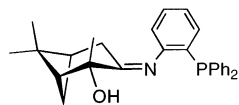


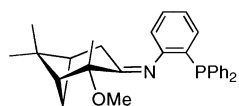
Kunio Hiroi* and Kazuhiro Watanabe

Tetrahedron: Asymmetry 12 (2001) 3067C₂₈H₃₀NOP2-Diphenylphosphino-*N*-[(1*R*,2*R*,5*R*)-2-hydroxy-3-pinanylidene]aniline

E.e. = 98%

[α]_D = -41.4 (*c* 1.57, CHCl₃)Source of chirality: (1*R*,2*R*,5*R*)-(+)-2-hydroxy-3-pinaneAbsolute configuration: 1*R*,2*R*,5*R*,*E*

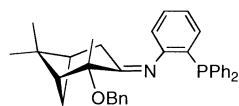
Kunio Hiroi* and Kazuhiro Watanabe

Tetrahedron: Asymmetry 12 (2001) 3067C₂₉H₃₂NOP2-Diphenylphosphino-*N*-[(1*R*,2*R*,5*R*)-2-methoxy-3-pinanylidene]aniline

E.e. = 98%

[α]_D = +203.2 (*c* 1.57, CHCl₃)Source of chirality: (1*R*,2*R*,5*R*)-(+)-2-hydroxy-3-pinaneAbsolute configuration: 1*R*,2*R*,5*R*,*E*

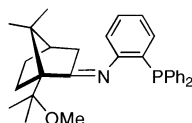
Kunio Hiroi* and Kazuhiro Watanabe

Tetrahedron: Asymmetry 12 (2001) 3067C₃₅H₃₆NOP2-Diphenylphosphino-*N*-[(1*R*,2*R*,5*R*)-2-benzyloxy-3-pinanylidene]aniline

E.e. = 98%

[α]_D = +114.3 (*c* 1.0, CHCl₃)Source of chirality: (1*R*,2*R*,5*R*)-(+)-2-hydroxy-3-pinaneAbsolute configuration: 1*R*,2*R*,5*R*,*E*

Kunio Hiroi* and Kazuhiro Watanabe

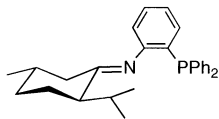
Tetrahedron: Asymmetry 12 (2001) 3067C₃₁H₃₆NOP2-Diphenylphosphino-*N*-[(1*S*,4*R*)-1-(2-methoxy-*iso*-propyl)-2-bornylidene]aniline

E.e. = 98%

[α]_D = -21.3 (*c* 1.22, CHCl₃)Source of chirality: (1*S*)-(+)-ketopinonic acidAbsolute configuration: 1*S*,4*R*,*E*

Kunio Hiroi* and Kazuhiro Watanabe

Tetrahedron: Asymmetry 12 (2001) 3067



$C_{28}H_{32}NOP$

2-Diphenylphosphino-*N*-[(2*S*,5*R*)-menthynylidene]aniline

E.e. = 98%

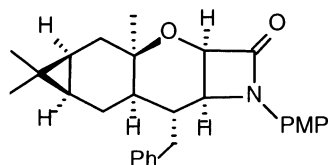
$[\alpha]_D = -18.3$ (*c* 1.35, $CHCl_3$)

Source of chirality: (2*S*,5*R*)-(-)-menthone

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

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{28}H_{33}NO_3$

7-Benzyl-1-(4-methoxyphenyl)-3*a*,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. = >98%

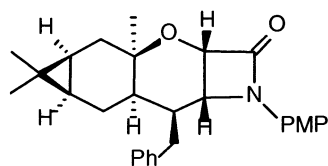
$[\alpha]_D = -8.75$ (*c* 6.16, $CHCl_3$)

Source of chirality: (+)-3-carene

Absolute configuration: 2*aR*,3*aR*,4*aS*,5*aR*,6*aR*,7*R*,7*aS*

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{28}H_{33}NO_3$

7-Benzyl-1-(4-methoxyphenyl)-3*a*,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. = >99%

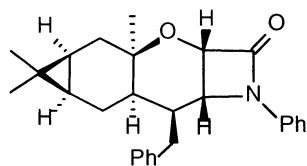
$[\alpha]_D = +22.6$ (*c* 1.28, $CHCl_3$)

Source of chirality: (+)-3-carene

Absolute configuration: 2*aS*,3*aR*,4*aS*,5*aR*,6*aR*,7*S*,7*aR*

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{27}H_{31}NO_2$

7-Benzyl-1-phenyl-3*a*,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. = >99%

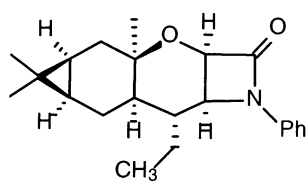
$[\alpha]_D = +20.5$ (*c* 0.76, $CHCl_3$)

Source of chirality: (+)-3-carene

Absolute configuration: 2*aS*,3*aR*,4*aS*,5*aR*,6*aR*,7*S*,7*aR*

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{22}H_{29}NO_2$

7-Ethyl-1-phenyl-3a,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. =>99%

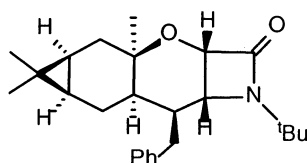
$[\alpha]_D = +79.8$ (c 0.99, $CHCl_3$)

Source of chirality: (+)-3-carene

Absolute configuration: 2a*R*,3a*R*,4a*S*,5a*R*,6a*R*,7*R*,7a*S*

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{25}H_{35}NO_2$

7-Benzyl-1-(*t*-butyl)-3a,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. =>98%

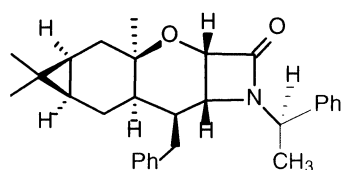
$[\alpha]_D = +21.8$ (c 0.78, $CHCl_3$)

Source of chirality: (+)-3-carene

Absolute configuration: 2a*S*,3a*R*,4a*S*,5a*R*,6a*R*,7*S*,7a*R*

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{29}H_{35}NO_2$

7-Benzyl-1-(1'-phenylethyl)-3a,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. =>98%

$[\alpha]_D = +24.1$ (c 0.55, $CHCl_3$)

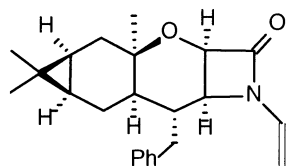
Source of chirality: (+)-3-carene

Absolute configuration:

1'*R*,2a*S*,3a*R*,4a*S*,5a*R*,6a*R*,7*S*,7a*R*

Sudhir N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and
B. M. Bhawal*

Tetrahedron: Asymmetry 12 (2001) 3073



$C_{23}H_{29}NO_2$

7-Benzyl-1-(vinyl)-3a,5,5-trimethyl-perhydrocyclopropa[6,7]chromeno[3,2-*b*]azetidin-2-one

D.e. =>98%

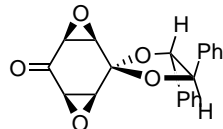
$[\alpha]_D = -7.8$ (c 2.5, $CHCl_3$)

Source of chirality: (+)-3-carene

Absolute configuration: 2a*R*,3a*R*,4a*S*,5a*R*,6a*R*,7*R*,7a*S*

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



$C_{20}H_{16}O_5$

(2*R*,3*R*,6*R*,7*S*,9*R*,10*S*)-6,7:9,10-Diepoxi-2,3-diphenyl-1,4-dioxaspiro[4.5]decan-8-one

E.e. = 100%

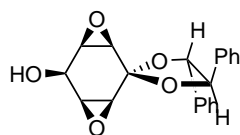
$[\alpha]_D^{20} = +44.1$ (*c* 1.2, $CHCl_3$)

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

Absolute configuration: 2*R*,3*R*,6*R*,7*S*,9*R*,10*S*

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



$C_{20}H_{18}O_5$

(2*R*,3*R*,6*R*,7*S*,8*R*,9*R*,10*S*)-6,7:9,10-Diepoxi-2,3-diphenyl-1,4-dioxaspiro[4.5]decan-8-ol

E.e. = 100%

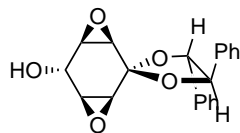
$[\alpha]_D^{20} = +20.4$ (*c* 0.8, $CHCl_3$)

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

Absolute configuration: 2*R*,3*R*,6*R*,7*S*,8*R*,9*R*,10*S*

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



$C_{20}H_{18}O_5$

(2*R*,3*R*,6*R*,7*S*,8*S*,9*R*,10*S*)-6,7:9,10-Diepoxi-2,3-diphenyl-1,4-dioxaspiro[4.5]decan-8-ol

E.e. = 100%

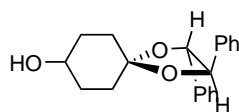
$[\alpha]_D^{20} = +8.9$ (*c* 0.9, $CHCl_3$)

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

Absolute configuration: 2*R*,3*R*,6*R*,7*S*,8*S*,9*R*,10*S*

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



$C_{20}H_{22}O_3$

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

E.e. = 100%

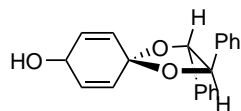
$[\alpha]_D^{20} = +44.4$ (*c* 1.2, $CHCl_3$)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-2,3-Diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-ol

E.e. = 100%

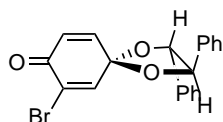
$[\alpha]_D^{20} = +24.4$ (*c* 2.1, $CHCl_3$)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-7-Bromo-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-one

E.e. = 100%

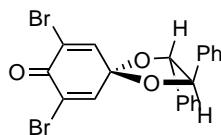
$[\alpha]_D^{20} = +49.2$ (*c* 1.0, CH_2Cl_2)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-7,9-Dibromo-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-one

E.e. = 100%

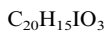
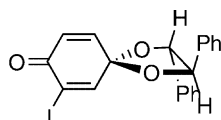
$[\alpha]_D^{20} = +36.0$ (*c* 1.3, CH_2Cl_2)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-7-Iodo-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-one

E.e. = 100%

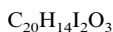
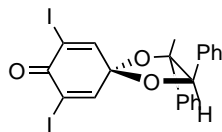
$[\alpha]_D^{20} = +45.0$ (*c* 1.7, $CHCl_3$)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-7,9-Diiodo-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-one

E.e. = 100%

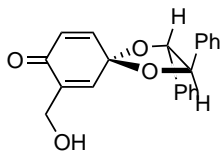
$[\alpha]_D^{20} = +28.3$ (*c* 0.6, $CHCl_3$)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-7-Hydroxymethyl-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-one

E.e. = 100%

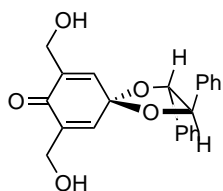
$[\alpha]_D^{20} = +56.0$ (*c* 2.0, $CHCl_3$)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



(2*R*,3*R*)-7,9-Dihydroxymethyl-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-one

E.e. = 100%

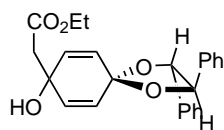
$[\alpha]_D^{20} = +65.2$ (*c* 0.7, THF)

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

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

Félix Busqué, Pedro de March,* Marta Figueredo,* Josep Font and Sonia Rodríguez

Tetrahedron: Asymmetry 12 (2001) 3077



Ethyl 2-[(2*R*,3*R*)-8-hydroxy-2,3-diphenyl-1,4-dioxaspiro[4.5]deca-6,9-dien-8-yl]acetate

E.e. = 100%

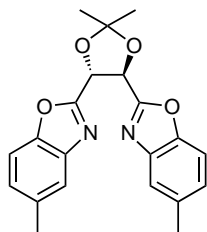
$[\alpha]_D^{20} = +11.8$ (*c* 3.7, $CHCl_3$)

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

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{21}H_{20}N_2O_4$

(4*R*,5*R*)-4,5-Bis(5-methylbenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

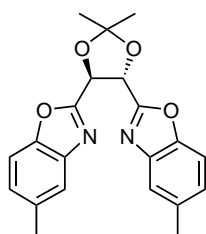
$[\alpha]_D^{20} = -235$ (*c* 2.07, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{21}H_{20}N_2O_4$

(4*S*,5*S*)-4,5-Bis(5-methylbenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

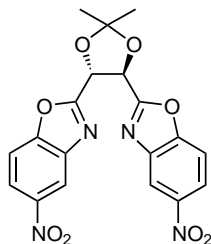
$[\alpha]_D^{20} = +235$ (*c* 1.06, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{14}N_4O_8$

(4*R*,5*R*)-4,5-Bis(5-nitrobenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

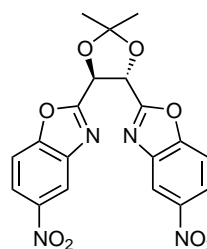
$[\alpha]_D^{20} = -243$ (*c* 1.03, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{14}N_4O_8$

(4*S*,5*S*)-4,5-Bis(5-nitrobenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

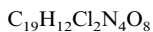
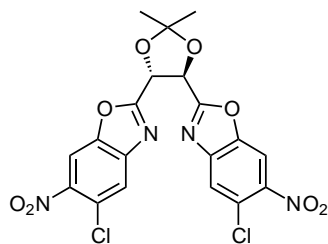
$[\alpha]_D^{20} = +238$ (*c* 1.04, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



(4*R*,5*R*)-4,5-Bis(5-chloro-6-nitrobenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

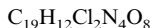
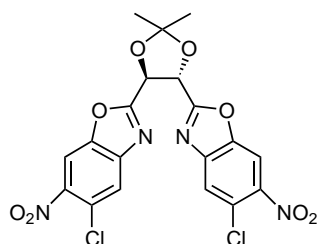
$[\alpha]_D^{20} = -213$ (*c* 1.23, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



(4*S*,5*S*)-4,5-Bis(5-chloro-6-nitrobenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

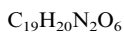
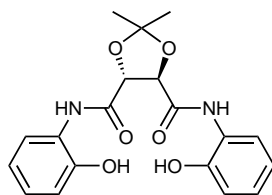
$[\alpha]_D^{20} = +215$ (*c* 1.33, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



(4*R*,5*R*)-4,5-Bis(2-hydroxyphenyl)-2,2-dimethyl-1,3-dioxolane-4,5-dicarboxamide

Ee = 100%

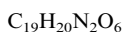
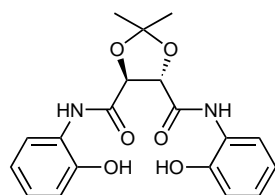
$[\alpha]_D^{20} = -105$ (*c* 0.96, acetone)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



(4*S*,5*S*)-4,5-Bis(2-hydroxyphenyl)-2,2-dimethyl-1,3-dioxolane-4,5-dicarboxamide

Ee = 100%

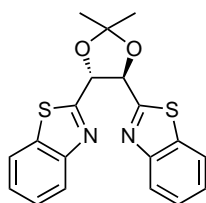
$[\alpha]_D^{20} = +107$ (*c* 0.90, acetone)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{16}N_2O_2S_2$

(4*R*,5*R*)-4,5-Bis(benzothiazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

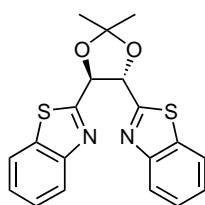
$[\alpha]_D^{20} = -249$ (*c* 0.68, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{16}N_2O_2S_2$

(4*S*,5*S*)-4,5-Bis(benzothiazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

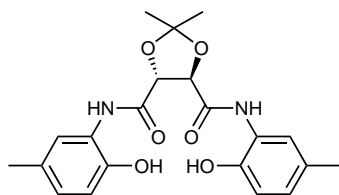
$[\alpha]_D^{20} = +249$ (*c* 0.96, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{21}H_{24}N_2O_6$

(4*R*,5*R*)-4,5-Bis(2-hydroxy-5-methylphenyl)-2,2-dimethyl-1,3-dioxolane-4,5-dicarboxamide

Ee = 100%

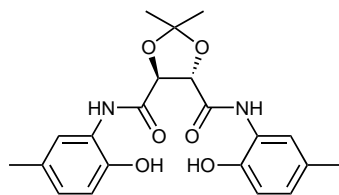
$[\alpha]_D^{20} = -90$ (*c* 1.19, acetone)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{21}H_{24}N_2O_6$

(4*S*,5*S*)-4,5-Bis(2-hydroxy-5-methylphenyl)-2,2-dimethyl-1,3-dioxolane-4,5-dicarboxamide

Ee = 100%

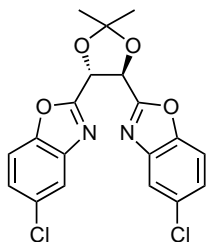
$[\alpha]_D^{20} = +90$ (*c* 1.47, acetone)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{14}Cl_2N_2O_4$

(4*R*,5*R*)-4,5-Bis(5-chlorobenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

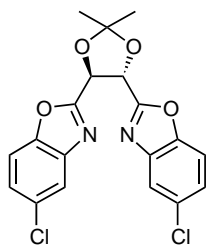
$[\alpha]_D^{20} = -214$ (*c* 0.74, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{14}Cl_2N_2O_4$

(4*S*,5*S*)-4,5-Bis(5-chlorobenzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

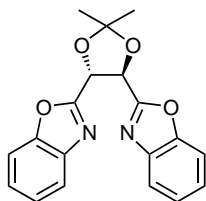
$[\alpha]_D^{20} = +216$ (*c* 0.81, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{16}N_2O_4$

(4*R*,5*R*)-4,5-Bis(benzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

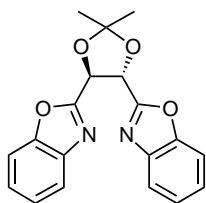
$[\alpha]_D^{20} = -224$ (*c* 1.15, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Peng Jiao, Jiayi Xu,* Qihan Zhang, Michael C. K. Choi and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3081



$C_{19}H_{16}N_2O_4$

(4*S*,5*S*)-4,5-Bis(benzoxazol-2-yl)-2,2-dimethyl-1,3-dioxolane

Ee = 100%

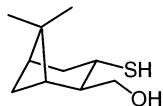
$[\alpha]_D^{20} = +220$ (*c* 0.98, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1*S*,2*R*,3*S*)-2-Hydroxymethyl-6,6-dimethyl-3-mercapto-bicyclo[3.1.1]heptane

E.e. >99% (NMR)

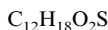
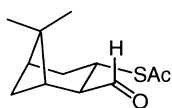
$[\alpha]_D^{23} = +76.5$

Source of chirality: (-)-myrtenal

Absolute configuration: 1*S*,2*R*,3*S*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1*S*,2*R*,3*S*)-2-Formyl-3-thioacetyl-6,6-dimethyl-bicyclo[3.1.1]heptane

E.e. >99% (NMR)

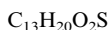
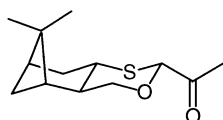
$[\alpha]_D^{23} = -4.4$

Source of chirality: (-)-myrtenal

Absolute configuration: 1*S*,2*R*,3*S*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1*S*,2*R*,5*R*,7*S*,9*R*)-5-Acetyl-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

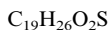
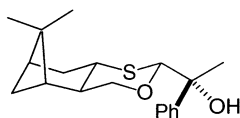
$[\alpha]_D^{22} = +52.3$

Source of chirality: (-)-myrtenal

Absolute configuration: 1*S*,2*R*,5*R*,7*S*,9*R*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1*S*,2*R*,5*R*,7*S*,9*R*)-5-[(1'*R*)-1'-Hydroxy-1'-phenyl-1'-ethyl]-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

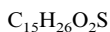
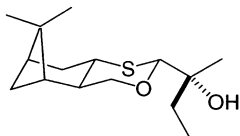
$[\alpha]_D^{21} = -58.9$

Source of chirality: (-)-myrtenal

Absolute configuration: 1*S*,2*R*,5*R*,7*S*,9*R*,1'*R*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1S,2R,5R,7S,9R)-5-[(2'R)-2'-Hydroxy-2'-n-butyl]-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

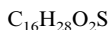
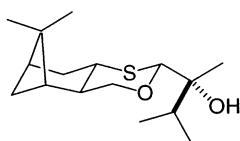
$[\alpha]_D^{23} = -12.6$

Source of chirality: (-)-myrtenal

Absolute configuration: 1S,2R,5R,7S,9R,2'R

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1S,2R,5R,7S,9R)-5-[(2'R)-2'-Hydroxy-3'-methyl-2'-butyl]-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

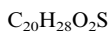
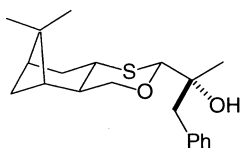
$[\alpha]_D^{23} = -29.1$

Source of chirality: (-)-myrtenal

Absolute configuration: 1S,2R,5R,7S,9R,2'R

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1S,2R,5R,7S,9R)-5-[(2'R)-2'-Hydroxy-2'-phenyl-2'-propyl]-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

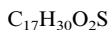
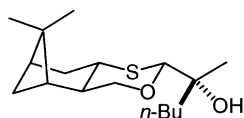
$[\alpha]_D^{23} = -46.5$

Source of chirality: (-)-myrtenal

Absolute configuration: 1S,2R,5R,7S,9R,2'R

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



(1S,2R,5R,7S,9R)-5-[(2'R,3'S*)-2'-Hydroxy-3'-methyl-2'-pentyl]-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

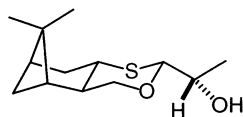
$[\alpha]_D^{23} = -4.8$

Source of chirality: (-)-myrtenal

Absolute configuration: 1S,2R,5R,7S,9R,2'R,3'S*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



$C_{13}H_{22}O_2S$

(1*S*,2*R*,5*R*,7*S*,9*R*)-5-[(*S*)-1'-Hydroxyethyl]-10,10-dimethyl-4-oxa-6-thia-tricyclo[7.1.1.0^{2,7}]undecane

E.e. >99% (NMR)

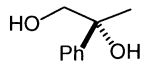
$[\alpha]_D^{23} = -49.1$

Source of chirality: (-)-myrtenal

Absolute configuration: 1*S*,2*R*,5*R*,9*R*,1'*S*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



$C_9H_{12}O_2$

(*R*)-(+)-2-Phenyl-1,2-propanediol

E.e. >99%

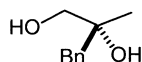
$[\alpha]_D^{23} = +5.9$

Source of chirality: asymmetric synthesis

Absolute configuration: *R*

Federico Martínez-Ramos, María Elena Vargas-Díaz,
Luis Chacón-García, Joaquín Tamariz, Pedro Joseph-Nathan and
L. Gerardo Zepeda*

Tetrahedron: Asymmetry 12 (2001) 3095



$C_{10}H_{14}O_2$

(*R*)-(+)-2-Methyl-3-phenyl-1,2-propanediol

E.e. >99%

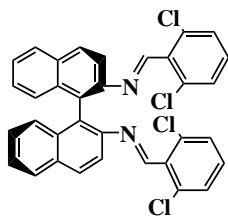
$[\alpha]_D^{23} = +10.6$

Source of chirality: asymmetric synthesis

Absolute configuration: *R*

Min Shi,* Chuan-Jiang Wang and Albert S. C. Chan

Tetrahedron: Asymmetry 12 (2001) 3105



$C_{34}H_{20}Cl_4N_2$

(*R*)-(+)-*N,N'*-Bis(2,6-dichlorobenzylidene)-1,1'-binaphthyl-2,2'-diamine

E.e. = 100%

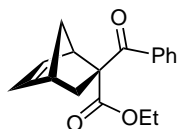
$[\alpha]_D^{20} = -88$ (c 0.089, acetone)

Source of chirality: resolution

Absolute configuration: (*R*)

Masashige Yamauchi,* Takashi Aoki, Ming-Zhu Li and Yuko Honda

Tetrahedron: Asymmetry 12 (2001) 3113



C₁₇H₁₈O₃

(1*R*,2*R*,4*R*)-2-Benzoylbicyclo[2.2.1]hept-5-ene-2-carboxylic acid ethyl ester

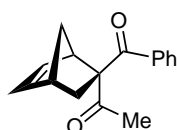
$[\alpha]_D^{21} = +303.0$ ($c = 4.38$, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*R*,2*R*,4*R* (assigned by chemical correlation)

Masashige Yamauchi,* Takashi Aoki, Ming-Zhu Li and Yuko Honda

Tetrahedron: Asymmetry 12 (2001) 3113



C₁₆H₁₆O₂

(1*R*,2*S*,4*R*)-1-[2-Benzoylbicyclo[2.2.1]hept-5-ene-2-yl]ethanone

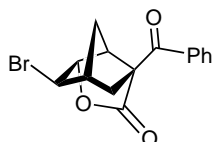
$[\alpha]_D^{21} = +546.4$ ($c = 3.86$, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*R*,2*S*,4*R* (assigned by chemical correlation)

Masashige Yamauchi,* Takashi Aoki, Ming-Zhu Li and Yuko Honda

Tetrahedron: Asymmetry 12 (2001) 3113



C₁₅H₁₃O₃Br

(1*R*,3*R*,6*R*,7*S*)-3-Benzoyl-9-bromo-5-oxatricyclo[4.2.1.0^{3,7}]nonan-4-one

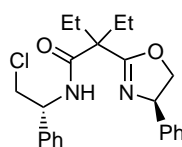
$[\alpha]_D^{25} = -107$ ($c = 0.35$, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*R*,3*R*,6*R*,7*S* (assigned by X-ray diffraction analysis)

Masashige Yamauchi,* Takashi Aoki, Ming-Zhu Li and Yuko Honda

Tetrahedron: Asymmetry 12 (2001) 3113



C₂₃H₂₇N₂O₂Cl

N-[(1*R*)-2-Chloro-1-phenylethyl] 2-ethyl-2-[(4*R*)-4-phenyl-4,5-dihydrooxazol-2-yl]butylamide

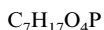
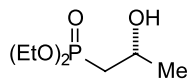
$[\alpha]_D^{22} = -15.1$ ($c = 1.26$, CHCl₃)

Source of chirality: D-phenylglycine

Absolute configuration: 1*R*,4*R*

Remigiusz Żurawiński, Kaoru Nakamura, Józef Drabowicz,
Piotr Kiełbasiński and Marian Mikołajczyk*

Tetrahedron: Asymmetry 12 (2001) 3139



Diethyl (2*R*)-2-hydroxypropanephosphonate

E.e. = 98%

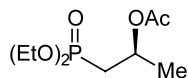
$[\alpha]_D^{20} = +7.2$ ($c = 1$, MeOH)

Source of chirality: asymmetric reduction by
Geotrichum candidum

Absolute configuration: *R*, lit.^{2,6}

Remigiusz Żurawiński, Kaoru Nakamura, Józef Drabowicz,
Piotr Kiełbasiński and Marian Mikołajczyk*

Tetrahedron: Asymmetry 12 (2001) 3139



Diethyl (2*S*)-2-acetoxypropanephosphonate

E.e. = 93%

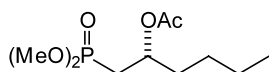
$[\alpha]_D^{20} = +7.2$ ($c = 1$, MeOH)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S*

Remigiusz Żurawiński, Kaoru Nakamura, Józef Drabowicz,
Piotr Kiełbasiński and Marian Mikołajczyk*

Tetrahedron: Asymmetry 12 (2001) 3139



Dimethyl (2*R*)-2-acetoxyhexanephosphonate

E.e. = 92%

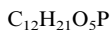
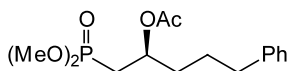
$[\alpha]_D^{20} = -11.6$ ($c = 1$, MeOH)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *R* (tentative assignment on the
basis of NMR)

Remigiusz Żurawiński, Kaoru Nakamura, Józef Drabowicz,
Piotr Kiełbasiński and Marian Mikołajczyk*

Tetrahedron: Asymmetry 12 (2001) 3139



Dimethyl (2*S*)-2-acetoxy-5-phenylpentanephosphonate

E.e. = 52%

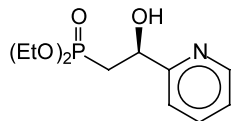
$[\alpha]_D^{20} = +5.1$ ($c = 1$, MeOH)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S* (tentative assignment on the
basis of NMR)

Remigiusz Żurawiński, Kaoru Nakamura, Józef Drabowicz,
Piotr Kiełbański and Marian Mikołajczyk*

Tetrahedron: Asymmetry 12 (2001) 3139



$C_{11}H_{18}NO_4P$

Diethyl (2*S*)-2-hydroxy-2-(2'-pyridyl)ethanephosphonate

E.e. = 62%

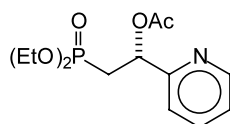
$[\alpha]_D^{20} = -18.8$ ($c = 1$, MeOH)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S* (tentative assignment on the basis of NMR)

Remigiusz Żurawiński, Kaoru Nakamura, Józef Drabowicz,
Piotr Kiełbański and Marian Mikołajczyk*

Tetrahedron: Asymmetry 12 (2001) 3139



$C_{13}H_{20}NO_5P$

Diethyl (2*R*)-2-acetoxy-2-(2'-pyridyl)ethanephosphonate

E.e. = 72%

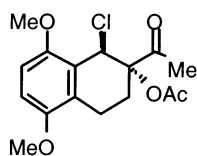
$[\alpha]_D^{20} = +31.9$ ($c = 1$, MeOH)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *R* (tentative assignment on the basis of NMR)

Fabrizio Badalassi, Paolo Crotti,* Cristina Di Bugno,*
Fabio D'Arata, Lucilla Favero and Alessio Ramacciotti

Tetrahedron: Asymmetry 12 (2001) 3155



$C_{16}H_{19}ClO_5$

(1*R*,2*S*)-2-Acetoxy-2-acetyl-1-chloro-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalene

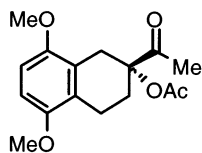
$[\alpha]_D^{25} = -16.2$ (c 1.0, CH_2Cl_2)

Source of chirality: (1*S*,2*R*)-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalen-1,2-diol

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

Fabrizio Badalassi, Paolo Crotti,* Cristina Di Bugno,*
Fabio D'Arata, Lucilla Favero and Alessio Ramacciotti

Tetrahedron: Asymmetry 12 (2001) 3155



$C_{16}H_{20}O_5$

(*R*)-2-Acetoxy-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalene

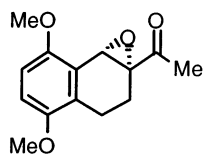
$[\alpha]_D^{25} = -46.3$ (c 1.0, $CHCl_3$)

Source of chirality: (1*S*,2*R*)-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalen-1,2-diol

Absolute configuration: 2*R*

Fabrizio Badalassi, Paolo Crotti,* Cristina Di Bugno,*
Fabio D'Arata, Lucilla Favero and Alessio Ramacciotti

Tetrahedron: Asymmetry 12 (2001) 3155



(1*S*,2*R*)-2-Acetyl-1,2-epoxy-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalene

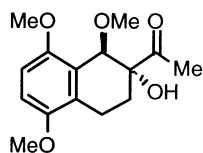
$[\alpha]_D^{25} = -209.3$ (*c* 2.3, $CHCl_3$)

Source of chirality: (1*S*,2*R*)-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalen-1,2-diol

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

Fabrizio Badalassi, Paolo Crotti,* Cristina Di Bugno,*
Fabio D'Arata, Lucilla Favero and Alessio Ramacciotti

Tetrahedron: Asymmetry 12 (2001) 3155



(1*R*,2*R*)-2-Acetyl-2-hydroxy-1,5,8-trimethoxy-1,2,3,4-tetrahydronaphthalene

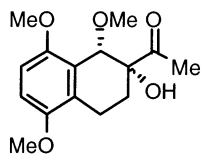
$[\alpha]_D^{25} = -113.1$ (*c* 1.2, $CHCl_3$)

Source of chirality: (1*S*,2*R*)-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalen-1,2-diol

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

Fabrizio Badalassi, Paolo Crotti,* Cristina Di Bugno,*
Fabio D'Arata, Lucilla Favero and Alessio Ramacciotti

Tetrahedron: Asymmetry 12 (2001) 3155



(1*S*,2*R*)-2-Acetyl-2-hydroxy-1,5,8-trimethoxy-1,2,3,4-tetrahydronaphthalene

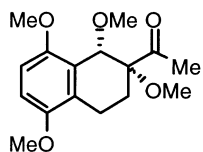
$[\alpha]_D^{25} = +44.7$ (*c* 1.3, $CHCl_3$)

Source of chirality: (1*S*,2*R*)-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalen-1,2-diol

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

Fabrizio Badalassi, Paolo Crotti,* Cristina Di Bugno,*
Fabio D'Arata, Lucilla Favero and Alessio Ramacciotti

Tetrahedron: Asymmetry 12 (2001) 3155



(1*S*,2*R*)-2-Acetyl-1,2,5,8-tetramethoxy-1,2,3,4-tetrahydronaphthalene

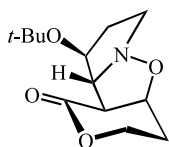
$[\alpha]_D^{25} = +114.7$ (*c* 2.2, $CHCl_3$)

Source of chirality: (1*S*,2*R*)-2-acetyl-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalen-1,2-diol

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

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



$C_{13}H_{21}NO_4$

(1a*S*,5a*S*,5b*R*,6*S*)-6-*tert*-Butoxy-5-oxo-pyrrolidino[1,2-*b*]isoxazolidino[4,5-*c*]tetrahydropyran

D.e. = 100%

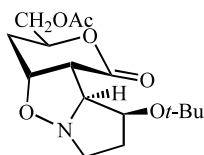
$[\alpha]_D = -23.5$ (*c* 1.0, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

Absolute configuration: (1a*S*,5a*S*,5b*R*,6*S*)

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



$C_{16}H_{25}NO_6$

(1a*R*,3*S*,5a*R*,5b*S*,6*S*)-3-Acetoxyethyl-6-*tert*-butoxy-5-oxo-pyrrolidino[1,2-*b*]isoxazolidino[4,5-*c*]tetrahydropyran

D.e. = 100%

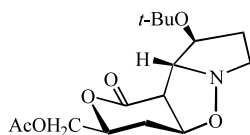
$[\alpha]_D = +43.2$ (*c* 0.6, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

Absolute configuration: (1a*R*,3*S*,5a*R*,5b*S*,6*S*)

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



$C_{16}H_{25}NO_6$

(1a*S*,3*S*,5a*S*,5b*R*,6*S*)-3-Acetoxyethyl-6-*tert*-butoxy-5-oxo-pyrrolidino[1,2-*b*]isoxazolidino[4,5-*c*]tetrahydropyran

D.e. = 100%

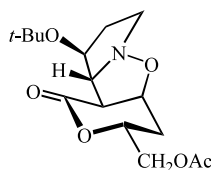
$[\alpha]_D = -17.2$ (*c* 1.0, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

Absolute configuration: (1a*S*,3*S*,5a*S*,5b*R*,6*S*)

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



$C_{16}H_{25}NO_6$

(1a*S*,3*R*,5a*S*,5b*R*,6*S*)-3-Acetoxyethyl-6-*tert*-butoxy-5-oxo-pyrrolidino[1,2-*b*]isoxazolidino[4,5-*c*]tetrahydropyran

D.e. = 100%

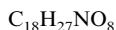
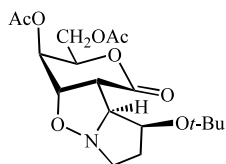
$[\alpha]_D = -34.3$ (*c* 1.0, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

Absolute configuration: (1a*S*,3*R*,5a*S*,5b*R*,6*S*)

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



(1a,S,2R,3R,5aR,5bS,6S)-2-Acetoxy-3-acetoxymethyl-6-*tert*-butoxy-5-oxo-pyrrolidino[1,2-*b*]isoxazolidino[4,5-*c*]tetrahydropyran

D.e. = 100%

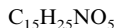
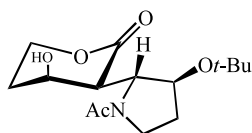
$[\alpha]_D = +58.5$ (*c* 0.7, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

Absolute configuration: (1a,S,2R,3R,5aR,5bS,6S)

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



(2'*R*,3'*S*)-*N*-Acetyl-3'-*tert*-butoxy-2,4-dideoxy-2-*C*-pyrrolidin-2'-yl-*L*-erythro-pentaldono-1,5-lactone

D.e. = 100%

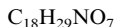
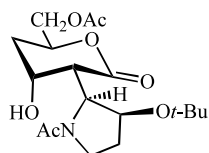
$[\alpha]_D = -4.4$ (*c* 0.9, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

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

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



(2'*R*,3'*S*)-*N*-Acetyl-6-*O*-acetyl-3'-*tert*-butoxy-2,4-dideoxy-2-*C*-pyrrolidin-2'-yl-*D*-ribo-hexaldono-1,5-lactone

D.e. = 100%

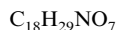
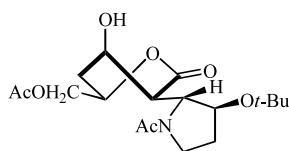
$[\alpha]_D = +30.8$ (*c* 0.45, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

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

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



(2'*R*,3'*S*)-*N*-Acetyl-6-*O*-acetyl-3'-*tert*-butoxy-2,4-dideoxy-2-*C*-pyrrolidin-2'-yl-*D*-lyxo-hexaldono-1,5-lactone

D.e. = 100%

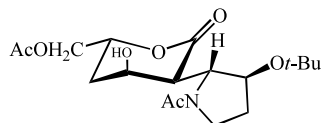
$[\alpha]_D = +2.3$ (*c* 0.6, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

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

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabczko,
Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski,*
F. Cardona, A. Goti and A. Brandi

Tetrahedron: Asymmetry 12 (2001) 3163



$C_{18}H_{29}NO_7$

(2'*R*,3'*S*)-*N*-Acetyl-6-*O*-acetyl-3'-*tert*-butoxy-2,4-dideoxy-2-*C*-pyrrolidin-2'-yl-*L*-ribo-hexaldono-1,5-lactone

D.e. = 100%

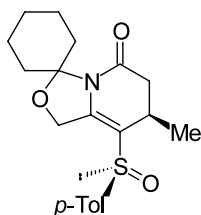
$[\alpha]_D^{25} = -19.1$ (*c* 0.7, CH_2Cl_2)

Source of chirality: diastereoselective 1,3-dipolar cycloaddition

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

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{20}H_{25}NO_3S$

(*S*_S,7*R*)-7-Methyl-3,3-pentamethylene-8-(*p*-tolylsulfinyl)-1,2,3,5,6,7-hexahydro-2-oxa-5-indolizinone

D.e. = 100%

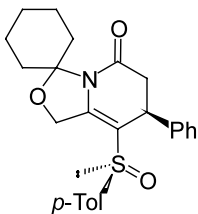
$[\alpha]_D^{23} = -98.3$ (*c* 0.54, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: *S*_S,7*R*

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{25}H_{27}NO_3S$

(*S*_S,7*S*)-3,3-Pentamethylene-7-phenyl-8-(*p*-tolylsulfinyl)-1,2,3,5,6,7-hexahydro-2-oxa-5-indolizinone

D.e. = 100%

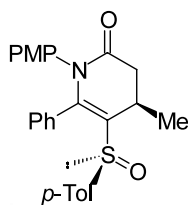
$[\alpha]_D^{23} = +28.6$ (*c* 0.35, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: *S*_S,7*S*

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{26}H_{25}NO_3S$

(*S*_S,4*R*)-1-(*p*-Methoxyphenyl)-4-methyl-6-phenyl-5-(*p*-tolylsulfinyl)-5,6-dehydropiperidin-2-one

D.e. = 100%

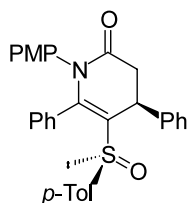
$[\alpha]_D^{23} = -161.8$ (*c* 1.0, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{31}H_{27}NO_3S$

($S_S,4S$)-1-(*p*-Methoxyphenyl)-4,6-diphenyl-5-(*p*-tolylsulfinyl)-5,6-dehydropiperidin-2-one

D.e. = 100%

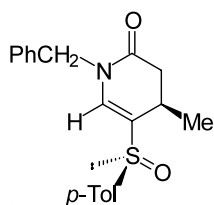
$[\alpha]_D^{23} -470.6$ (*c* 0.16, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: $S_S,4S$

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{20}H_{21}NO_2S$

($S_S,4R$)-1-Benzyl-4-methyl-5-(*p*-tolylsulfinyl)-5,6-dehydropiperidin-2-one

D.e. = 100%

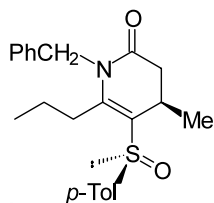
$[\alpha]_D^{23} -47.0$ (*c* 1.0, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: $S_S,4R$

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{23}H_{27}NO_2S$

($S_S,4R$)-1-Benzyl-4-methyl-6-propyl-5-(*p*-tolylsulfinyl)-5,6-dehydropiperidin-2-one

D.e. = 100%

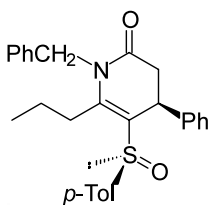
$[\alpha]_D^{23} -142.7$ (*c* 0.22, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: $S_S,4R$

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



$C_{28}H_{29}NO_2S$

($S_S,4S$)-1-Benzyl-4-phenyl-6-propyl-5-(*p*-tolylsulfinyl)-5,6-dehydropiperidin-2-one

D.e. = 100%

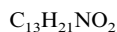
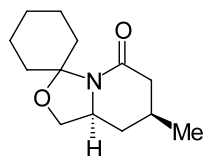
$[\alpha]_D^{23} -266.0$ (*c* 0.08, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: $S_S,4S$

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



(7*S*,8*aS*)-7-Methyl-3,3-pentamethylene-1,2,3,5,6,7,8,8*a*-octahydro-2-oxa-5-indolizinone

D.e. = 100%

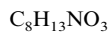
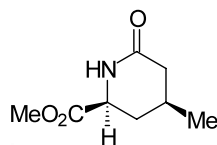
$[\alpha]_D^{23} +24.0$ (c 1.1, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: 7*S*,8*aS*

Hassan Acherki, Carlos Alvarez-Ibarra,* Alfonso de Dios,
Marta Gutiérrez and María L. Quiroga

Tetrahedron: Asymmetry 12 (2001) 3173



(2*S*,4*S*)-Methyl 4-methyl-6-oxopipercolate

D.e. >97%

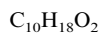
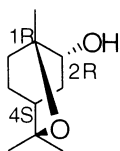
$[\alpha]_D^{23} -20.7$ (c 4.5, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Mitsuo Miyazawa* and Yuya Hashimoto

Tetrahedron: Asymmetry 12 (2001) 3185



(-)-(1*R*,2*R*,4*S*)-1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octan-6-ol

E.e. = 100% [determined by gas chromatography
analysis on Cp-Cyclodextrin- β -236-M-19]

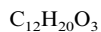
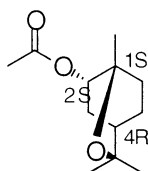
$[\alpha]_D^{25} -19.6$ (c 1.08 in $CHCl_3$)

Source of chirality: microbial resolution

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

Mitsuo Miyazawa* and Yuya Hashimoto

Tetrahedron: Asymmetry 12 (2001) 3185



Acetate, (+)-(1*S*,2*S*,4*R*)-1,3,3-trimethyl-2-oxabicyclo[2.2.2]octan-6-ol

E.e. = 100% [determined by gas chromatography
analysis on Cp-Cyclodextrin- β -236-M-19]

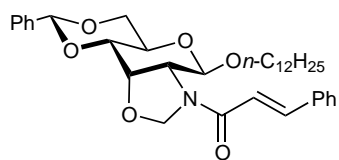
$[\alpha]_D^{25} +74.2$ (c 0.96 in $CHCl_3$)

Source of chirality: microbial resolution

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

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{35}H_{47}NO_6$

1-Dodecyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-3-*O*-methylidene-2-*N*-(*trans*-3-phenyl-2-propenoyl)- β -D-allopyranoside

Ee = 100%

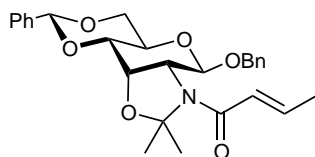
$[\alpha]_D^{25} = -32.4$ (*c* 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{27}H_{31}NO_6$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-*N*-(*trans*-2-butenoyl)-2-deoxy-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

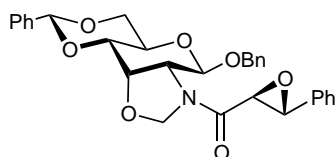
$[\alpha]_D^{25} = -16.9$ (*c* 0.7, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{30}H_{29}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(*2S,3R*)-2,3-epoxy-3-phenylpropanoyl]-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

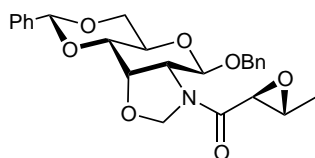
$[\alpha]_D^{25} = +62.5$ (*c* 0.5, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (*2S,3R*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{25}H_{27}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(*2S,3R*)-2,3-epoxybutanoyl]-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

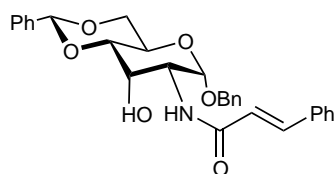
$[\alpha]_D^{25} = -21.1$ (*c* 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (*2S,3R*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{29}H_{29}NO_6$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-(*trans*-3-phenyl-2-propenamido)- α -D-allopyranoside

Ee = 100%

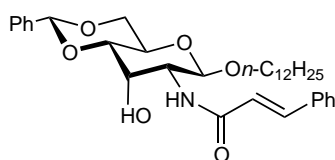
$[\alpha]_D^{25} = +92.0$ (*c* 0.4, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, α -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{34}H_{47}NO_6$

1-Dodecyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-(*trans*-3-phenyl-2-propenamido)- β -D-allopyranoside

Ee = 100%

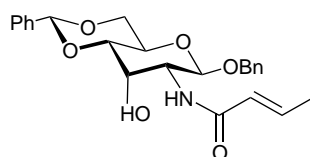
$[\alpha]_D^{25} = -80.0$ (*c* 0.5, DMF)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{24}H_{27}NO_6$

Benzyl (*R*)-4,6-*O*-benzylidene-2-(*trans*-2-butenamido)-2-deoxy- β -D-allopyranoside

Ee = 100%

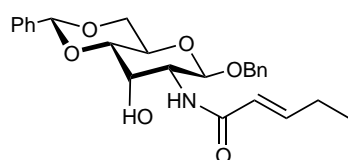
$[\alpha]_D^{25} = -92.3$ (*c* 0.4, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{25}H_{30}NO_6$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-(*trans*-3-phenyl-2-pentenamido)- β -D-allopyranoside

Ee = 100%

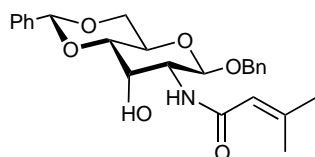
$[\alpha]_D^{25} = -77.1$ (*c* 0.7, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{25}H_{29}NO_6$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-(3-methyl-2-butenamido)-β-*D*-allopyranoside

Ee = 100%

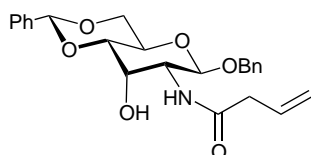
$[\alpha]_D^{25} = -91.1$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β-*D*-allo

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{24}H_{27}NO_6$

Benzyl (*R*)-4,6-*O*-benzylidene-2-(3-butenamido)-2-deoxy-β-*D*-allopyranoside

Ee = 100%

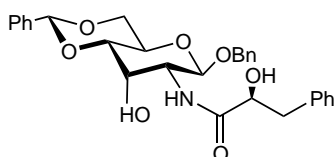
$[\alpha]_D^{25} = -117.7$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β-*D*-allo

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{29}H_{31}NO_7$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-[(*S*)-2-hydroxy-3-phenylpropanamido]-β-*D*-allopyranoside

Ee = 100%

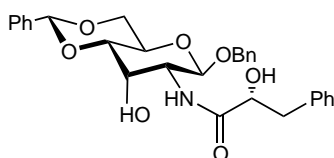
$[\alpha]_D^{25} = -142.3$ (*c* 0.5, DMF)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β-*D*-allo, (*S*)-2-hydroxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{29}H_{31}NO_7$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-[(*R*)-2-hydroxy-3-phenylpropanamido]-β-*D*-allopyranoside

Ee = 100%

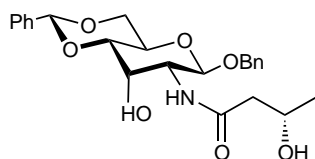
$[\alpha]_D^{25} = -48.7$ (*c* 0.6, DMF)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β-*D*-allo, (*R*)-2-hydroxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{24}H_{29}NO_7$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-[(*S*)-3-hydroxybutanamido]- β -D-allopyranoside

Ee = 100%

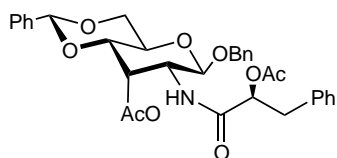
$[\alpha]_D^{25} = -96.2$ (c 0.4, DMF)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (*S*)-2-hydroxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{33}H_{35}NO_9$

Benzyl 2-[(*S*)-2-acetoxy-3-phenylpropanamido]-3-*O*-acetyl-(*R*)-4,6-*O*-benzylidene-2-deoxy- β -D-allopyranoside

Ee = 100%

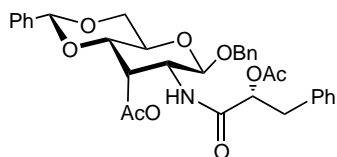
$[\alpha]_D^{25} = -95.6$ (c 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (*S*)-2-acetoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{33}H_{35}NO_9$

Benzyl 2-[(*R*)-2-acetoxy-3-phenylpropanamido]-3-*O*-acetyl-(*R*)-4,6-*O*-benzylidene-2-deoxy- β -D-allopyranoside

Ee = 100%

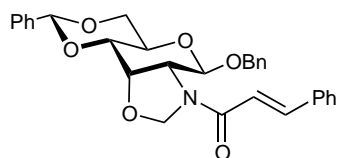
$[\alpha]_D^{25} = -91.5$ (c 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (*R*)-2-acetoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{30}H_{29}NO_6$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-3-*O*-methylidene-2-*N*-(*trans*-3-phenyl-2-propenoyl)- β -D-allopyranoside

Ee = 100%

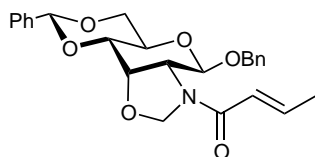
$[\alpha]_D^{25} = +73.9$ (c 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{25}H_{27}NO_6$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-*N*-(*trans*-2-butenoyl)-2-deoxy-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

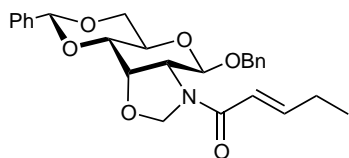
$[\alpha]_D^{25} = -7.8$ (*c* 0.8, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{26}H_{29}NO_6$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-3-*O*-methylidene-2-*N*-(*trans*-2-pentenoyl)- β -D-allopyranoside

Ee = 100%

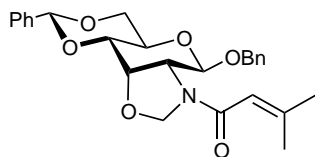
$[\alpha]_D^{25} = -32.7$ (*c* 0.6, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{26}H_{29}NO_6$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-(3-methyl-2-butenoyl)-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

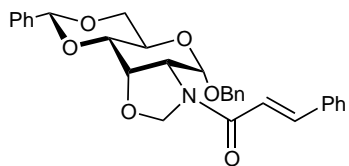
$[\alpha]_D^{25} = -14.2$ (*c* 0.7, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{30}H_{29}NO_6$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-3-*O*-methylidene-2-*N*-(*trans*-3-phenyl-2-propenoyl)- α -D-allopyranoside

Ee = 100%

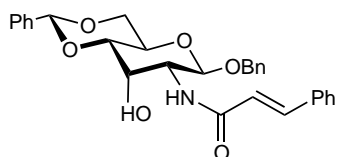
$[\alpha]_D^{25} = +196.1$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, α -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{29}H_{29}NO_6$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-(*trans*-3-phenyl-2-propenamido)- β -D-allopyranoside

Ee = 100%

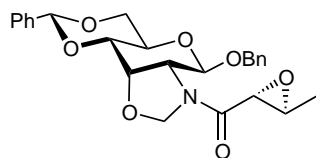
$[\alpha]_D^{25} = -74.1$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{25}H_{27}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(2*R*,3*S*)-2,3-epoxybutanoyl]-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

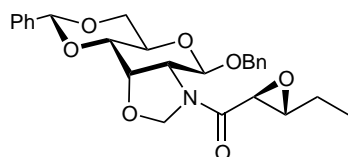
$[\alpha]_D^{25} = -102.7$ (*c* 0.4, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*R*,3*S*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{26}H_{29}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(2*S*,3*R*)-2,3-epoxypentanoyl]-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

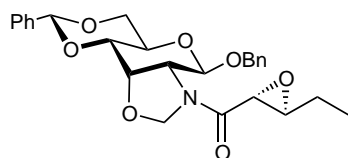
$[\alpha]_D^{25} = -53.6$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*S*,3*R*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{26}H_{29}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(2*R*,3*S*)-2,3-epoxypentanoyl]-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

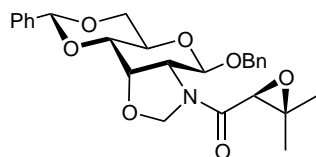
$[\alpha]_D^{25} = -144.2$ (*c* 0.4, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*R*,3*S*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{26}H_{29}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-(2,3-epoxy-3-methylbutanoyl)-2-*N*-3-*O*-methylidene- β -D-allopyranoside

De = 48%

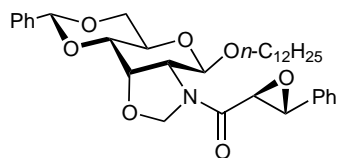
$[\alpha]_D^{25} = -37.9$ (*c* 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*S*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{35}H_{47}NO_7$

1-Dodecyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(2*S*,3*R*)-2,3-epoxy-3-phenylpropanoyl]-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

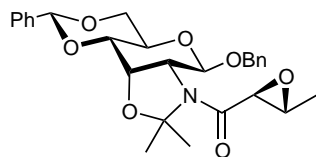
$[\alpha]_D^{25} = +40.4$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*S*,3*R*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{27}H_{31}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(2*S*,3*R*)-2,3-epoxybutanoyl]-2-*N*-3-*O*-isopropylidene- β -D-allopyranoside

Ee = 100%

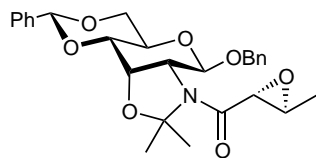
$[\alpha]_D^{25} = -18.2$ (*c* 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*S*,3*R*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{27}H_{31}NO_7$

Benzyl 2-amino-(*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(2*R*,3*S*)-2,3-epoxybutanoyl]-2-*N*-3-*O*-isopropylidene- β -D-allopyranoside

Ee = 100%

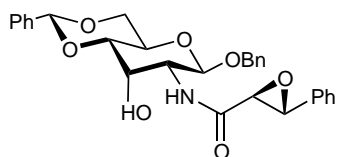
$[\alpha]_D^{25} = -105.3$ (*c* 0.3, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β -D-*allo*, (2*R*,3*S*)-2,3-epoxy-

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco and Fernando Iglesias-Guerra*

Tetrahedron: Asymmetry 12 (2001) 3189



$C_{29}H_{29}NO_7$

Benzyl (*R*)-4,6-*O*-benzylidene-2-deoxy-2-*N*-[(*E*)-2,3-epoxy-3-phenylpropanoyl]-β-*D*-allopyranoside

De = 40%

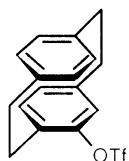
$[\alpha]_D^{25} = -61.5$ (*c* 0.5, DMF)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)-4,6-*O*-, β-*D*-allo, (2*S*,3*R*)-2,3-epoxy-

Birgit Ortner, Harald Hübner and Peter Gmeiner*

Tetrahedron: Asymmetry 12 (2001) 3205



$C_{17}H_{15}F_3O_3S$

(*R*)-Trifluoromethanesulfonic acid [2.2]paracyclophan-4-yl ester

E.e. >98%

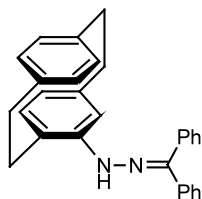
$[\alpha]_D^{20} = -16.2$ (*c* 1, $CHCl_3$)

Source of chirality: resolution by microbial hydrolysis

Absolute configuration: *R*

Birgit Ortner, Harald Hübner and Peter Gmeiner*

Tetrahedron: Asymmetry 12 (2001) 3205



$C_{29}H_{26}N_2$

(*R*)-*N*-Benzhydrylidene-*N'*-[2.2]paracyclophan-4-ylhydrazine

E.e. >98%

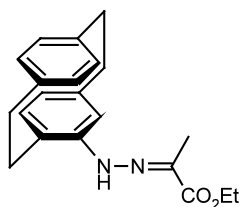
$[\alpha]_D^{20} = -267.2$ (*c* 1, $CHCl_3$)

Source of chirality: resolution by microbial hydrolysis

Absolute configuration: *R*

Birgit Ortner, Harald Hübner and Peter Gmeiner*

Tetrahedron: Asymmetry 12 (2001) 3205



$C_{21}H_{23}N_2O_2$

(*R*)-2-([2.2]Paracyclophan-4-ylhydrazono)propionic acid ethyl ester

E.e. >98%

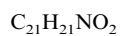
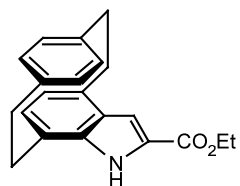
$[\alpha]_D^{20} = -150.5$ (*c* 1, $CHCl_3$)

Source of chirality: resolution by microbial hydrolysis

Absolute configuration: *R*

Birgit Ortner, Harald Hübner and Peter Gmeiner*

Tetrahedron: Asymmetry 12 (2001) 3205



(*R*)-[2.2](4,7)Indoloparacyclophane-2-carboxylic acid ethyl ester

E.e. >98%

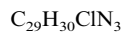
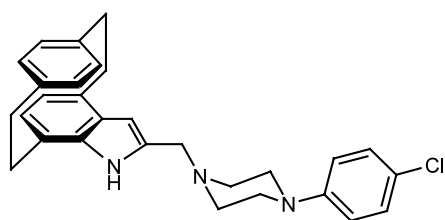
$[\alpha]_D^{20} = +130.6$ (*c* 0.33, $CHCl_3$)

Source of chirality: resolution by microbial hydrolysis

Absolute configuration: *R*

Birgit Ortner, Harald Hübner and Peter Gmeiner*

Tetrahedron: Asymmetry 12 (2001) 3205



(*R*)-1-([2.2](4,7)Indoloparacyclophane-2-ylmethyl)-4-(4-chlorophenyl)piperazine

E.e. >98%

$[\alpha]_D^{20} = +46.6$ (*c* 0.15, $CHCl_3$)

Source of chirality: resolution by microbial hydrolysis

Absolute configuration: *R*