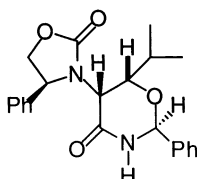
$[\alpha]_{\text{D}}^{20} = +148.4$ (*c* 0.36, CHCl_3)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
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(2*S*,5*R*,6*S*)-6-*i*-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

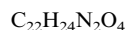
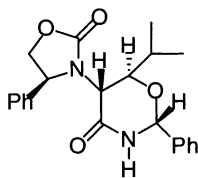
$[\alpha]_{\text{D}}^{20} = +118.0$ (*c* 0.79, CHCl_3)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*S*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*R*,5*R*,6*R*)-6-*i*-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

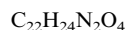
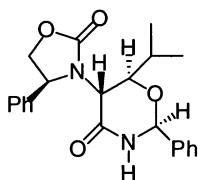
$[\alpha]_D^{20} = +47.3$ (*c* 1.88, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*S*,5*R*,6*R*)-6-*i*-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

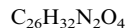
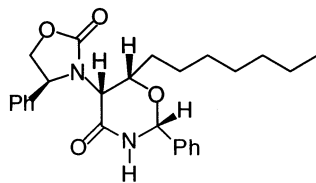
$[\alpha]_D^{20} = +121.6$ (*c* 1.01, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*R*,5*R*,6*S*)-6-(Hept-1-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

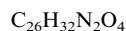
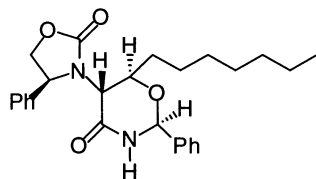
$[\alpha]_D^{20} = +133.8$ (*c* 0.27, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4(*S*)]

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(2*S*,5*R*,6*R*)-(6-Hept-1-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

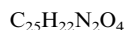
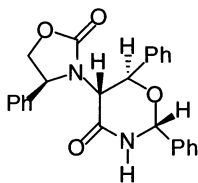
$[\alpha]_D^{20} = +126.5$ (*c* 0.34, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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(2*R*,5*R*,6*R*)-6-Phenyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

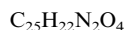
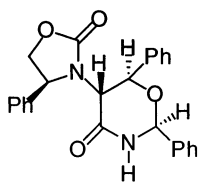
$[\alpha]_D^{20} = +63.4$ (*c* 0.76, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*S*,5*R*,6*R*)-6-Phenyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

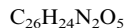
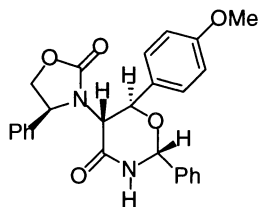
$[\alpha]_D^{20} = +168.2$ (*c* 0.82, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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(2*R*,5*R*,6*R*)-6-(4-Methoxyphenyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

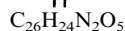
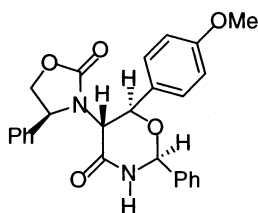
$[\alpha]_D^{20} = -1.4$ (*c* 1.61, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

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(2*S*,5*R*,6*R*)-6-(4-Methoxyphenyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

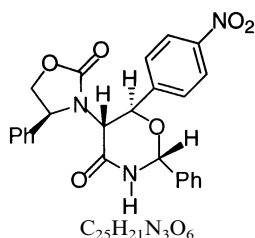
$[\alpha]_D^{20} = +166.2$ (*c* 0.74, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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(2*R*,5*R*,6*R*)-6-(4-Nitrophenyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

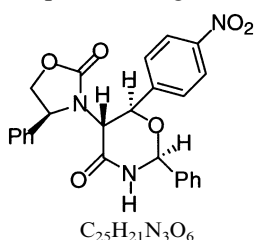
$[\alpha]_D^{20} = -33.9$ (*c* 0.81, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*S*,5*R*,6*R*)-6-(4-Nitrophenyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

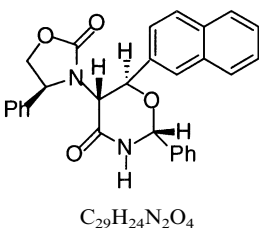
$[\alpha]_D^{20} = +92.0$ (*c* 0.50, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*R*,5*R*,6*R*)-6-(2-Naphthyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

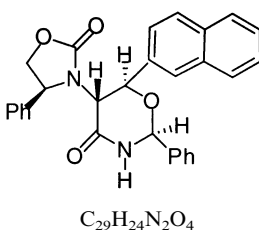
$[\alpha]_D^{20} = -36.6$ (*c* 1.65, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*S*,5*R*,6*R*)-6-(2-Naphthyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

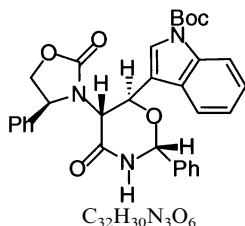
$[\alpha]_D^{20} = +81.3$ (*c* 1.07, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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(2*R*,5*R*,6*R*)-6-(1-*t*-Butoxycarbonylindol-3-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

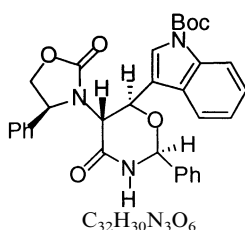
$[\alpha]_D^{20} = +20.9$ (*c* 2.49, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*S*,5*R*,6*R*)-6-(1-*t*-Butoxycarbonylindol-3-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-phenyl-1,3-oxazinan-4-one

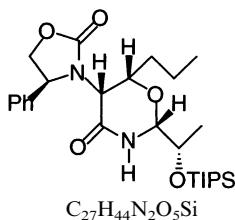
$[\alpha]_D^{20} = +111.0$ (*c* 1.36, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*S*,5*R*,6*R*) [4(*S*)]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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(2*R*,5*R*,6*S*)-6-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

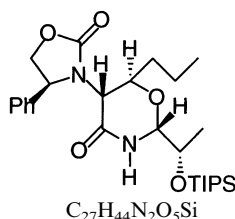
$[\alpha]_D^{20} = +102.0$ (*c* 1.72, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

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(2*R*,5*R*,6*R*)-6-Propyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

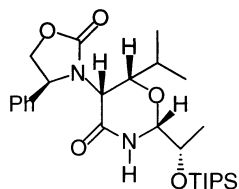
$[\alpha]_D^{20} = +75.4$ (*c* 1.26, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4*S*], [1*S*]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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$C_{27}H_{44}N_2O_5Si$

(2*R*,5*R*,6*S*)-6-(2-Methyl)-ethyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

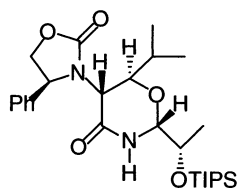
$[\alpha]_D^{20} = +92.4$ (*c* 0.92, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

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$C_{27}H_{44}N_2O_5Si$

(2*R*,5*R*,6*R*)-6-(2-Methyl)-ethyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

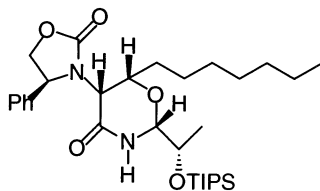
$[\alpha]_D^{20} = +63.7$ (*c* 1.82, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



$C_{31}H_{52}N_2O_5Si$

(2*R*,5*R*,6*S*)-6-(Hept-1-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

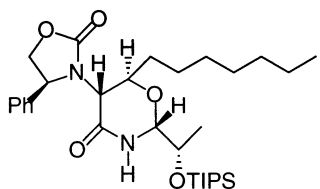
$[\alpha]_D^{20} = +94.3$ (*c* 0.81, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



$C_{31}H_{52}N_2O_5Si$

(2*R*,5*R*,6*R*)-6-(Hept-1-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

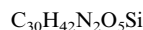
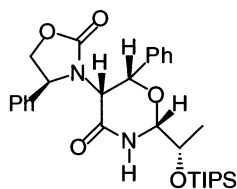
$[\alpha]_D^{20} = +84.2$ (*c* 0.43, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-Phenyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-
2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

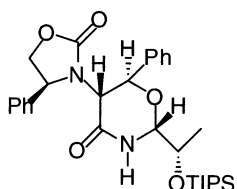
$[\alpha]_D^{20} = +183.2$ (*c* 1.19, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*R*)-6-Phenyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-
triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

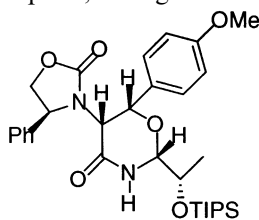
$[\alpha]_D^{20} = +82.3$ (*c* 3.02, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4*S*], [1*S*]

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Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-(4(*S*)-Methoxyphenyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-
2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

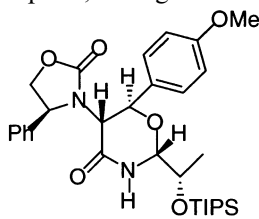
$[\alpha]_D^{20} = +143.2$ (*c* 1.48, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

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Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*R*)-6-(4(*S*)-Methoxyphenyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-
2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

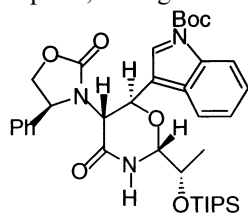
$[\alpha]_D^{20} = +55.8$ (*c* 2.24, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
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Tetrahedron: Asymmetry 12 (2001) 439



$C_{37}H_{51}N_3O_7Si$

(2*R*,5*R*,6*R*)-6-(1-*t*-Butoxycarbonylindol-3-yl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

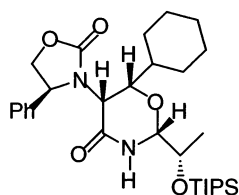
$[\alpha]_D^{20} = +84.3$ (*c* 1.48, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



$C_{30}H_{48}N_2O_5Si$

(2*R*,5*R*,6*S*)-6-Cyclohexyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

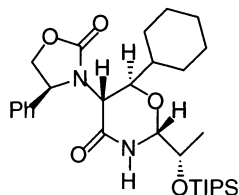
$[\alpha]_D^{20} = +116.2$ (*c* 1.67, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



$C_{30}H_{48}N_2O_5Si$

(2*R*,5*R*,6*R*)-6-Cyclohexyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

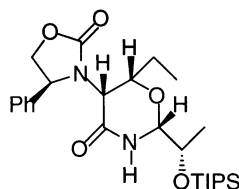
$[\alpha]_D^{20} = +66.5$ (*c* 1.08, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



$C_{26}H_{42}N_2O_5Si$

(2*R*,5*R*,6*S*)-6-Ethyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilyloxyethyl]-1,3-oxazinan-4-one

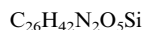
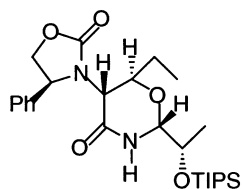
$[\alpha]_D^{20} = +100.0$ (*c* 1.04, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

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Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*R*)-6-Ethyl-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

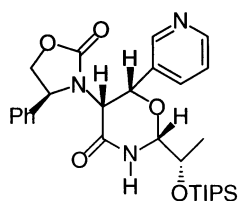
$[\alpha]_D^{20} = +80.5$ (*c* 0.88, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-(3-Pyridyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

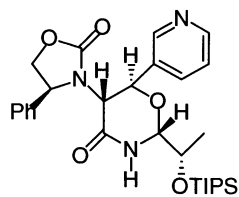
$[\alpha]_D^{20} = +63.9$ (*c* 1.38, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4(*S*)], [1(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*R*)-6-(3-Pyridyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

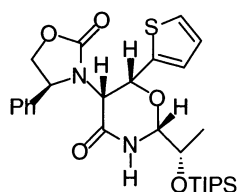
$[\alpha]_D^{20} = +77.0$ (*c* 0.80, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)], [1(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
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Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-(2-Thienyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

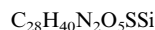
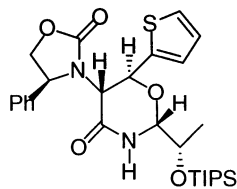
$[\alpha]_D^{20} = +124.4$ (*c* 1.16, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4(*S*)], [1(*S*)]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*R*)-6-(2-Thienyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

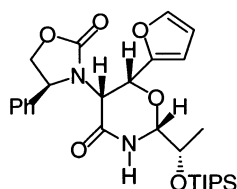
$[\alpha]_D^{20} = +103.7$ (*c* 0.98, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*S*)-6-(2-Furyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

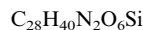
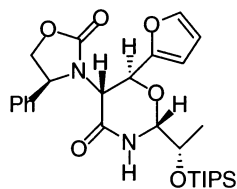
$[\alpha]_D^{20} = +94.8$ (*c* 0.48, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*S*) [4*S*], [1*S*]

Alessandro Bongini,* Mauro Panunzio,* Elisa Bandini,
Eileen Campana, Giorgio Martelli and Giuseppe Spunta

Tetrahedron: Asymmetry 12 (2001) 439



(2*R*,5*R*,6*R*)-6-(2-Furyl)-5-[(4*S*)-2-oxo-4-phenyloxazolidin-3-yl]-2-[1(*S*)-triisopropylsilanyloxyethyl]-1,3-oxazinan-4-one

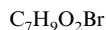
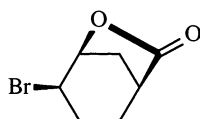
$[\alpha]_D^{20} = +151.3$ (*c* 0.96, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*,5*R*,6*R*) [4(*S*)], [1*S*]

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



(1*S*,4*R*,5*S*)-4-Bromo-6-oxabicyclo[3.2.1]octan-7-one

Ee $\geq$ 96%

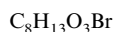
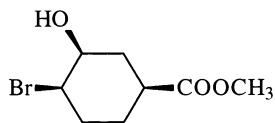
$[\alpha]_D^{20} = +68.3$ (*c* 1.2, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



Methyl (1*S*,3*S*,4*R*)-4-bromo-3-hydroxy-1-cyclohexanecarboxylate

Ee $\geq$ 96%

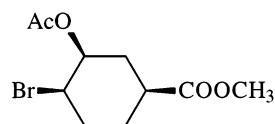
$[\alpha]_D^{20} = -33.1$ (c 1.0, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*,4*R*)

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



Methyl (1*S*,3*S*,4*R*)-3-acetoxy-4-bromo-1-cyclohexanecarboxylate

Ee $\geq$ 96%

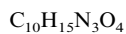
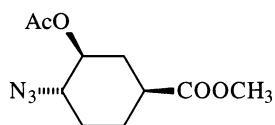
$[\alpha]_D^{20} = -39.4$ (c 1.2, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*,4*R*)

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



Methyl (1*S*,3*S*,4*S*)-3-acetoxy-4-azido-1-cyclohexanecarboxylate

Ee $\geq$ 96%

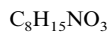
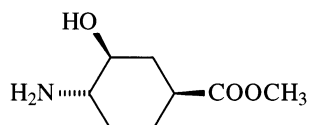
$[\alpha]_D^{20} = +25.0$ (c 1.2, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*,4*S*)

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



Methyl (1*S*,3*S*,4*S*)-4-amino-3-hydroxy-1-cyclohexanecarboxylate

Ee = 96%

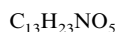
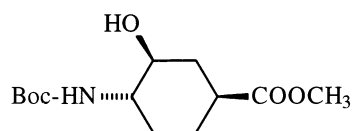
$[\alpha]_D^{20} = +29.2$ (c 0.5, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*,4*S*)

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



Methyl (1*S*,3*S*,4*S*)-4-(*tert*-butoxycarbonylamino)-3-hydroxy-1-cyclohexanecarboxylate

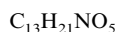
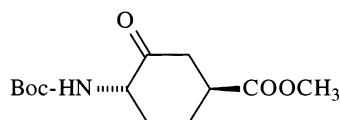
$[\alpha]_{\text{D}}^{20} = +11.4$ (*c* 1.9, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (1*S*,3*S*,4*S*)

Krzysztof Krajewski, Zbigniew Ciunik and Ignacy Z. Siemion*

Tetrahedron: Asymmetry 12 (2001) 455



Methyl (1*S*,4*S*)-4-(*tert*-butoxycarbonylamino)-3-oxo-1-cyclohexanecarboxylate

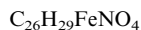
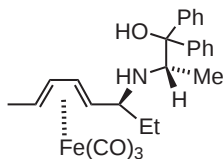
$[\alpha]_{\text{D}}^{20} = +1.8$ (*c* 1.5, MeOH)

Source of chirality: asymmetric synthesis

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

Kazuya Okamoto, Tetsutaro Kimachi, Toshiro Ibuka and Yoshiji Takemoto*

Tetrahedron: Asymmetry 12 (2001) 463



(2*S*,1'*S*,2'*S*)-*N*-Tricarbonyliron[(η^4 -2'-5')-1'-ethyl-2',4'-hexadienyl]-2-amino-1,1-diphenylpropan-1-ol

Ee > 95%

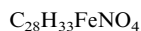
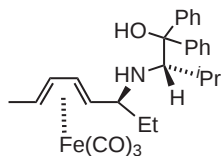
$[\alpha]_{\text{D}}^{21} = -21.90$ (*c* 0.719, CHCl₃)

Source of chirality: asymmetric synthesis

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

Kazuya Okamoto, Tetsutaro Kimachi, Toshiro Ibuka and Yoshiji Takemoto*

Tetrahedron: Asymmetry 12 (2001) 463



(2*S*,1'*S*,2'*S*)-*N*-Tricarbonyliron[(η^4 -2'-5')-1'-ethyl-2',4'-hexadienyl]-2-amino-1,1-diphenyl-3-methylbutan-1-ol

Ee > 95%

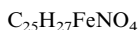
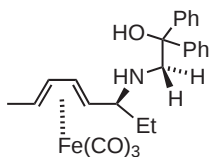
$[\alpha]_{\text{D}}^{31} = +38.24$ (*c* 1.037, CHCl₃)

Source of chirality: asymmetric synthesis

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

Kazuya Okamoto, Tetsutaro Kimachi, Toshiro Ibuka
and Yoshiji Takemoto*

Tetrahedron: Asymmetry 12 (2001) 463



(1'S,2'S)-N-Tricarbonyliron[(η^4 -2-5)-1'-ethyl-2',4'-hexadienyl]-2-amino-1,1-diphenylethan-1-ol

Ee>95%

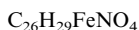
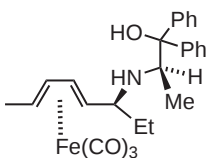
$[\alpha]_D^{28} = +12.17$ (c 0.641, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Kazuya Okamoto, Tetsutaro Kimachi, Toshiro Ibuka
and Yoshiji Takemoto*

Tetrahedron: Asymmetry 12 (2001) 463



(2R,1'S,2'S)-N-Tricarbonyliron[(η^4 -2-5)-1'-ethyl-2',4'-hexadienyl]-2-amino-1,1-diphenylpropan-1-ol

Ee>95%

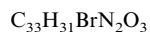
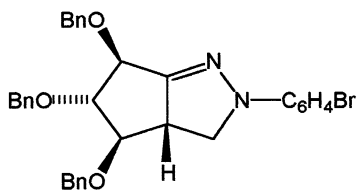
$[\alpha]_D^{31} = +30.42$ (c 0.933, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

De>95%

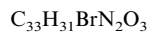
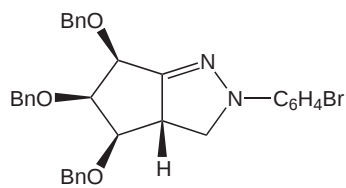
$[\alpha]_D^{23} = -73.9$ (c 1.0, $CHCl_3$)

Source of chirality: asymmetric [3+2] cycloaddition

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

De>95%

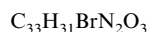
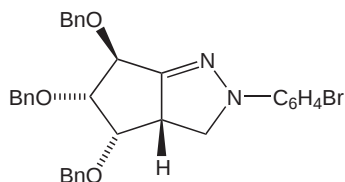
$[\alpha]_D^{23} = -12.5$ (c 0.6, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

De > 95%

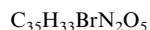
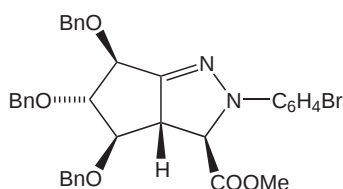
$[\alpha]_{\text{D}}^{23} = +43.5$ (c 1.1, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

Absolute configuration: (3a*S*,4*S*,5*S*,6*S*)

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-3-carboxymethyl-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

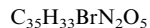
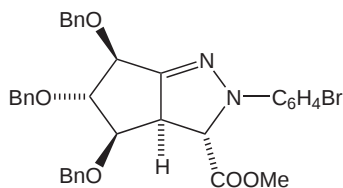
$[\alpha]_{\text{D}}^{23} = +13.6$ (c 1.75, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-3-carboxymethyl-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

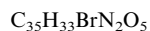
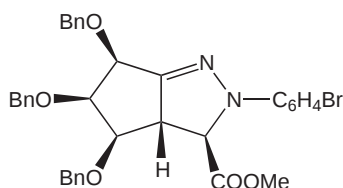
$[\alpha]_{\text{D}}^{23} = +1.5$ (c 1.15, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-3-carboxymethyl-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

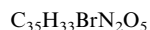
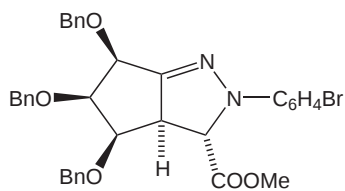
$[\alpha]_{\text{D}}^{23} = +21.6$ (c 0.94, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-3-carboxymethyl-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

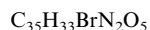
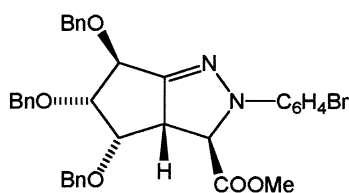
$[\alpha]_D^{23} = +53.5$ (*c* 0.95, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

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

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-3-carboxymethyl-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

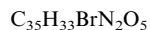
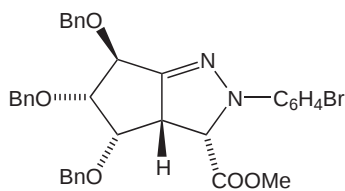
$[\alpha]_D^{23} = -7.0$ (*c* 0.8, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

Absolute configuration: (3*S*,3a*S*,4*S*,5*S*,6*S*)

Attila Agócs, Tamás E. Gunda, Gyula Batta, Árpád Kovács-Kulyassa
and Pál Herczegh*

Tetrahedron: Asymmetry 12 (2001) 469



2-(4-Bromophenyl)-3-carboxymethyl-4,5,6-tribenzyloxy-2,3,3a,4,5,6-hexahydro-cyclopentapyrazole

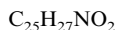
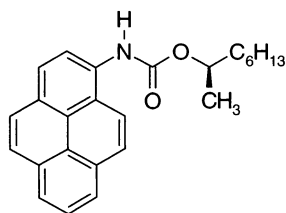
$[\alpha]_D^{23} = -3.7$ (*c* 0.47, CH_2Cl_2)

Source of chirality: asymmetric [3+2] cycloaddition

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

Uday Maitra,* Vijay Kumar Potluri, N. M. Sangeetha, P. Babu
and A. R. Raju

Tetrahedron: Asymmetry 12 (2001) 477



(2*R*)-Pyren-1-yl-carbamic acid 2-octyl ester

Ee >98%

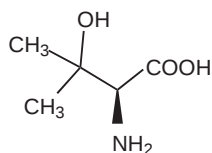
$[\alpha]_D^{21} = -35.4$ (*c* 1.3, $CHCl_3$)

Source of chirality: derived from (*R*)-2-octanol

Absolute configuration: *R*

Yuri N. Belokon,* Konstantin A. Kochetkov, Nikolai S. Ikonnikov,
Tatiana V. Strelkova, Syuzanna R. Harutyunyan and Ashot S. Saghiyan

Tetrahedron: Asymmetry 12 (2001) 481



(2*S*)-2-Amino-3-hydroxy-3-methylbutanoic acid [(2*S*)-β-hydroxyvaline]

Ee > 99% (by chiral GLC)

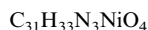
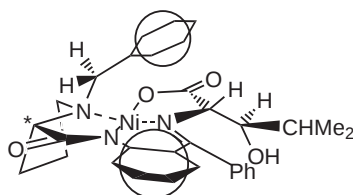
$[\alpha]_D^{25} = +13.5$ (*c* 0.64, 6*N* HCl)

Source of chirality: asymmetric alkylation

Absolute configuration: *S*

Yuri N. Belokon,* Konstantin A. Kochetkov, Nikolai S. Ikonnikov,
Tatiana V. Strelkova, Syuzanna R. Harutyunyan and Ashot S. Saghiyan

Tetrahedron: Asymmetry 12 (2001) 481



Ni(II)-(2*S*,3*R*)-β-Hydroxyleucine/(*S*)-*o*-[*N*-(*N'*-benzylpropyl)amino]benzophenone
Schiff base complex

syn-(2*S*)/*syn*-(2*R*) = 60/1

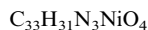
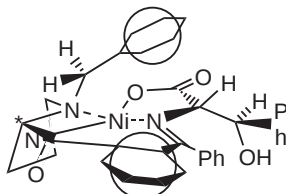
$[\alpha]_D^{25} = +3100$ (*c* 0.04, CHCl₃)

Source of chirality: asymmetric alkylation

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

Yuri N. Belokon,* Konstantin A. Kochetkov, Nikolai S. Ikonnikov,
Tatiana V. Strelkova, Syuzanna R. Harutyunyan and Ashot S. Saghiyan

Tetrahedron: Asymmetry 12 (2001) 481



Ni(II)-(2*S*,3*R*)-β-Phenylserine/(*S*)-*o*-[*N*-(*N'*-benzylpropyl)amino]benzophenone
Schiff base complex

syn-(2*S*)/*syn*-(2*R*) = 60/1

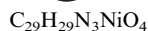
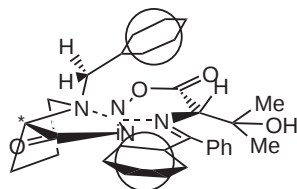
$[\alpha]_D^{25} = +1900$ (*c* 0.04, CHCl₃)

Source of chirality: asymmetric alkylation

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

Yuri N. Belokon,* Konstantin A. Kochetkov, Nikolai S. Ikonnikov,
Tatiana V. Strelkova, Syuzanna R. Harutyunyan and Ashot S. Saghiyan

Tetrahedron: Asymmetry 12 (2001) 481



Ni(II)-(*S*)-β-Hydroxyvaline/(*S*)-*o*-[*N*-(*N'*-benzylpropyl)amino]benzophenone
Schiff base complex

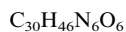
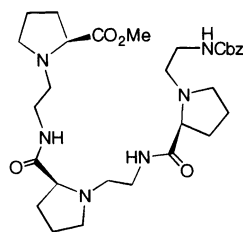
$[\alpha]_D^{25} = +2707$ (*c* 0.04, CHCl₃)

Source of chirality: asymmetric alkylation

Absolute configuration: *S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(2*S*,11*S*,20*S*)-2,6-*cyclo*-11,15-*cyclo*-20,24-*cyclo*-26-(Benzyloxycarbonylamino)-6,9,15,18,24-pentaaza-10,19-dioxohexacosanoic acid methyl ester

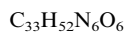
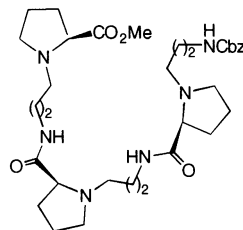
$[\alpha]_D^{20} = -99.6$ (*c* 1.0, $CHCl_3$)

Source of chirality: L-proline

Absolute configuration: (2*S*,11*S*,20*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(2*S*,12*S*,22*S*)-2,6-*cyclo*-12,16-*cyclo*-22,26-*cyclo*-29-(Benzyloxycarbonylamino)-6,10,16,20,26-pentaaza-11,21-dioxononanoic acid methyl ester

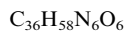
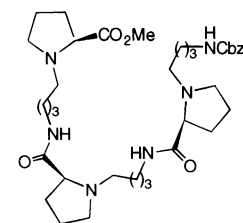
$[\alpha]_D^{20} = -89.2$ (*c* 1.0, $CHCl_3$)

Source of chirality: L-proline

Absolute configuration: (2*S*,12*S*,22*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(2*S*,13*S*,24*S*)-2,6-*cyclo*-13,17-*cyclo*-24,28-*cyclo*-32-(Benzyloxycarbonylamino)-6,11,17,22,28-pentaaza-12,23-dioxodotriacontanoic acid methyl ester

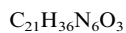
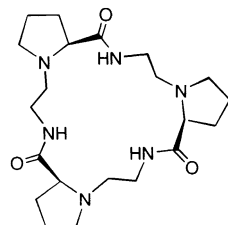
$[\alpha]_D^{20} = -73.7$ (*c* 1.0, $CHCl_3$)

Source of chirality: L-proline

Absolute configuration: (2*S*,13*S*,24*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(6*S*,15*S*,24*S*)-1,4,10,13,19,22-Hexaazatetracyclo[22.3.0.0^{6,10}.0^{15,19}]-heptacosane-5,14,23-trione

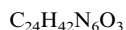
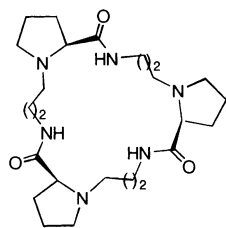
$[\alpha]_D^{20} = -149$ (*c* 1.8, $CHCl_3$)

Source of chirality: L-proline

Absolute configuration: (6*S*,15*S*,24*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(7*S*,17*S*,27*S*)-1,5,11,15,21,25-Hexaazatetracyclo[25.3.0.0^{7,11}.0^{17,21}]-triacontane-6,16,26-trione

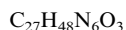
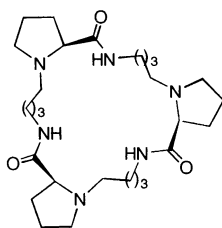
$[\alpha]_D^{20} = -68.5$ (*c* 1.9, CHCl₃)

Source of chirality: L-proline

Absolute configuration: (7*S*,17*S*,27*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(8*S*,19*S*,30*S*)-1,6,12,17,23,28-Hexaazatetracyclo[28.3.0.0^{8,12}.0^{19,23}]-triacontane-7,18,29-trione

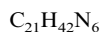
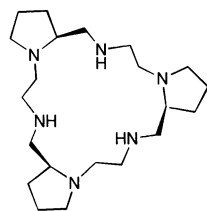
$[\alpha]_D^{20} = -152$ (*c* 0.50, CHCl₃)

Source of chirality: L-proline

Absolute configuration: (8*S*,19*S*,30*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(6*S*,15*S*,24*S*)-1,4,10,13,19,22-Hexaazatetracyclo[22.3.0.0^{6,10}.0^{15,19}]heptacosane

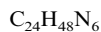
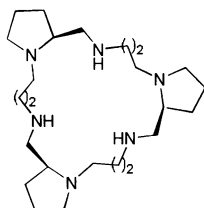
$[\alpha]_D^{20} = -69.9$ (*c* 0.57, CHCl₃)

Source of chirality: L-proline

Absolute configuration: (6*S*,15*S*,24*S*)

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 487



(7*S*,17*S*,27*S*)-1,5,11,15,21,25-Hexaazatetracyclo[25.3.0.0^{7,11}.0^{17,21}]triacontane

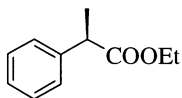
$[\alpha]_D^{20} = -88.1$ (*c* 0.57, CHCl₃)

Source of chirality: L-proline

Absolute configuration: (7*S*,17*S*,27*S*)

Raffaella Gandolfi, Roberto Gualandris, Chiara Zanchi
and Francesco Molinari*

Tetrahedron: Asymmetry 12 (2001) 501



$C_{11}H_{14}O_2$
Ethyl-2-phenylpropanoate

Ee > 97% determined by GLC

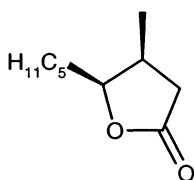
$[\alpha]_D^{20} = -59.9$ ($c = 1.6$, $CHCl_3$)

Source of chirality: esterification with *Rhizopus oryzae*

Absolute configuration: *R*

Fabio Benedetti, Cristina Forzato, Patrizia Nitti, Giuliana Pitacco,
Ennio Valentin* and Michela Vicario

Tetrahedron: Asymmetry 12 (2001) 505



$C_{10}H_{18}O_2$
cis-(4*S*,5*S*)-(-)-4,5-Dihydro-4-methyl-5-pentyl-2(3*H*)-furanone

Ee = 99% (by chiral HRGC)

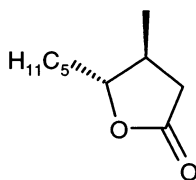
$[\alpha]_D^{25} = -69.5$ ($c = 0.42$, MeOH)

Source of chirality: baker's yeast reduction

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

Fabio Benedetti, Cristina Forzato, Patrizia Nitti, Giuliana Pitacco,
Ennio Valentin* and Michela Vicario

Tetrahedron: Asymmetry 12 (2001) 505



$C_{10}H_{18}O_2$
trans-(4*S*,5*R*)-(+)-4,5-Dihydro-4-methyl-5-pentyl-2(3*H*)-furanone

Ee = 99% (by chiral HRGC)

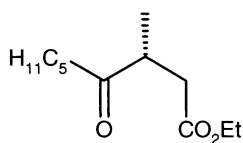
$[\alpha]_D^{25} = +73.0$ ($c = 0.20$, MeOH)

Source of chirality: baker's yeast reduction

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

Fabio Benedetti, Cristina Forzato, Patrizia Nitti, Giuliana Pitacco,
Ennio Valentin* and Michela Vicario

Tetrahedron: Asymmetry 12 (2001) 505



$C_{12}H_{22}O_3$
Ethyl (*R*)-(+)-3-methyl-4-oxononanoate

Ee = 88% (by chiral HRGC)

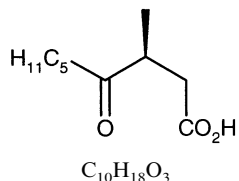
$[\alpha]_D^{25} = +16.3$ ($c = 0.75$, MeOH)

Source of chirality: enzymic hydrolysis

Absolute configuration: *R*

Fabio Benedetti, Cristina Forzato, Patrizia Nitti, Giuliana Pitacco, Ennio Valentin* and Michela Vicario

Tetrahedron: Asymmetry 12 (2001) 505



(S)-(-)-3-Methyl-4-oxononanoic acid

Ee = 98% (by chiral HRGC of its methyl ester)

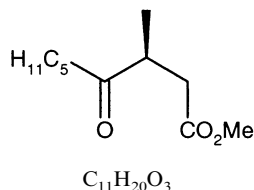
$[\alpha]_D^{25} = -32.0$ (c 0.55, MeOH)

Source of chirality: enzymic hydrolysis

Absolute configuration: *S*

Fabio Benedetti, Cristina Forzato, Patrizia Nitti, Giuliana Pitacco, Ennio Valentin* and Michela Vicario

Tetrahedron: Asymmetry 12 (2001) 505



Methyl (S)-(-)-3-methyl-4-oxononanoate

Ee = 98% (by chiral HRGC)

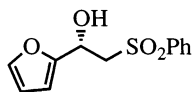
$[\alpha]_D^{25} = -31.0$ (c 1.30, THF)

Source of chirality: enzymic hydrolysis

Absolute configuration: *S*

Vicente Gotor, Francisca Rebolledo* and Ramón Liz

Tetrahedron: Asymmetry 12 (2001) 513



(S)-1-(2-Furyl)-2-(phenylsulfonyl)ethanol

Ee 97% (HPLC, Chiralcel-OD)

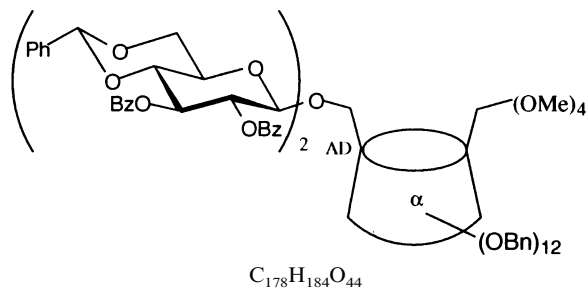
$[\alpha]_D^{22} = +13.0$ (c 0.98, CHCl₃)

Source of chirality: microbial reduction

Absolute configuration: *S*

Wei Wang, Alan J. Pearce, Yongmin Zhang and Pierre Sinaÿ*

Tetrahedron: Asymmetry 12 (2001) 517



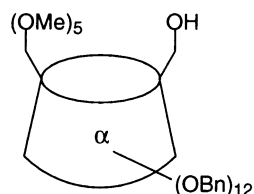
6^A,6^D-[Di-*O*-(2,3-di-*O*-benzoyl-4,6-*O*-benzylidene)-β-*D*-glucopyranosyl]-hexakis(2,3-di-*O*-benzyl)-6^B,6^C,6^E,6^F-tetra-*O*-methyl-α-cyclodextrin

Ee = 100%

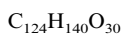
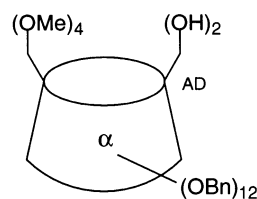
$[\alpha]_D = +17$ (c 2.2, CHCl₃)

Source of chirality: *D*-glucose, α-cyclodextrin

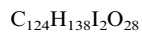
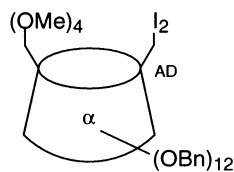
Absolute configuration: α-*D*-gluco

Hexakis(2,3-di-*O*-benzyl)-6^B,6^C,6^D,6^E,6^F-penta-*O*-methyl- α -cyclodextrin

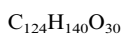
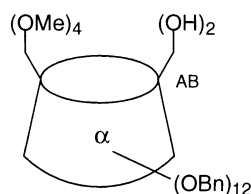
Ee = 100%

[α]_D = +15 (*c* 1.3, CHCl₃)Source of chirality: α -cyclodextrinAbsolute configuration: α -D-*gluco*Hexakis(2,3-di-*O*-benzyl)-6^B,6^C,6^E,6^F-tetra-*O*-methyl- α -cyclodextrin

Ee = 100%

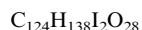
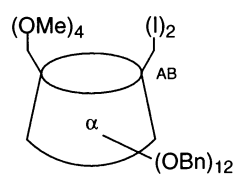
[α]_D = +28 (*c* 3.3, CHCl₃)Source of chirality: α -cyclodextrinAbsolute configuration: α -D-*gluco*Hexakis(2,3-di-*O*-benzyl)-6^A,6^D-dideoxy-6^A,6^D-diiodo-6^B,6^C,6^E,6^F-tetra-*O*-methyl- α -cyclodextrin

Ee = 100%

[α]_D = +21 (*c* 3.4, CHCl₃)Source of chirality: α -cyclodextrinAbsolute configuration: α -D-*gluco*Hexakis(2,3-di-*O*-benzyl)-6^C,6^D,6^E,6^F-tetra-*O*-methyl- α -cyclodextrin

Ee = 100%

[α]_D = +24 (*c* 1.2, CHCl₃)Source of chirality: α -cyclodextrinAbsolute configuration: α -D-*gluco*



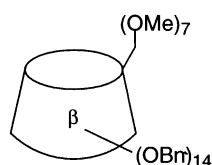
Hexakis(2,3-di-*O*-benzyl)-6^A,6^B-dideoxy-6^A,6^B-diiodo-6^C,6^D,6^E,6^F-tetra-*O*-methyl- α -cyclodextrin

Ee = 100%

$[\alpha]_D = +18$ (*c* 1.4, CHCl₃)

Source of chirality: α -cyclodextrin

Absolute configuration: α -D-*gluco*



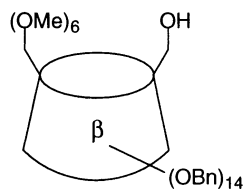
Heptakis(2,3-di-*O*-benzyl-6-*O*-methyl)- β -cyclodextrin

Ee = 100%

$[\alpha]_D = +20$ (*c* 1.5, CHCl₃)

Source of chirality: β -cyclodextrin

Absolute configuration: α -D-*gluco*



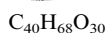
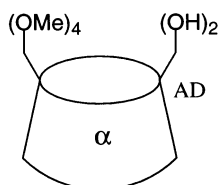
Heptakis(2,3-di-*O*-benzyl)-6^B,6^C,6^D,6^E,6^F,6^G-hexa-*O*-methyl- β -cyclodextrin

Ee = 100%

$[\alpha]_D = +22$ (*c* 3.7, CHCl₃)

Source of chirality: β -cyclodextrin

Absolute configuration: α -D-*gluco*



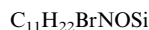
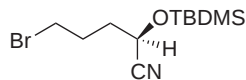
6^B,6^C,6^E,6^F-Tetra-*O*-methyl- α -cyclodextrin

Ee = 100%

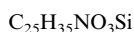
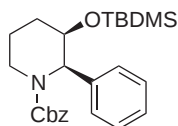
$[\alpha]_D = +105$ (*c* 0.6, CHCl₃)

Source of chirality: α -cyclodextrin

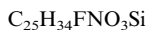
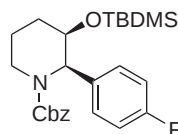
Absolute configuration: α -D-*gluco*

(R)-(+)-5-Bromo-2-*tert*-butyldimethylsilyloxypentanenitrile

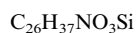
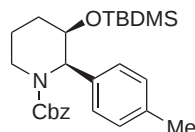
Ee = 91%

 $[\alpha]_{\text{D}}^{25} = +33.6$ ($c = 1.6$, CHCl_3)Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanationAbsolute configuration: *R*(R,R)-1-(Benzyloxycarbonyl)-3-*tert*-butyldimethylsilyloxy-2-phenylpiperidine

Ee = 91%

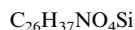
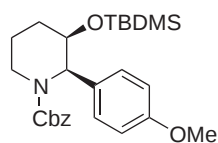
 $[\alpha]_{\text{D}}^{25} = -41.1$ ($c = 1.0$, CHCl_3)Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reductionAbsolute configuration: (*R,R*)(R,R)-1-(Benzyloxycarbonyl)-3-*tert*-butyldimethylsilyloxy-2-(*p*-fluorophenyl)-piperidine

Ee = 91%

 $[\alpha]_{\text{D}}^{25} = -39.2$ ($c = 1.0$, CHCl_3)Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reductionAbsolute configuration: (*R,R*)(R,R)-1-(Benzyloxycarbonyl)-3-*tert*-butyldimethylsilyloxy-2-(*p*-methylphenyl)-piperidine

Ee = 91%

 $[\alpha]_{\text{D}}^{25} = -45.0$ ($c = 1.0$, CHCl_3)Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reductionAbsolute configuration: (*R,R*)



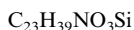
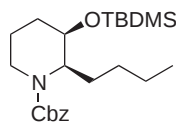
(*R,R*)-1-(Benzyloxycarbonyl)-3-*tert*-butyltrimethylsilyloxy-2-(*p*-methoxyphenyl)-piperidine

Ee = 91%

$[\alpha]_D^{25} = -40.5$ ($c = 1.0$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



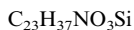
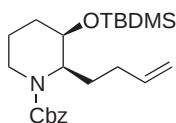
(*R,R*)-1-(Benzyloxycarbonyl)-3-*tert*-butyltrimethylsilyloxy-2-butylpiperidine

Ee = 91%

$[\alpha]_D^{25} = -16.2$ ($c = 1.2$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



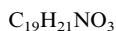
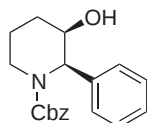
(*R,R*)-1-(Benzyloxycarbonyl)-3-*tert*-butyltrimethylsilyloxy-2-(3-butenyl)piperidine

Ee = 91%

$[\alpha]_D^{25} = -16.4$ ($c = 0.9$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



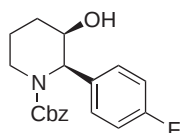
(*R,R*)-1-(Benzyloxycarbonyl)-2-phenylpiperidin-3-ol

Ee = 91%

$[\alpha]_D^{25} = -66.4$ ($c = 1.0$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



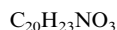
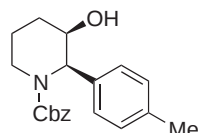
(*R,R*)-1-(Benzyloxycarbonyl)-2-(*p*-fluorophenyl)piperidin-3-ol

Ee = 91%

$[\alpha]_D^{25} = -51.8$ ($c = 1.1$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



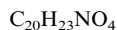
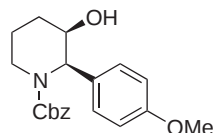
(*R,R*)-1-(Benzyloxycarbonyl)-2-(*p*-methylphenyl)piperidin-3-ol

Ee = 91%

$[\alpha]_D^{25} = -65.6$ ($c = 0.9$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



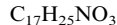
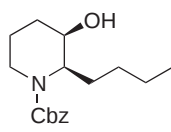
(*R,R*)-1-(Benzyloxycarbonyl)-2-(*p*-methoxyphenyl)piperidin-3-ol

Ee = 91%

$[\alpha]_D^{25} = -64.3$ ($c = 0.7$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



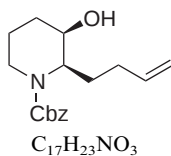
(*R,R*)-1-(Benzyloxycarbonyl)-2-butylpiperidin-3-ol

Ee = 91%

$[\alpha]_D^{25} = -20.9$ ($c = 0.9$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)



(*R,R*)-1-(Benzyloxycarbonyl)-2-(3-butenyl)piperidin-3-ol

Ee = 91%

$[\alpha]_D^{25} = -24.4$ ($c = 0.9$, $CHCl_3$)

Source of chirality: (*R*)-oxynitrilase-catalyzed transcyanation and diastereoselective reduction

Absolute configuration: (*R,R*)