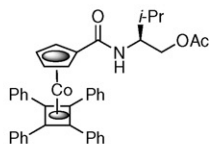


Stereochemistry abstracts

Mehbuba R. Yeamine and Christopher J. Richards\*

*Tetrahedron: Asymmetry 18 (2007) 2613*



$C_{41}H_{38}CoNO_3$

( $\eta^5$ -(*S*)-*N*-2-(1-Acetoxy-3-methylbutyl)carboxamidocyclopentadienyl)( $\eta^4$ -tertaphenylcyclobutadiene)cobalt

Ee = 100%

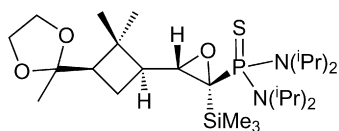
$[\alpha]_D^{24} = -32.6$  (c 0.01,  $CH_2Cl_2$ )

Source of chirality: (*S*)-valine

Absolute configuration: (*S*)

Ona Illa, Ángel Álvarez-Larena, Antoine Baceiredo, Vicenç Branchadell and Rosa M. Ortuño\*

*Tetrahedron: Asymmetry 18 (2007) 2617*



$C_{27}H_{55}N_2O_3SiPS$

(2*S*,3*S*)-3-[(1'*R*,3'*R*)-2',2'-Dimethyl-3'-(2-methyl-1,3-dioxolan-2-yl)cyclobutyl]-2-trimethylsilyloxiran-2-yl-*N,N,N',N'*-tetraisopropylthiophosphondiamide

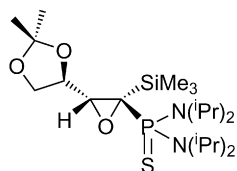
$[\alpha]_D = +28.26$  (c 0.46,  $CH_2Cl_2$ )

Source of chirality: (-)-verbenone and stereoselective synthesis

Absolute configuration: (2*S*,3*S*,1'*R*,3'*R*)

Ona Illa, Ángel Álvarez-Larena, Antoine Baceiredo, Vicenç Branchadell and Rosa M. Ortuño\*

*Tetrahedron: Asymmetry 18 (2007) 2617*



$C_{16}H_{33}N_2O_3SiPS$

3-[(4'*R*)-2',2'-Dimethyl-1',3'-dioxolan-4'-yl]-2-trimethylsilyloxiran-2-yl-*N,N,N',N'*-tetraisopropylthiophosphondiamide

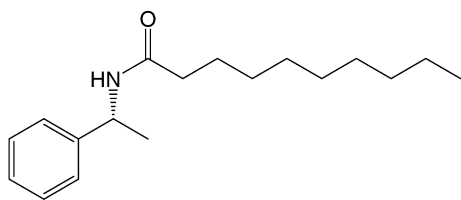
$[\alpha]_D = -47.1$  (c 1.87,  $CH_2Cl_2$ )

Source of chirality: (-)-verbenone and stereoselective synthesis

Absolute configuration: (4*R*)

A. Torres-Gavilán, J. Escalante, I. Regla, A. López-Munguía and E. Castillo\*

*Tetrahedron: Asymmetry 18 (2007) 2621*



$C_{18}H_{29}NO$

*N*-[(*R*)-(+)-1-Phenylethyl]decanamide

Yield 95%, ee > 99%

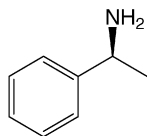
$[\alpha]_D^{24} = +67.5$  (c 0.7,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (*R*)

A. Torres-Gavilán, J. Escalante, I. Regla, A. López-Munguía and E. Castillo\*

*Tetrahedron: Asymmetry 18 (2007) 2621*



C<sub>8</sub>H<sub>11</sub>N

(S)-(-)-1-Phenylethylamine

Yield 90%, calcd ee > 97%

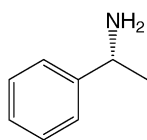
$[\alpha]_D^{24} = -30.6$  (c 9.6, EtOH)

Source of chirality: enzymatic resolution

Absolute configuration: (R)

A. Torres-Gavilán, J. Escalante, I. Regla, A. López-Munguía and E. Castillo\*

*Tetrahedron: Asymmetry 18 (2007) 2621*



C<sub>8</sub>H<sub>11</sub>N

(R)-(+)-1-Phenylethylamine

Yield 98%, ee > 99%

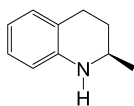
$[\alpha]_D^{24} = +29.8$  (c 9.6, EtOH)

Source of chirality: enzymatic resolution

Absolute configuration: (R)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>10</sub>H<sub>13</sub>N

(R)-1,2,3,4-Tetrahydro-2-methylquinoline

Ee = 91%

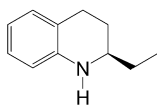
$[\alpha]_D^{21} = +88$  (c 0.02, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (R)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>11</sub>H<sub>15</sub>N

(R)-2-Ethyl-1,2,3,4-tetrahydroquinoline

Ee = 92%

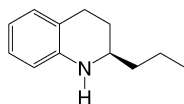
$[\alpha]_D^{21} = +76$  (c 0.02, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (R)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>12</sub>H<sub>17</sub>N

(*R*)-1,2,3,4-Tetrahydro-2-propylquinoline

Ee = 88%

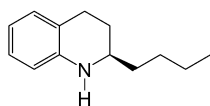
$[\alpha]_D^{21} = +84$  (*c* 0.02, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>13</sub>H<sub>19</sub>N

(*R*)-2-Butyl-1,2,3,4-tetrahydroquinoline

Ee = 88%

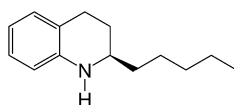
$[\alpha]_D^{21} = +78$  (*c* 0.02, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>14</sub>H<sub>21</sub>N

(*R*)-1,2,3,4-Tetrahydro-2-pentylquinoline

Ee = 91%

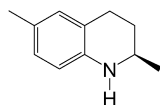
$[\alpha]_D^{21} = +100$  (*c* 0.012, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>11</sub>H<sub>15</sub>N

(*R*)-1,2,3,4-Tetrahydro-2,6-dimethylquinoline

Ee = 87%

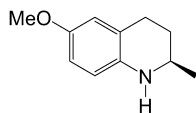
$[\alpha]_D^{21} = +121$  (*c* 0.007, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>11</sub>H<sub>15</sub>NO

(*R*)-1,2,3,4-Tetrahydro-6-dimethoxy-2-methylquinoline

Ee = 87%

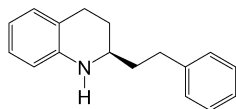
$[\alpha]_D^{21} = +64$  (*c* 0.02, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>17</sub>H<sub>19</sub>N

(*R*)-1,2,3,4-Tetrahydro-2-phenethylquinoline

Ee = 90%

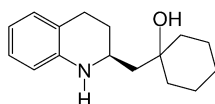
$[\alpha]_D^{21} = +95$  (*c* 0.013, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>16</sub>H<sub>23</sub>NO

1-(((*S*)-1,2,3,4-Tetrahydroquinolin-2-yl)methyl)cyclohexanol

Ee = 85%

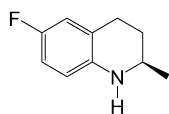
$[\alpha]_D^{21} = +82$  (*c* 0.01, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*S*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry 18 (2007) 2625*



C<sub>10</sub>H<sub>12</sub>FN

(*R*)-6-Fluoro-1,2,3,4-tetrahydro-2-methylquinoline

Ee = 90%

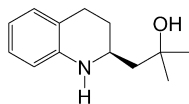
$[\alpha]_D^{21} = +84$  (*c* 0.015, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (*R*)

Sau Hing Chan, Kim Hung Lam,\* Yue-Ming Li, Lijin Xu, Weijun Tang, Fuk Loi Lam, Wai Hung Lo, Wing Yiu Yu, Qinghua Fan\* and Albert S. C. Chan\*

*Tetrahedron: Asymmetry* 18 (2007) 2625



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

1-((S)-1,2,3,4-Tetrahydroquinolin-2-yl)-2-methylpropan-2-ol

Ee = 91%

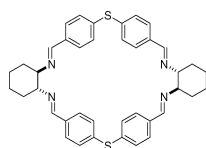
$[\alpha]_D^{21} = +82$  (c 0.014, CHCl<sub>3</sub>)

Source of chirality: asymmetric hydrogenation

Absolute configuration: (S)

Jacek Gawroński,\* Marcin Kwit, Jakub Grajewski, Jadwiga Gajewy and Anna Długokińska

*Tetrahedron: Asymmetry* 18 (2007) 2632



C<sub>40</sub>H<sub>40</sub>N<sub>4</sub>S<sub>2</sub>

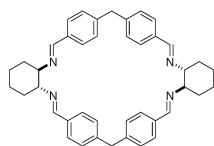
Rhombimine S

$\Delta\epsilon$  ( $\lambda$ , nm) = -26 (315); +32 (275); -22 (257), in MeCN

Chirality source: enantiomerically pure (1R,2R)-1,2-diaminocyclohexane

Jacek Gawroński,\* Marcin Kwit, Jakub Grajewski, Jadwiga Gajewy and Anna Długokińska

*Tetrahedron: Asymmetry* 18 (2007) 2632



C<sub>42</sub>H<sub>44</sub>N<sub>4</sub>

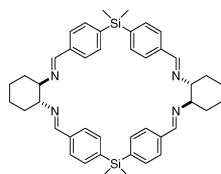
Rhombimine C

$\Delta\epsilon$  ( $\lambda$ , nm) = -36 (275); +152 (257); -30 (239), in MeCN

Chirality source: enantiomerically pure (1R,2R)-1,2-diaminocyclohexane

Jacek Gawroński,\* Marcin Kwit, Jakub Grajewski, Jadwiga Gajewy and Anna Długokińska

*Tetrahedron: Asymmetry* 18 (2007) 2632



C<sub>44</sub>H<sub>52</sub>N<sub>4</sub>Si<sub>2</sub>

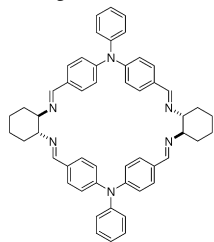
Rhombimine Si

$\Delta\epsilon$  ( $\lambda$ , nm) = -37 (270); +20 (247), in MeCN

Chirality source: enantiomerically pure (1R,2R)-1,2-diaminocyclohexane

Jacek Gawroński,\* Marcin Kwit, Jakub Grajewski, Jadwiga Gajewy and Anna Długokińska

*Tetrahedron: Asymmetry 18 (2007) 2632*



C<sub>52</sub>H<sub>50</sub>N<sub>6</sub>

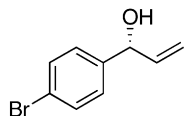
Rhombimine N

$\Delta\epsilon$  ( $\lambda$ , nm) = -16 (375); +9 (349); -5 (327), in MeCN-dioxane

Chirality source: enantiomerically pure (1*R*,2*R*)-1,2-diaminocyclohexane

Itaru Sato,\* Noriaki Asakura and Taizo Iwashita

*Tetrahedron: Asymmetry 18 (2007) 2638*



C<sub>9</sub>H<sub>9</sub>BrO

(*R*)-1-(4-Bromophenyl)prop-2-en-1-ol

Ee = 97%

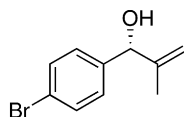
$[\alpha]_D^{22} = -16.8$  (*c* 1.2, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Itaru Sato,\* Noriaki Asakura and Taizo Iwashita

*Tetrahedron: Asymmetry 18 (2007) 2638*



C<sub>10</sub>H<sub>11</sub>BrO

(*R*)-1-(4-Bromophenyl)-2-methylprop-2-en-1-ol

Ee = 94%

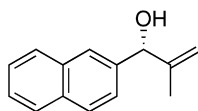
$[\alpha]_D^{22} = +13.9$  (*c* 1.8, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Itaru Sato,\* Noriaki Asakura and Taizo Iwashita

*Tetrahedron: Asymmetry 18 (2007) 2638*



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

(*R*)-1-(Naphthalene-2-yl)-2-methylprop-2-en-1-ol

Ee = 92%

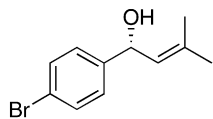
$[\alpha]_D^{22} = +17.6$  (*c* 2.2, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Itaru Sato,\* Noriaki Asakura and Taizo Iwashita

*Tetrahedron: Asymmetry 18 (2007) 2638*



C<sub>11</sub>H<sub>13</sub>BrO

(*R*)-1-(4-Bromophenyl)-3-methylbut-2-en-1-ol

Ee = 80%

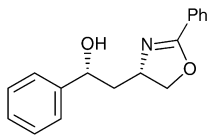
$[\alpha]_D^{22} = -89.4$  (*c* 1.3, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



C<sub>17</sub>H<sub>17</sub>NO<sub>2</sub>

(*R*)-1-Phenyl-2-((*S*)-2-phenyl-4,5-dihydrooxazol-4-yl)ethanol

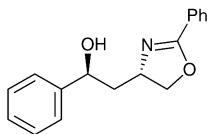
$[\alpha]_D^{20} = +79.3$  (*c* 0.3, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: L-aspartic acid

Absolute configuration: (*R,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



C<sub>17</sub>H<sub>17</sub>NO<sub>2</sub>

(*S*)-1-Phenyl-2-((*S*)-2-phenyl-4,5-dihydrooxazol-4-yl)ethanol

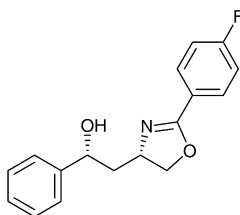
$[\alpha]_D^{20} = -142.0$  (*c* 0.3, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: L-aspartic acid

Absolute configuration: (*S,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



C<sub>17</sub>H<sub>16</sub>FNO<sub>2</sub>

(*R*)-2-((*S*)-2-(4-Fluorophenyl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

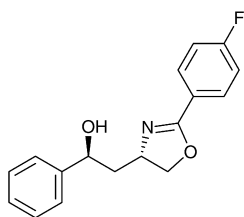
$[\alpha]_D^{20} = +75.3$  (*c* 0.3, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: L-aspartic acid

Absolute configuration: (*R,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



$C_{17}H_{16}FNO_2$

(*S*)-2-((*S*)-2-(4-Fluorophenyl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

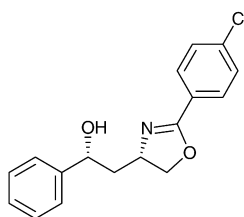
$[\alpha]_D^{20} = -148.7$  (*c* 0.3,  $CH_2Cl_2$ )

Source of chirality: L-aspartic acid

Absolute configuration: (*S,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



$C_{17}H_{16}ClNO_2$

(*R*)-2-((*S*)-2-(4-Chlorophenyl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

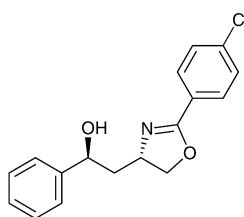
$[\alpha]_D^{20} = +82.0$  (*c* 0.3,  $CH_2Cl_2$ )

Source of chirality: L-aspartic acid

Absolute configuration: (*R,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



$C_{17}H_{16}ClNO_2$

(*S*)-2-((*S*)-2-(4-Chlorophenyl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

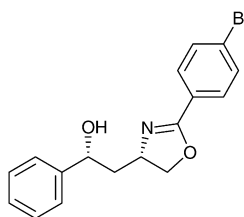
$[\alpha]_D^{20} = -154.0$  (*c* 0.3,  $CH_2Cl_2$ )

Source of chirality: L-aspartic acid

Absolute configuration: (*S,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



$C_{17}H_{16}BrNO_2$

(*R*)-2-((*S*)-2-(4-Bromophenyl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

$[\alpha]_D^{20} = +67.0$  (*c* 0.3,  $CH_2Cl_2$ )

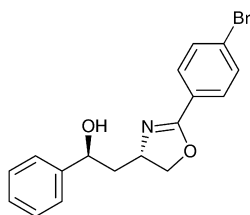
Source of chirality: L-aspartic acid

Absolute configuration: (*R,S*)



Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



C<sub>17</sub>H<sub>16</sub>BrNO<sub>2</sub>

(*S*)-2-((*S*)-2-(4-Bromophenyl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

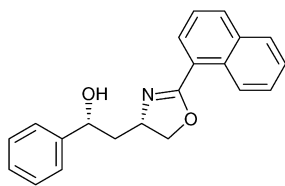
$[\alpha]_D^{20} = -142.7$  (*c* 0.3, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: L-aspartic acid

Absolute configuration: (*S,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



C<sub>21</sub>H<sub>19</sub>NO<sub>2</sub>

(*R*)-2-((*S*)-2-(Naphthalen-1-yl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

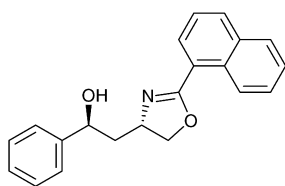
$[\alpha]_D^{20} = +131.7$  (*c* 0.3, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: L-aspartic acid

Absolute configuration: (*R,S*)

Gexin Yan, Yong Wu,\* Wenqing Lin and Xiaomei Zhang\*

*Tetrahedron: Asymmetry 18 (2007) 2643*



C<sub>21</sub>H<sub>19</sub>NO<sub>2</sub>

(*S*)-2-((*S*)-2-(Naphthalen-1-yl)-4,5-dihydrooxazol-4-yl)-1-phenylethanol

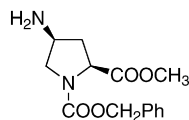
$[\alpha]_D^{20} = -82.7$  (*c* 0.3, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: L-aspartic acid

Absolute configuration: (*S,S*)

Yu-Xia Liu, Ya-Nan Sun, Hao-Han Tan, Wei Liu and Jing-Chao Tao\*

*Tetrahedron: Asymmetry 18 (2007) 2649*



C<sub>14</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>

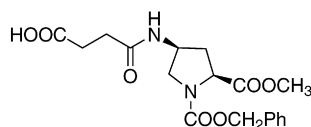
(*2S,4S*)-*N*-Cbz-4-aminoproline methyl ester

$[\alpha]_D^{20} = -23.2$  (*c* 1.18, EtOH)

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

Yu-Xia Liu, Ya-Nan Sun, Hao-Han Tan, Wei Liu and Jing-Chao Tao\*

*Tetrahedron: Asymmetry 18 (2007) 2649*



$C_{18}H_{22}N_2O_7$

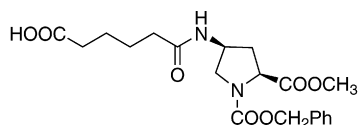
(2*S*,4*S*)-1-Benzyloxycarbonyl-2-methoxycarbonyl-4-(3'-carboxyl-propanoyl)amino-pyrrolidine

$[\alpha]_D^{20} = -9.2$  (*c* 1.50, EtOH)

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

Yu-Xia Liu, Ya-Nan Sun, Hao-Han Tan, Wei Liu and Jing-Chao Tao\*

*Tetrahedron: Asymmetry 18 (2007) 2649*



$C_{20}H_{26}N_2O_7$

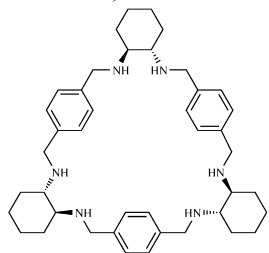
(2*S*,4*S*)-1-Benzyloxycarbonyl-2-methoxycarbonyl-4-(5'-carboxyl-valeryl)amino-pyrrolidine

$[\alpha]_D^{20} = -13.8$  (*c* 0.65, EtOH)

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

Koichi Tanaka,\* Noriaki Fukuda and Takeshi Fujiwara

*Tetrahedron: Asymmetry 18 (2007) 2657*



$C_{42}H_{60}N_6$

(2*S*,3*S*,12*S*,13*S*,22*S*,23*S*)-1,4,11,14,21,24-Hexaaza-(2,3:12,13:22,23)-tributano-(6,9:16,19:26,29)-trietheno-(1*H*,2*H*,3*H*,4*H*,5*H*,10*H*,11*H*,12*H*,13*H*,14*H*,15*H*,20*H*,21*H*,22*H*,23*H*,24*H*,25*H*)-duodecahydro-(30)-annulene

Ee = >99%

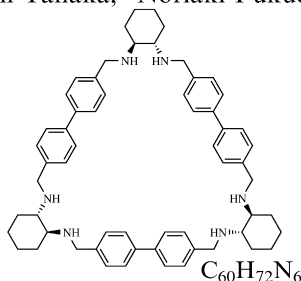
$[\alpha]_D = +82.0$  (*c* 0.5, CHCl<sub>3</sub>)

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

Absolute configuration: (2*S*,3*S*,12*S*,13*S*,22*S*,23*S*)

Koichi Tanaka,\* Noriaki Fukuda and Takeshi Fujiwara

*Tetrahedron: Asymmetry 18 (2007) 2657*



$C_{60}H_{72}N_6$

(2*S*,3*S*,16*S*,17*S*,30*S*,31*S*)-1,4,15,18,29,32-Hexaaza-(2,3:16,17:30,31)-tributano-(6,9:10,13:20,23:24,27:34,37:38,41)-hexaetheno-(1*H*,2*H*,3*H*,4*H*,5*H*,14*H*,15*H*,16*H*,17*H*,18*H*,19*H*,28*H*,29*H*,30*H*,31*H*,32*H*,33*H*,42*H*)-duodecahydro-(42)-annulene

Ee = >99%

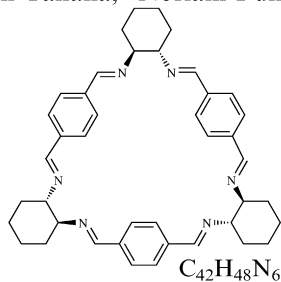
$[\alpha]_D = +226$  (*c* 1.0, CH<sub>2</sub>Cl<sub>2</sub>)

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

Absolute configuration: (2*S*,3*S*,16*S*,17*S*,30*S*,31*S*)

Koichi Tanaka,\* Noriaki Fukuda and Takeshi Fujiwara

*Tetrahedron: Asymmetry 18 (2007) 2657*



$C_{42}H_{48}N_6$

(2*S*,3*S*,12*S*,13*S*,22*S*,23*S*)-1,4,11,14,21,24-Hexaaza-(2,3:12,13:22,23)-tributeno-(6,9:16,19:26,29)-trietheno-(2*H*,3*H*,12*H*,22*H*,23*H*)-hexahydro-(30)-annulene

$E_e = >99\%$

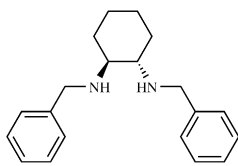
$[\alpha]_D = +323$  ( $c$  1.0,  $CHCl_3$ )

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

Absolute configuration: (2*S*,3*S*,12*S*,13*S*,22*S*,23*S*)

Koichi Tanaka,\* Noriaki Fukuda and Takeshi Fujiwara

*Tetrahedron: Asymmetry 18 (2007) 2657*



$C_{20}H_{26}N_2$

(1*S*,2*S*)-*N*<sub>1</sub>,*N*<sub>2</sub>-Dibenzylcyclohexane-1,2-diamine

$E_e = >99\%$

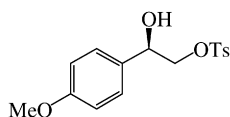
$[\alpha]_D = +71.9$  ( $c$  0.5,  $CH_2Cl_2$ )

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

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

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{16}H_{18}O_5S$

(*R*)-1-(4-Methoxyphenyl)-2-(*p*-tolylsulfonyloxy)ethanol

$E_e = 94\%$

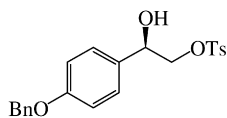
$[\alpha]_D^{25} = -50.7$  ( $c$  0.79,  $CHCl_3$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{22}H_{22}O_5S$

(*R*)-1-(4-Benzyloxyphenyl)-2-(*p*-tolylsulfonyloxy)ethanol

$E_e = 95\%$

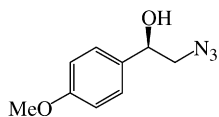
$[\alpha]_D^{25} = -42.5$  ( $c$  0.79,  $CHCl_3$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_9H_{11}N_3O_2$

(*R*)-2-Azido-1-(*p*-methoxyphenyl)ethanol

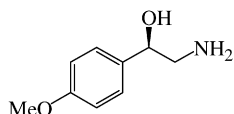
$[\alpha]_D^{25} = -86.1$  (*c* 1.39,  $CHCl_3$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_9H_{13}NO_2$

(*R*)-2-Amino-1-(*p*-methoxyphenyl)ethanol

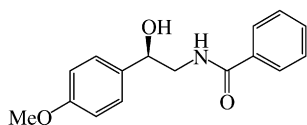
$[\alpha]_D^{25} = -38.3$  (*c* 0.49, EtOH)

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{16}H_{17}NO_3$

(*R*)-Tembamide

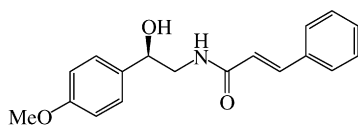
$[\alpha]_D^{25} = -59.4$  (*c* 0.57,  $CHCl_3$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{18}H_{19}NO_3$

(*R*)-Aegeline

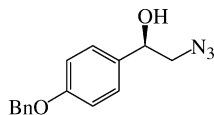
$[\alpha]_D^{25} = -49.1$  (*c* 0.27, MeOH)

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{15}H_{15}N_3O_2$

(*R*)-(-)-2-Azido-1-(*p*-benzyloxyphenyl)ethanol

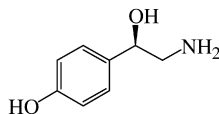
$[\alpha]_D^{25} = -70.3$  (*c* 1.09,  $CHCl_3$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_8H_{11}NO_2$

(*R*)-Octopamine

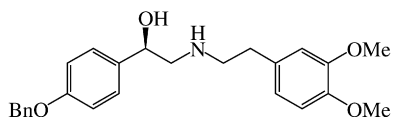
$[\alpha]_D^{25} = -37.3$  (*c* 1.02,  $H_2O$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{25}H_{29}NO_4$

(*R*)-1-(*p*-Benzyloxyphenyl)-2-[2-(3,4-dimethoxyphenyl)ethylamino]ethanol

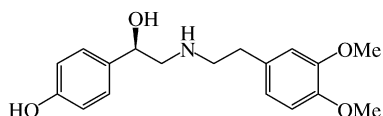
$[\alpha]_D^{25} = -19.2$  (*c* 1.1,  $MeOH$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Do-Min Lee, Jong-Cheol Lee, Nakcheol Jeong and Kee-In Lee\*

*Tetrahedron: Asymmetry 18 (2007) 2662*



$C_{18}H_{23}NO_4$

(*R*)-Denopamine

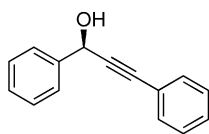
$[\alpha]_D^{25} = -27.7$  (*c* 0.91,  $MeOH$ )

Source of chirality: asymmetric transfer hydrogenation

Absolute configuration: (*R*)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{12}O$

(*R*)-1,3-Diphenyl-prop-2-yn-1-ol

Ee = 69%

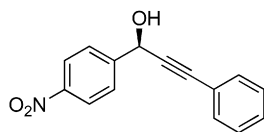
$[\alpha]_D^{23} = +3.2$  (c 0.668, DCM)

Source of chirality: alkylation

Absolute configuration: (*R*)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{11}NO_3$

(*R*)-1-(4-Nitrophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 99%

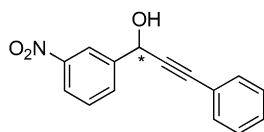
$[\alpha]_D^{23} = +13.3$  (c 0.15, DCM)

Source of chirality: alkylation

Absolute configuration: (*R*)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{11}NO_3$

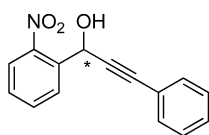
(+)-1-(3-Nitrophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 99%

$[\alpha]_D^{23} = +9.4$  (c 0.276, DCM)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{11}NO_3$

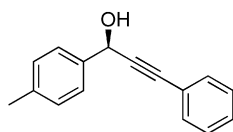
(-)-1-(2-Nitrophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 36%

$[\alpha]_D^{23} = -2.9$  (c 0.34, DCM)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



C<sub>16</sub>H<sub>14</sub>O

(R)-1-(4-Methylphenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 60%

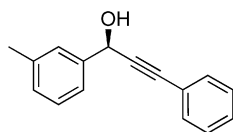
$[\alpha]_D^{23} = +2.2$  (c 0.452, DCM)

Source of chirality: alkylation

Absolute configuration: (R)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



C<sub>16</sub>H<sub>14</sub>O

(R)-1-(3-Methylphenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 66%

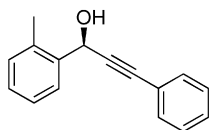
$[\alpha]_D^{23} = +2.8$  (c 0.36, DCM)

Source of chirality: alkylation

Absolute configuration: (R)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



C<sub>16</sub>H<sub>14</sub>O

(R)-1-(2-Methylphenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 12%

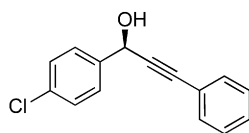
$[\alpha]_D^{23} = -3.6$  (c 0.436, DCM)

Source of chirality: alkylation

Absolute configuration: (R)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



C<sub>15</sub>H<sub>11</sub>ClO

(R)-1-(4-Chlorophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 88%

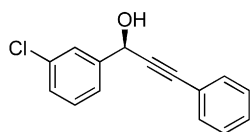
$[\alpha]_D^{23} = +8.5$  (c 0.4, DCM)

Source of chirality: alkylation

Absolute configuration: (R)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{11}ClO$

(*R*)-1-(3-Chlorophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 89%

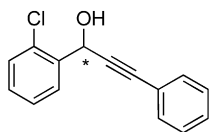
$[\alpha]_D^{23} = +9.8$  (c 0.408, DCM)

Source of chirality: alkylation

Absolute configuration: (*R*)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{11}ClO$

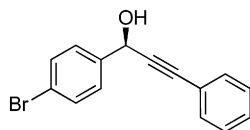
(-)-1-(2-Chlorophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 88%

$[\alpha]_D^{23} = -31.9$  (c 0.514, DCM)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{15}H_{11}BrO$

(*R*)-1-(4-Bromophenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 89%

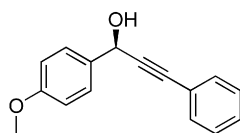
$[\alpha]_D^{23} = +3.9$  (c 0.568, DCM)

Source of chirality: alkylation

Absolute configuration: (*R*)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{16}H_{14}O_2$

(*R*)-1-(4-Methoxyphenyl)-3-phenyl-prop-2-yn-1-ol

Ee = 56%

$[\alpha]_D^{23} = +0.9$  (c 0.442, DCM)

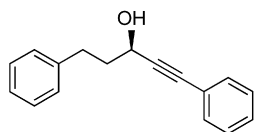
Source of chirality: alkylation

Absolute configuration: (*R*)



Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{17}H_{16}O_2$

(*R*)-1,5-Diphenylpent-1-yn-3-ol

Ee = 22%

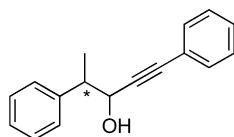
$[\alpha]_D^{23} = -13.9$  (c 0.458,  $CHCl_3$ )

Source of chirality: alkylation

Absolute configuration: (*R*)

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{17}H_{16}O$

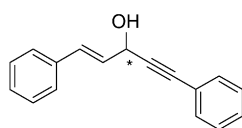
(+)-1,4-Diphenylpent-1-yn-3-ol

Ee = 20%

$[\alpha]_D^{23} = +15.5$  (c 1.21,  $CHCl_3$ )

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{17}H_{14}O$

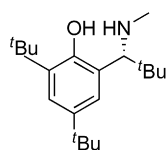
(+)-1,5-Diphenylpent-1-en-4-yn-3-ol

Ee = 36%

$[\alpha]_D^{23} = +0.7$  (c 0.722,  $CHCl_3$ )

Xiao-Feng Yang, Takuji Hirose\* and Guang-You Zhang

*Tetrahedron: Asymmetry 18 (2007) 2668*



$C_{20}H_{35}NO$

(*R*)-2,4-Di-*tert*-butyl-6-(2,2-dimethyl-1-(methylamino)propyl)phenol

Ee >99%

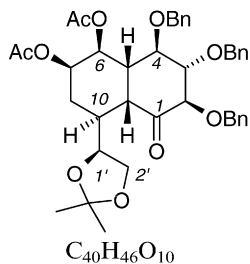
$[\alpha]_D^{20} = -31.7$  (c 0.328,  $CH_3COOCH_2CH_3$ )

Source of chirality: (*R*)-2-(1-amino-2,2-dimethylpropyl)-4,6-di-*tert*-butylphenol

Absolute configuration: (*R*)

Sławomir Jarosz,\* Marcin Nowogródzki and Marta Kołaczek

*Tetrahedron: Asymmetry 18 (2007) 2674*



$[\alpha]_D = +17.7$  (*c* 1, CHCl<sub>3</sub>)

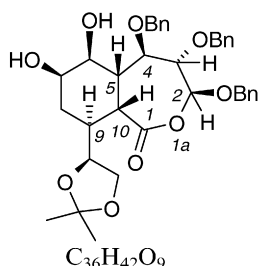
Source of chirality: chiral pool

Absolute configuration: (2*R*,3*S*,4*R*,5*R*,6*S*,7*R*,9*S*,10*R*)

(2*R*,3*S*,4*R*,5*R*,6*S*,7*R*,9*S*,10*R*)-{2,3,4-Tri-*O*-benzyl-6,7-di-*O*-acetyl-1-keto-9-[(1'*R*)-5,5-dimethyl-2,4-dioxolane-1'-yl]}-bicyclo[4.4.0]decane

Sławomir Jarosz,\* Marcin Nowogródzki and Marta Kołaczek

*Tetrahedron: Asymmetry 18 (2007) 2674*



$[\alpha]_D = -5.1$  (*c* 1, CHCl<sub>3</sub>)

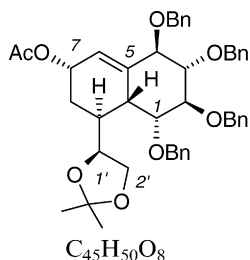
Source of chirality: chiral pool

Absolute configuration: (2*S*,3*S*,4*R*,5*R*,6*S*,7*R*,9*S*,10*R*)

(2*S*,3*S*,4*R*,5*R*,6*S*,7*R*,9*S*,10*R*)-{2,3,4-Tri-*O*-benzyl-6,7-dihydroxy-1-keto-9-[(1'*R*)-5,5-dimethyl-2,4-dioxolane-1'-yl]} bicyclo[4.5.0]-2-oxa-undecane

Sławomir Jarosz,\* Marcin Nowogródzki and Marta Kołaczek

*Tetrahedron: Asymmetry 18 (2007) 2674*



$[\alpha]_D = +19.9$  (*c* 1, CHCl<sub>3</sub>)

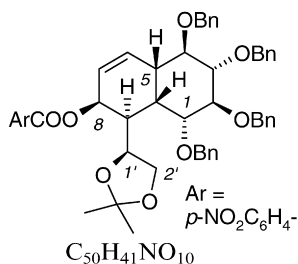
Source of chirality: chiral pool

Absolute configuration: (1*R*,2*R*,3*S*,4*R*,7*S*,9*S*,10*R*)

(1*R*,2*R*,3*S*,4*R*,7*S*,9*S*,10*R*)-{1,2,3,4-Tetra-*O*-benzyl-7-*O*-acetyl-hydroxy-9-[(1'*R*)-5,5-dimethyl-2,4-dioxolane-1'-yl]} bicyclo[4.4.0]dec-5,6-ene

Sławomir Jarosz,\* Marcin Nowogródzki and Marta Kołaczek

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$[\alpha]_D = -1.0$  (*c* 1, CHCl<sub>3</sub>)

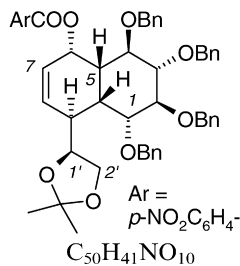
Source of chirality: chiral pool

Absolute configuration: (1*R*,2*R*,3*S*,4*R*,5*R*,8*S*,9*S*,10*R*)

(1*R*,2*R*,3*S*,4*R*,5*R*,8*S*,9*S*,10*R*)-{1,2,3,4-Tetra-*O*-benzyl-8-(4-*O*-*p*-nitrobenzoyl)-9-[(1'*R*)-5,5-dimethyl-2,4-dioxolane-1'-yl]}-bicyclo[4.4.0]dec-6,7-ene

Sławomir Jarosz,\* Marcin Nowogródzki and Marta Kołaczek

*Tetrahedron: Asymmetry 18 (2007) 2674*



$[\alpha]_{\text{D}} = -4.5$  ( $c$  1,  $\text{CHCl}_3$ )

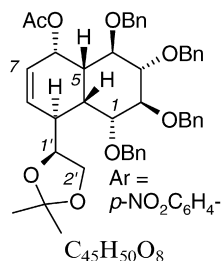
Source of chirality: chiral pool

Absolute configuration: (1*R*,2*R*,3*S*,4*R*,5*R*,6*S*,9*S*,10*R*)

(1*R*,2*R*,3*S*,4*R*,5*R*,6*S*,9*S*,10*R*)-{1,2,3,4-Tetra-*O*-benzyl-6-(4-*O*-*p*-nitrobenzoyl)-9-[(1'*R*)-5,5-dimethyl-2,4-dioxolane-1'-yl]}-bicyclo[4.4.0]dec-7,8-ene

Sławomir Jarosz,\* Marcin Nowogródzki and Marta Kołaczek

*Tetrahedron: Asymmetry 18 (2007) 2674*



$[\alpha]_{\text{D}} = -13.0$  ( $c$  1,  $\text{CHCl}_3$ )

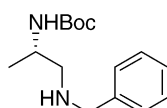
Source of chirality: chiral pool

Absolute configuration: (1*R*,2*R*,3*S*,4*R*,5*R*,6*S*,9*S*,10*R*)

(1*R*,2*R*,3*S*,4*R*,5*R*,6*S*,9*S*,10*R*)-{1,2,3,4-Tetra-*O*-benzyl-6-(*O*-acetyl)-9-[(1'*R*)-5,5-dimethyl-2,4-dioxolane-1'-yl]} bicyclo[4.4.0]dec-7,8-ene

Gianna Reginato,\* Barbara Di Credico, Daniele Andreotti,  
Anna Mingardi, Alfredo Paio and Daniele Donati

*Tetrahedron: Asymmetry 18 (2007) 2680*



$\text{C}_{15}\text{H}_{24}\text{N}_2\text{O}_2$

(*S*)-*tert*-Butyl-1-(benzylamino)-propan-2-yl-carbamate

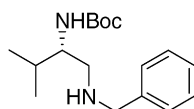
$[\alpha]_{\text{D}}^{24} = -1.8$  ( $c$  1.05,  $\text{CHCl}_3$ )

Source of chirality = L-alanine

Absolute configuration: (*S*)

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$\text{C}_{17}\text{H}_{28}\text{N}_2\text{O}_2$

(*S*)-*tert*-Butyl-1-(benzylamino)-3-methyl-butan-2-yl-carbamate

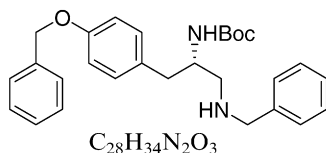
$[\alpha]_{\text{D}}^{24} = +1.2$  ( $c$  0.94,  $\text{CHCl}_3$ )

Source of chirality = L-valine

Absolute configuration: (*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

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(*S*)-*tert*-Butyl-1-(benzylamino)-3-[4-(benzyloxy)-phenyl]-propan-2-yl-carbamate

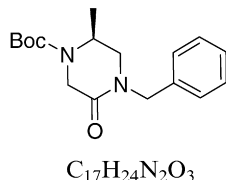
$$[\alpha]_D^{24} = -1.4 (c 1.09, CHCl_3)$$

Source of chirality = L-tyrosine

Absolute configuration: (*S*)

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(*S*)-1-(Benzyl)-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

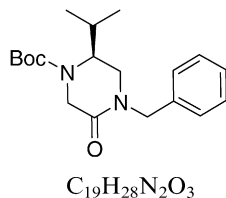
$$[\alpha]_D^{24} = +0.7 (c 0.81, CHCl_3)$$

Source of chirality = L-alanine

Absolute configuration: (*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

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(*S*)-1-(Benzyl)-4-*tert*-butoxycarbonyl-5-isopropyl-2-oxopiperazine

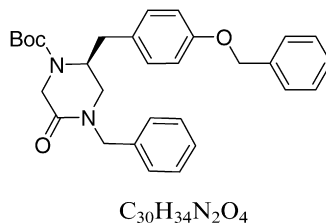
$$[\alpha]_D^{24} = +0.9 (c 0.45, CHCl_3)$$

Source of chirality = L-valine

Absolute configuration: (*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

*Tetrahedron: Asymmetry 18 (2007) 2680*



(*S*)-1-(Benzyl)-4-*tert*-butoxycarbonyl-5-[(4-benzyloxy)-benzyl]-2-oxopiperazine

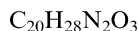
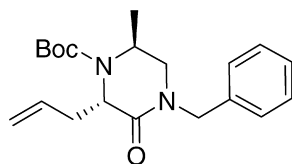
$$[\alpha]_D^{24} = -62.9 (c 1.00, CHCl_3)$$

Source of chirality = L-tyrosine

Absolute configuration: (*S*)

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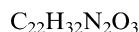
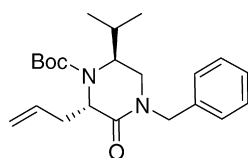


(3*S*,5*S*)-1-(Benzyl)-3-allyl-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

$[\alpha]_D^{24} = +11.1$  (*c* 1.26,  $CHCl_3$ )  
Source of chirality = L-alanine  
Absolute configuration: (3*S*,5*S*)

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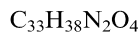
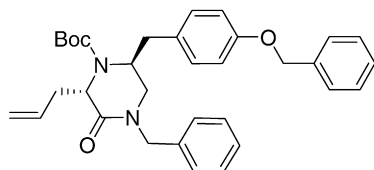


(3*S*,5*S*)-1-(Benzyl)-3-allyl-4-*tert*-butoxycarbonyl-5-isopropyl-2-oxopiperazine

$[\alpha]_D^{24} = +1.0$  (*c* 1.00,  $CHCl_3$ )  
Source of chirality = L-valine  
Absolute configuration: (3*S*,5*S*)

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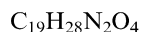
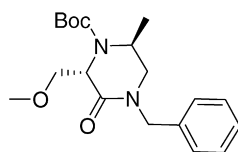


(3*S*,5*S*)-1-(Benzyl)-3-allyl-4-*tert*-butoxycarbonyl-5-4-[(benzyloxy)-benzyl]-2-oxopiperazine

$[\alpha]_D^{24} = -31.8$  (*c* 1.31,  $CHCl_3$ )  
Source of chirality = L-tyrosine  
Absolute configuration: (3*S*,5*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

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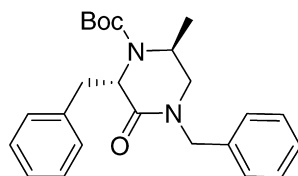


(3*S*,5*S*)-1-(Benzyl)-3-methoxymethyl-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

$[\alpha]_D^{24} = +14.4$  (*c* 0.61,  $CHCl_3$ )  
Source of chirality = L-alanine  
Absolute configuration: (3*S*,5*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

*Tetrahedron: Asymmetry 18 (2007) 2680*



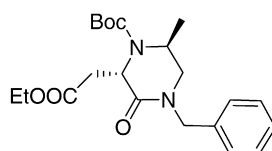
$C_{24}H_{30}N_2O_3$

(3*S*,5*S*)-1,3-Dibenzyl-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

$[\alpha]_D^{24} = +15.1$  (*c* 1.00,  $CHCl_3$ )  
Source of chirality = L-alanine  
Absolute configuration: (3*S*,5*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

*Tetrahedron: Asymmetry 18 (2007) 2680*



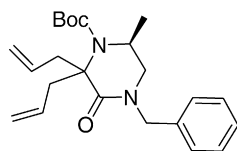
$C_{21}H_{30}N_2O_5$

(3*S*,5*S*)-1-Benzyl-3-(ethoxycarbonylmethyl)-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

$[\alpha]_D^{24} = 9.4$  (*c* 0.93,  $CHCl_3$ )  
Source of chirality = L-alanine  
Absolute configuration: (3*S*,5*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

*Tetrahedron: Asymmetry 18 (2007) 2680*



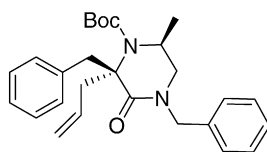
$C_{23}H_{32}N_2O_3$

(*S*)-1-Benzyl-3,3'-diallyl-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

$[\alpha]_D^{24} = -3.3$  (*c* 0.25,  $CHCl_3$ )  
Source of chirality = L-alanine  
Absolute configuration: (*S*)

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Anna Mingardi, Alfredo Paio and Daniele Donati

*Tetrahedron: Asymmetry 18 (2007) 2680*



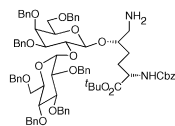
$C_{27}H_{34}N_2O_3$

(3*S*,5*S*)-1-Benzyl-3-allyl-3'-benzyl-4-*tert*-butoxycarbonyl-5-methyl-2-oxopiperazine

$[\alpha]_D^{24} = +0.4$  (*c* 0.65,  $CHCl_3$ )  
Source of chirality = L-alanine  
Absolute configuration: (3*S*,5*S*)

Pietro Allevi,\* Eti A. Femia, Elios Giannini and Mario Anastasia

*Tetrahedron: Asymmetry 18 (2007) 2689*



$C_{79}H_{90}N_2O_{15}$

*tert*-Butyl (2*S*,5*S*)-6-amino-2-benzyloxycarbonylamino-5-[(2,3,4,6-tetra-*O*-benzyl- $\alpha$ -D-glucopyranosyl)-(1 $\rightarrow$ 2)-(3,4,6-tri-*O*-benzyl- $\beta$ -D-galactopyranosyl)]hexanoate

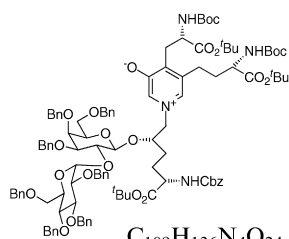
$[\alpha]_D^{20} = +40.5$  (*c* 1,  $CH_2Cl_2$ )

Source of chirality: L-glutamic acid,  
D-galactose and D-glucose

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

Pietro Allevi,\* Eti A. Femia, Elios Giannini and Mario Anastasia

*Tetrahedron: Asymmetry 18 (2007) 2689*



$C_{109}H_{136}N_4O_{24}$

4-[(*S*)-2-*tert*-Butylloxycarbonylamino-2-*tert*-butylloxycarbonylethyl]-5-[(*S*)-3-*tert*-butylloxycarbonylamino-3-*tert*-butylloxycarbonylpropyl]-1-[(2*S*,5*S*)-5-benzyloxycarbonylamino-5-*tert*-butylloxycarbonyl-2-[(2,3,4,6-tetra-*O*-benzyl- $\alpha$ -D-glucopyranosyl)-(1 $\rightarrow$ 2)-(3,4,6-tri-*O*-benzyl- $\beta$ -D-galactopyranosyloxy)]pentyl]-3-pyridiniumolate

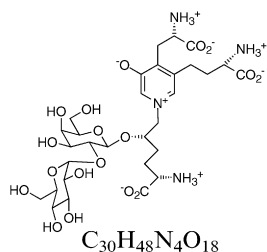
$[\alpha]_D^{20} = +34.9$  (*c* 1,  $CH_2Cl_2$ )

Source of chirality: L-glutamic acid,  
D-galactose and D-glucose

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

Pietro Allevi,\* Eti A. Femia, Elios Giannini and Mario Anastasia

*Tetrahedron: Asymmetry 18 (2007) 2689*



$C_{30}H_{48}N_4O_{18}$

$\alpha$ -D-Glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-galactopyranosyl-*O*-epipyridinoline

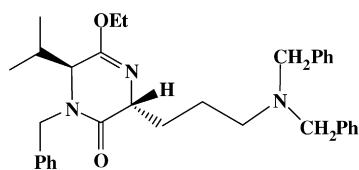
$[\alpha]_D^{20} = +17.4$  (*c* 0.5,  $H_2O$ )

Source of chirality: L-glutamic acid,  
D-galactose and D-glucose

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

Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



$C_{33}H_{41}N_3O_2$

(3*R*,6*S*)-1-Benzyl-3-(3-dibenzylaminobutyl)-5-ethoxy-1,6-dihydro-6-isopropylpyrazin-2-(3*H*)-one

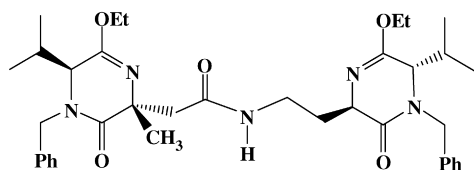
$[\alpha]_D = +41$  (*c* 0.9,  $CHCl_3$ )

Source of chirality: L-valine

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

Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



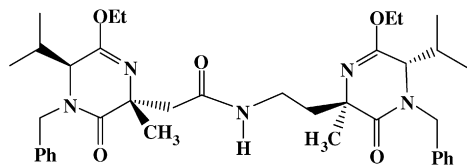
$[\alpha]_D = +28.4$  (*c* 0.9, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>37</sub>H<sub>51</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-4-Benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-4-benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-3-oxopyrazin-2-yl)ethyl]acetamide

Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



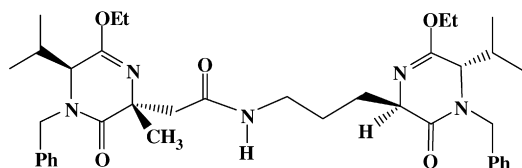
$[\alpha]_D = +7.1$  (*c* 0.7, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>38</sub>H<sub>53</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-4-Benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-4-benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl)ethyl]acetamide

Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



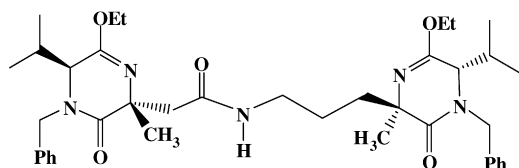
$[\alpha]_D = +31.2$  (*c* 2.2, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>38</sub>H<sub>53</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-4-Benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-4-benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-3-oxopyrazin-2-yl)propyl]acetamide

Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



$[\alpha]_D = +9.7$  (*c* 1.2, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

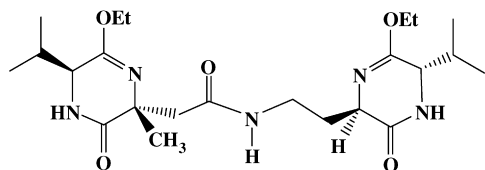
C<sub>39</sub>H<sub>55</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-4-Benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-4-benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl)propyl]acetamide



Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



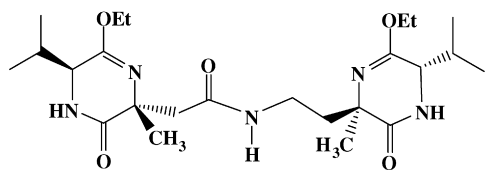
$[\alpha]_D = +9.2$  (*c* 0.2, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>23</sub>H<sub>39</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-6-Ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-3-oxopyrazin-2-yl)ethyl]acetamide

Giosuè M. Almiento, Daniele Balducci,\* Andrea Bottoni,  
Matteo Calvaresi and Gianni Porzi\*

*Tetrahedron: Asymmetry 18 (2007) 2695*



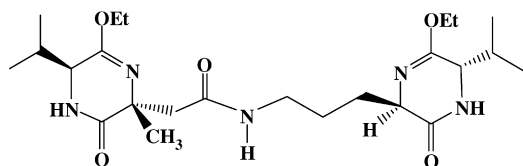
$[\alpha]_D = +12$  (*c* 0.9, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>24</sub>H<sub>41</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-6-Ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl)ethyl]acetamide

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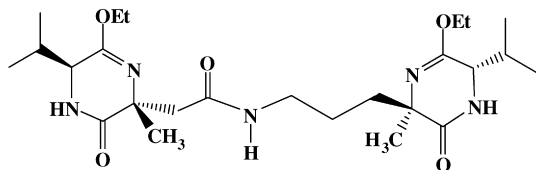
$[\alpha]_D = +33.8$  (*c* 0.9, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>24</sub>H<sub>41</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-6-Ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-3-oxopyrazin-2-yl)propyl]acetamide

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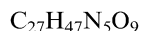
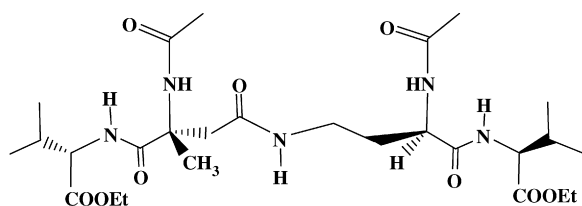
$[\alpha]_D = +5.5$  (*c* 0.9, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*)

C<sub>25</sub>H<sub>43</sub>N<sub>5</sub>O<sub>5</sub>

2-[(2*R*,5*S*)-6-Ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*R*,5*S*)-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl)propyl]acetamide

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(2*S*,5*R*,11*R*,14*S*)-5,11-Diacetyldiamino-3,8,13-triazo-2,14-diisopropyl-5-methyl-4,7,12-trioxo-pentadecan-1,15-dioic acid diethylester

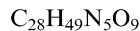
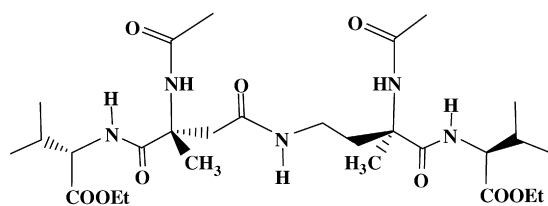
$[\alpha]_D = +38.5$  (*c* 0.7,  $CHCl_3$ )

Source of chirality: L-valine

Absolute configuration: (2*S*,5*R*,11*R*,14*S*)

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(2*S*,5*R*,11*R*,14*S*)-5,11-Diacetyldiamino-3,8,13-triazo-2,14-diisopropyl-5,11-dimethyl-4,7,12-trioxo-pentadecan-1,15-dioic acid diethylester

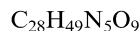
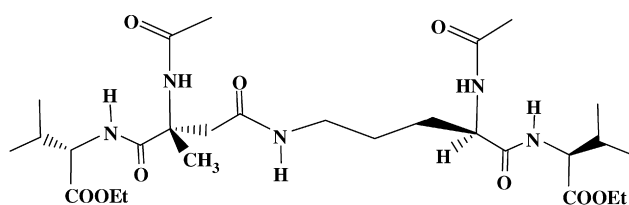
$[\alpha]_D = +53.3$  (*c* 0.4,  $CHCl_3$ )

Source of chirality: L-valine

Absolute configuration: (2*S*,5*R*,11*R*,14*S*)

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(2*S*,5*R*,12*R*,15*S*)-5,12-Diacetyldiamino-3,8,14-triazo-2,15-diisopropyl-5-methyl-4,7,13-trioxo-hexadecan-1,16-dioic acid diethylester

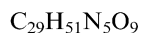
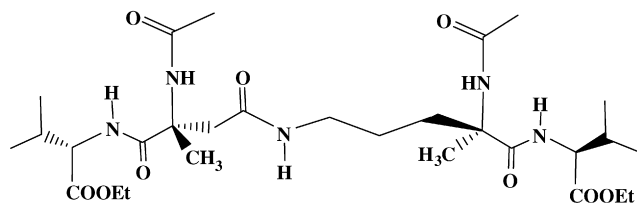
$[\alpha]_D = +34.1$  (*c* 0.6,  $CHCl_3$ )

Source of chirality: L-valine

Absolute configuration: (2*S*,5*R*,11*R*,14*S*)

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(2*S*,5*R*,12*R*,15*S*)-5,12-Diacetyldiamino-3,8,14-triazo-2,15-diisopropyl-5,12-dimethyl-4,7,13-trioxo-hexadecan-1,16-dioic acid diethylester

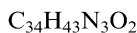
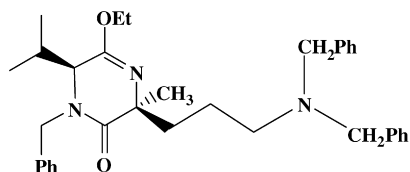
$[\alpha]_D = +28.3$  (*c* 0.9,  $CHCl_3$ )

Source of chirality: L-valine

Absolute configuration: (2*S*,5*R*,12*R*,15*S*)

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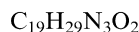
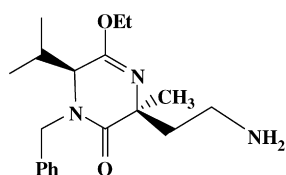


(3*S*,6*S*)-1-Benzyl-3-methyl-3-(3-(dibenzylaminobutyl)-5-ethoxy-1,6-dihydro-6-isopropylpyrazin-2-(3*H*)-one

$[\alpha]_D = +5.3$  (*c* 1.2,  $CHCl_3$ )  
Source of chirality: L-valine  
Absolute configuration: (3*S*,6*S*)

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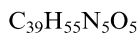
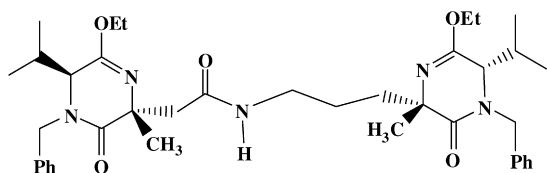


(3*S*,6*S*)-1-Benzyl-3-methyl-3-(3-aminopropyl)-5-ethoxy-1,6-dihydro-6-isopropylpyrazin-2-(3*H*)-one

$[\alpha]_D = +13.2$  (*c* 1.2,  $CHCl_3$ )  
Source of chirality: L-valine  
Absolute configuration: (3*S*,6*S*)

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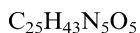
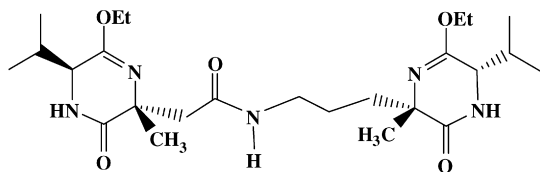


2-[(2*R*,5*S*)-4-Benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*S*,5*S*)-4-benzyl-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl)propyl]acetamide

$[\alpha]_D = +5.4$  (*c* 0.8,  $CHCl_3$ )  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*,2*S*,5*S*)

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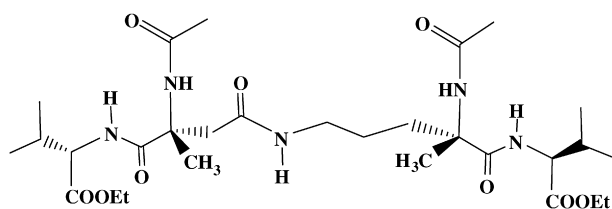


2-[(2*R*,5*S*)-6-Ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-3-oxopyrazin-2-yl]-*N*-[2-((2*S*,5*S*)-6-ethoxy-2,3,4,5-tetrahydro-5-isopropyl-2-methyl-2-methyl-3-oxopyrazin-2-yl)propyl]acetamide

$[\alpha]_D = -19.9$  (*c* 0.7,  $CHCl_3$ )  
Source of chirality: L-valine  
Absolute configuration: (2*R*,5*S*,2*S*,5*S*)

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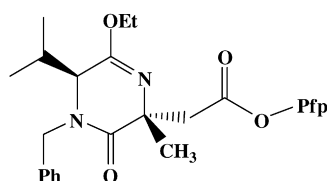
$[\alpha]_D = +26.1$  (*c* 0.5, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (2*S*,5*R*,12*S*,15*S*)

C<sub>29</sub>H<sub>51</sub>N<sub>5</sub>O<sub>9</sub>

(2*S*,5*R*,12*S*,15*S*)-5,12-Diacetyldiamino-3,8,14-triazo-2,15-diisopropyl-5,12-dimethyl-4,7,13-trioxo-hexadecan-1,16-dioic acid diethylester

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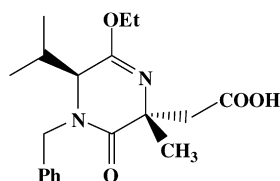
$[\alpha]_D = -31.5$  (*c* 1, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (3*R*,6*S*)

C<sub>25</sub>H<sub>25</sub>F<sub>5</sub>N<sub>2</sub>O<sub>4</sub>

(3*R*,6*S*)-(1-Benzyl-5-ethoxy-6-isopropyl-3-methyl-1,6-dihydro-pyrazin-2-yl)-acetic acid pentafluorophenyl ester

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Matteo Calvaresi and Gianni Porzi\*

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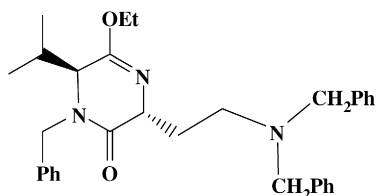
$[\alpha]_D = -14.8$  (*c* 0.5, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (3*R*,6*S*)

C<sub>19</sub>H<sub>26</sub>N<sub>2</sub>O<sub>4</sub>

(3*R*,6*S*)-(1-Benzyl-5-ethoxy-6-isopropyl-3-methyl-1,6-dihydro-pyrazin-2-yl)-acetic acid

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Matteo Calvaresi and Gianni Porzi\*

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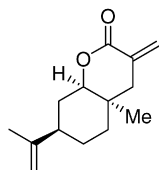
$[\alpha]_D = +39.8$  (*c* 1, CHCl<sub>3</sub>)  
Source of chirality: L-valine  
Absolute configuration: (3*R*,6*S*)

C<sub>32</sub>H<sub>39</sub>N<sub>3</sub>O<sub>2</sub>

(3*R*,6*S*)-1-Benzyl-3-(2-dibenzylaminoethyl)-5-ethoxy-1,6-dihydro-6-isopropylpyrazin-2-(3*H*)-one

Henryk Krawczyk,\* Marcin Śliwiński, Jacek Kędzia,  
Jakub Wojciechowski and Wojciech M. Wolf\*

*Tetrahedron: Asymmetry 18 (2007) 2712*



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

(4aR,7R,8aR)-7-Isopropenyl-4a-methyl-3-methyleneoctahydrochromen-2-one

Ee = 99%

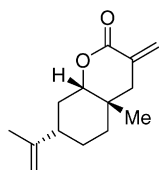
[α]<sub>D</sub><sup>25</sup> = +21.3 (c 1.19, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (4aR,7R,8aR)

Henryk Krawczyk,\* Marcin Śliwiński, Jacek Kędzia,  
Jakub Wojciechowski and Wojciech M. Wolf\*

*Tetrahedron: Asymmetry 18 (2007) 2712*



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

(4aS,7S,8aS)-7-Isopropenyl-4a-methyl-3-methyleneoctahydrochromen-2-one

Ee = 99%

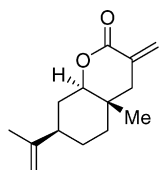
[α]<sub>D</sub><sup>25</sup> = -23.7 (c 0.46, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (4aS,7S,8aS)

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Jakub Wojciechowski and Wojciech M. Wolf\*

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

(4aS,7R,8aR)-7-Isopropenyl-4a-methyl-3-methyleneoctahydrochromen-2-one

Ee = 99%

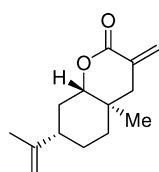
[α]<sub>D</sub><sup>25</sup> = +116.15 (c 0.39, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (4aS,7R,8aR)

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Jakub Wojciechowski and Wojciech M. Wolf\*

*Tetrahedron: Asymmetry 18 (2007) 2712*



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

(4aR,7S,8aS)-7-Isopropenyl-4a-methyl-3-methyleneoctahydrochromen-2-one

Ee = 99%

[α]<sub>D</sub><sup>25</sup> = -117.5 (c 0.56, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (4aR,7S,8aS)