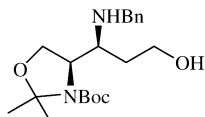


## Stereochemistry abstracts

Latibuddin Thander, Kaushik Sarkar, Shital K. Chattopadhyay \*

*Tetrahedron: Asymmetry 20 (2009) 1213*



$C_{20}H_{32}N_2O_4$

(*R*)-*tert*-Butyl 4-((*S*)-1-(benzylamino)-3-hydroxypropyl)-2,2-dimethylazolidine-3-carboxylate

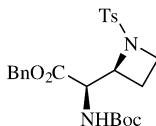
$[\alpha]_D = -24$  (c 0.7,  $CHCl_3$ ).

Source of chirality: L-Serine

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

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$C_{24}H_{30}N_2O_6S$

(*R*)-Benzyl 2-(*tert*-butoxycarbonyl)-2-((*S*)-1-tosylazetid-2-yl)acetate

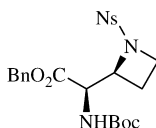
$[\alpha]_D = +9$  (c 1.51, MeOH)

Source of chirality: L-Serine

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

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$C_{23}H_{27}N_3O_8S$

(*R*)-Benzyl 2-(*tert*-butoxycarbonyl)-2-((*S*)-1-(4-nitrophenylsulfonyl)azetid-2-yl)acetate

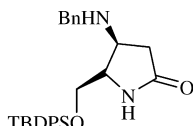
$[\alpha]_D = -13$  (c 1.50,  $CHCl_3$ )

Source of chirality: L-Serine

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

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$C_{28}H_{34}N_2O_2Si$

(4*S*,5*S*)-4-(Benzylamino)-5-((*tert*-butyl)phenylsilyloxy)methylpyrrolidin-2-one

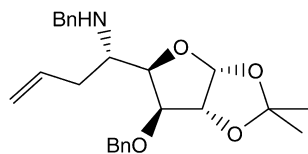
$[\alpha]_D = -2$  (c 4.25, MeOH)

Source of chirality: L-Serine

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

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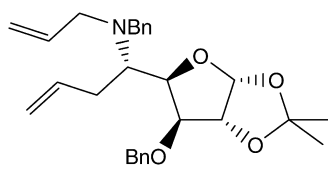
$C_{25}H_{31}NO_4$

(*S*)-*N*-Benzyl-1-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)but-3-en-1-amine

$[\alpha]_D^{30} = -55.6$  (c 0.52,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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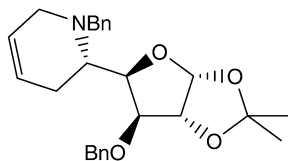
$C_{28}H_{35}NO_4$

(*S*)-*N*-Allyl-*N*-benzyl-1-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)but-3-en-1-amine

$[\alpha]_D^{30} = -38.6$  (c 0.95,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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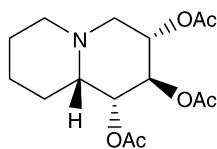
$C_{26}H_{31}NO_4$

(*S*)-1-Benzyl-2-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)-1,2,3,6-tetrahydropyridine

$[\alpha]_D^{30} = -25.2$  (c 0.25,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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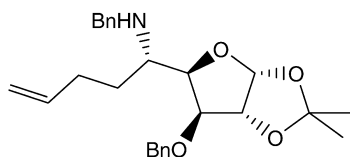
$C_{15}H_{23}NO_6$

(1*R*,2*R*,3*S*,9*aS*)-Octahydro-1*H*-quinolizine-1,2,3-triyl triacetate

$[\alpha]_D^{30} = +8.4$  (c 1.3,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (1*R*,2*R*,3*S*,9*aS*)

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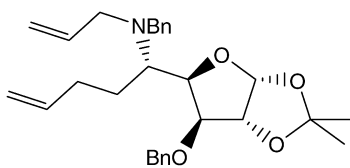
$C_{26}H_{33}NO_4$

(S)-N-Benzyl-1-((3aR,5R,6S,6aR)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-d][1,3]dioxol-5-yl)pent-4-en-1-amine

$[\alpha]_D^{30} = -30.5$  (c 0.85,  $CHCl_3$ )  
Source of chirality: D-glucose  
Absolute configuration: (3aR,5R,6S,6aR)

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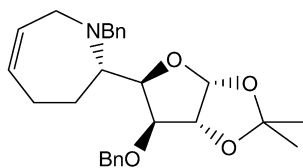
$C_{29}H_{37}NO_4$

(S)-N-allyl-N-benzyl-1-((3aR,5R,6S,6aR)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-d][1,3]dioxol-5-yl)pent-4-en-1-amine

$[\alpha]_D^{30} = -57.6$  (c 4.3,  $CHCl_3$ )  
Source of chirality: D-glucose  
Absolute configuration: (3aR,5R,6S,6aR)

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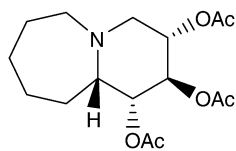
$C_{27}H_{33}NO_4$

(S)-1-Benzyl-2-((3aR,5R,6S,6aR)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-d][1,3]dioxol-5-yl)-2,3,4,7-tetrahydro-1H-azepine

$[\alpha]_D^{30} = -155.6$  (c 0.25,  $CHCl_3$ )  
Source of chirality: D-glucose  
Absolute configuration: (3aR,5R,6S,6aR)

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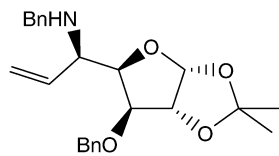
$C_{16}H_{25}NO_6$

(1R,2R,3S,10aS)-Decahydropyrido[1,2-a]azepine-1,2,3-triyl triacetate

$[\alpha]_D^{30} = +3.3$  (c 0.9,  $CHCl_3$ )  
Source of chirality: D-glucose  
Absolute configuration: (1R,2R,3S,10aS)

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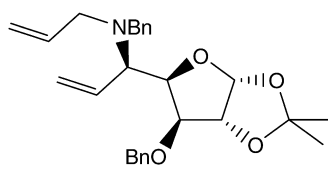
$C_{24}H_{29}NO_4$

(*R*)-*N*-Benzyl-1-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)prop-2-en-1-amine

$[\alpha]_D^{30} = -15.1$  (c 0.62,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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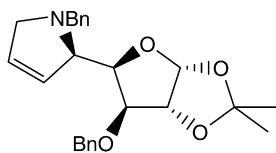
$C_{27}H_{33}NO_4$

(*R*)-*N*-Allyl-*N*-benzyl-1-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)prop-2-en-1-amine

$[\alpha]_D^{30} = -16.8$  (c 0.475,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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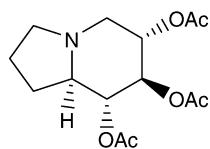
$C_{25}H_{29}NO_4$

(*R*)-1-Benzyl-2-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)-2,5-dihydro-1*H*-pyrrole

$[\alpha]_D^{30} = -9.2$  (c 1.2,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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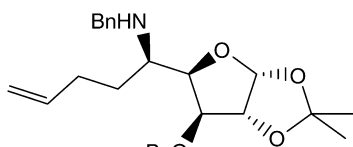
$C_{14}H_{21}NO_6$

6,7,8-Triacetyl, 1-deoxy, castanospermine

$[\alpha]_D^{30} = +38.3$  (c 0.36,  $CHCl_3$ )  
Source of chirality: *D*-glucose  
Absolute configuration: (6*S*,7*R*,8*R*,8*aR*)

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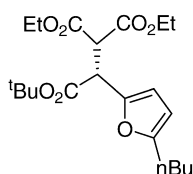
C<sub>26</sub>H<sub>33</sub>NO<sub>4</sub>

(*R*)-*N*-Benzyl-1-((3*aR*,5*R*,6*S*,6*aR*)-6-(benzyloxy)-2,2-dimethyltetrahydrofuro[2,3-*d*][1,3]dioxol-5-yl)pent-4-en-1-amine

$[\alpha]_D^{30} = -34.5$  (c 0.575, CHCl<sub>3</sub>)  
Source of chirality: D-glucose  
Absolute configuration: (3*aR*,5*R*,6*S*,6*aR*)

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Tsumoru Morimoto, Kiyomi Kakiuchi

*Tetrahedron: Asymmetry 20 (2009) 1224*



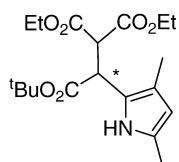
C<sub>21</sub>H<sub>32</sub>O<sub>7</sub>

1-*tert*-Butyl 2,2-diethyl 1-(5-butylfuran-2-yl)ethane-1,2,2-tricarboxylate

Ee = 58%  
 $[\alpha]_D^{22} = -59$  (c 1.02, CHCl<sub>3</sub>)  
Source of chirality: (-)-2,2'-methylenebis[(3*aS*,8*aR*)-  
3*a*,8*a*-dihydro-8*H*-indeno[1,2-*d*]oxazole]  
Absolute configuration: (*R*)

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Tsumoru Morimoto, Kiyomi Kakiuchi

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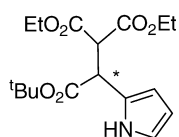
C<sub>19</sub>H<sub>29</sub>NO<sub>6</sub>

1-*tert*-Butyl 2,2-diethyl 1-(3,5-dimethyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

Ee = 72%  
 $[\alpha]_D^{30} = -75$  (c 1.06, CHCl<sub>3</sub>)  
Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-  
*tert*-butyl-2-oxazoline)

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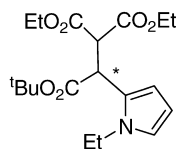
C<sub>17</sub>H<sub>25</sub>NO<sub>6</sub>

1-*tert*-Butyl 2,2-diethyl 1-(1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

Ee = 29%  
 $[\alpha]_D^{32} = -20$  (c 0.96, CHCl<sub>3</sub>)  
Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-  
*tert*-butyl-2-oxazoline)

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Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>19</sub>H<sub>29</sub>NO<sub>6</sub>

1-*tert*-Butyl 2,2-diethyl 1-(1-ethyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

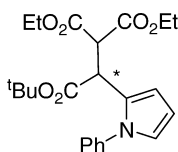
Ee = 10%

$[\alpha]_D^{23} = -15$  (c 1.55, CHCl<sub>3</sub>)

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

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Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>23</sub>H<sub>29</sub>NO<sub>6</sub>

1-*tert*-Butyl 2,2-diethyl 1-(1-phenyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

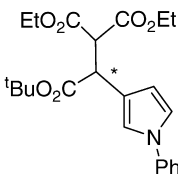
Ee = 10%

$[\alpha]_D^{21} = +10$  (c 1.80, CHCl<sub>3</sub>)

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

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C<sub>23</sub>H<sub>29</sub>NO<sub>6</sub>

1-*tert*-Butyl 2,2-diethyl 1-(1-phenyl-1*H*-pyrrol-3-yl)ethane-1,2,2-tricarboxylate

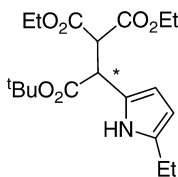
Ee = 66%

$[\alpha]_D^{14} = -76$  (c 0.15, CHCl<sub>3</sub>)

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

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Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>19</sub>H<sub>29</sub>NO<sub>6</sub>

1-*tert*-Butyl 2,2-diethyl 1-(5-ethyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

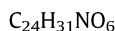
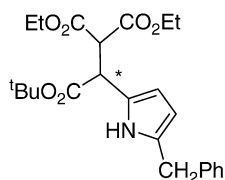
Ee = 45%

$[\alpha]_D^{26} = -40$  (c 0.99, CHCl<sub>3</sub>)

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

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Tsumoru Morimoto, Kiyomi Kakiuchi

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1-*tert*-Butyl 2,2-diethyl 1-(5-benzyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

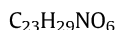
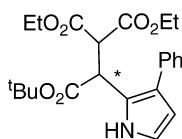
Ee = 41%

$[\alpha]_D^{24} = -37$  (c 1.02,  $CHCl_3$ )

Source of chirality: (S,S)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

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1-*tert*-Butyl 2,2-diethyl 1-(3-phenyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

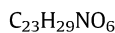
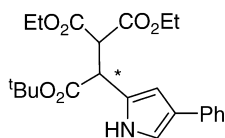
Ee = 66%

$[\alpha]_D^{23} = -99$  (c 0.50,  $CHCl_3$ )

Source of chirality: (S,S)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

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Tsumoru Morimoto, Kiyomi Kakiuchi

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1-*tert*-Butyl 2,2-diethyl 1-(4-phenyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

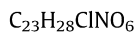
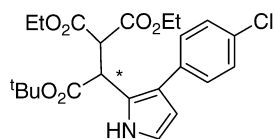
Ee = 12%

$[\alpha]_D^{27} = +11$  (c 0.22,  $CHCl_3$ )

Source of chirality: (+)-2,2'-isopropylidenebis[(4*R*)-4-benzyl-2-oxazoline]

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1-*tert*-Butyl 2,2-diethyl 1-[3-(4'-chlorophenyl)-1*H*-pyrrol-2-yl]ethane-1,2,2-tricarboxylate

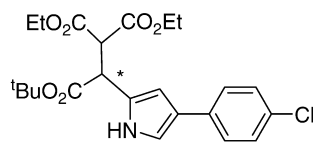
Ee = 50%

$[\alpha]_D^{22} = -77$  (c 1.23,  $CHCl_3$ )

Source of chirality: (S,S)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

*Tetrahedron: Asymmetry 20 (2009) 1224*



$C_{23}H_{28}ClNO_6$

1-*tert*-Butyl 2,2-diethyl 1-[4-(4'-chlorophenyl)-1*H*-pyrrol-2-yl]ethane-1,2,2-tricarboxylate

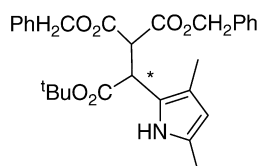
Ee = 28%

$[\alpha]_D^{26} = -13$  (c 0.20,  $CHCl_3$ )

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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$C_{21}H_{32}O_4$

1-*tert*-Butyl 2,2-dibenzyl 1-(3,5-dimethyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

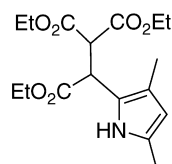
Ee = 38%

$[\alpha]_D^{26} = -35$  (c 1.00,  $CHCl_3$ )

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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$C_{17}H_{25}NO_6$

1,2,2-Triethyl 1-(3,5-dimethyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

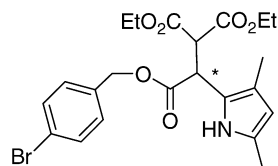
Ee = 63%

$[\alpha]_D^{21} = -96$  (c 1.24,  $CHCl_3$ )

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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$C_{22}H_{26}BrNO_6$

1-(4-Bromobenzyl) 2,2-diethyl 1-(3,5-dimethyl-1*H*-pyrrol-2-yl)ethane-1,2,2-tricarboxylate

Ee = 48%

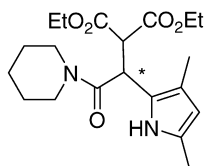
$[\alpha]_D^{23} = -38$  (c 0.54,  $CHCl_3$ )

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-*tert*-butyl-2-oxazoline)



Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>20</sub>H<sub>30</sub>N<sub>2</sub>O<sub>5</sub>

Diethyl 2-[1-(3,5-dimethyl-1H-pyrrol-2-yl)-2-oxo-2-(piperidin-1-yl)ethyl]malonate

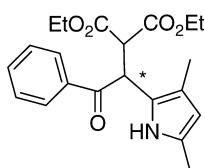
Ee = 71%

[ $\alpha$ ]<sub>D</sub><sup>27</sup> = -118 (c 1.08, CHCl<sub>3</sub>)

Source of chirality: (S,S)-(-)-2,2'-isopropylidenebis(4-tert-butyl-2-oxazoline)

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>21</sub>H<sub>25</sub>NO<sub>5</sub>

Diethyl 2-[1-(3,5-dimethyl-1H-pyrrol-2-yl)-2-oxo-2-phenylethyl]malonate

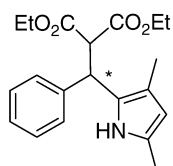
Ee = 41%

[ $\alpha$ ]<sub>D</sub><sup>22</sup> = -83 (c 1.68, CHCl<sub>3</sub>)

Source of chirality: (S,S)-(-)-2,2'-isopropylidenebis(4-tert-butyl-2-oxazoline)

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

*Tetrahedron: Asymmetry 20 (2009) 1224*



C<sub>20</sub>H<sub>25</sub>NO<sub>4</sub>

Diethyl 2-[(3,5-dimethyl-1H-pyrrol-2-yl)(phenyl)methyl]malonate

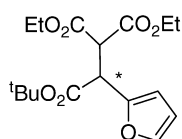
Ee = 47%

[ $\alpha$ ]<sub>D</sub><sup>19</sup> = -10 (c 0.56, CHCl<sub>3</sub>)

Source of chirality: (S,S)-(-)-2,2'-isopropylidenebis(4-tert-butyl-2-oxazoline)

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>17</sub>H<sub>24</sub>O<sub>7</sub>

1-tert-Butyl 2,2-diethyl 1-(furan-2-yl)ethane-1,2,2-tricarboxylate

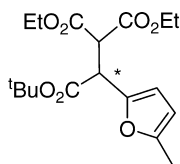
Ee = 9%

[ $\alpha$ ]<sub>D</sub><sup>28</sup> = -8 (c 0.31, CHCl<sub>3</sub>)

Source of chirality: (-)-2,2'-methylenebis[(3aS,8aR)-3a,8a-dihydro-8H-indeno[1,2-d]oxazole]

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

*Tetrahedron: Asymmetry 20 (2009) 1224*



C<sub>18</sub>H<sub>26</sub>O<sub>7</sub>

1-*tert*-Butyl 2,2-diethyl 1-(5-methylfuran-2-yl)ethane-1,2,2-tricarboxylate

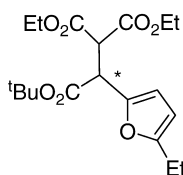
Ee = 46%

[ $\alpha$ ]<sub>D</sub><sup>24</sup> = -52 (c 0.95, CHCl<sub>3</sub>)

Source of chirality: (-)-2,2'-methylenebis[(3*aS*,8*aR*)-  
3*a*,8*a*-dihydro-8*H*-indeno[1,2-*d*]oxazole]

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>19</sub>H<sub>28</sub>O<sub>7</sub>

1-*tert*-Butyl 2,2-diethyl 1-(5-ethylfuran-2-yl)ethane-1,2,2-tricarboxylate

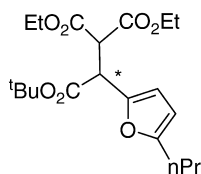
Ee = 60%

[ $\alpha$ ]<sub>D</sub><sup>30</sup> = -63 (c 1.07, CHCl<sub>3</sub>)

Source of chirality: (-)-2,2'-methylenebis[(3*aS*,8*aR*)-  
3*a*,8*a*-dihydro-8*H*-indeno[1,2-*d*]oxazole]

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>20</sub>H<sub>30</sub>O<sub>7</sub>

1-*tert*-Butyl 2,2-diethyl 1-(5-propylfuran-2-yl)ethane-1,2,2-tricarboxylate

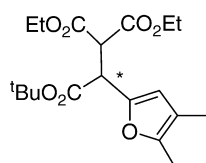
Ee = 57%

[ $\alpha$ ]<sub>D</sub><sup>28</sup> = -62 (c 1.48, CHCl<sub>3</sub>)

Source of chirality: (-)-2,2'-methylenebis[(3*aS*,8*aR*)-  
3*a*,8*a*-dihydro-8*H*-indeno[1,2-*d*]oxazole]

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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C<sub>19</sub>H<sub>28</sub>O<sub>7</sub>

1-*tert*-Butyl 2,2-diethyl 1-(4,5-dimethylfuran-2-yl)ethane-1,2,2-tricarboxylate

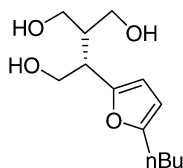
Ee = 27%

[ $\alpha$ ]<sub>D</sub><sup>22</sup> = -29 (c 1.01, CHCl<sub>3</sub>)

Source of chirality: (*S,S*)-(-)-2,2'-isopropylidenebis(4-  
*tert*-butyl-2-oxazoline)

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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$C_{13}H_{22}O_4$

(*S*)-2-(Hydroxymethyl)-3-(5-butylfuran-2-yl)butane-1,4-diol

Ee = 62%

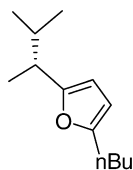
$[\alpha]_D^{17} = -5.8$  (c 1.35,  $CHCl_3$ )

Source of chirality: (–)-2,2'-methylenebis[(3*aS*,8*aR*)-  
3*a*,8*a*-dihydro-8*H*-indeno[1,2-*d*]oxazole]

Absolute configuration: (*S*)

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
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$C_{13}H_{22}O$

(*R*)-2-Butyl-5-(1,2-dimethylpropyl)furan

Ee = 62%

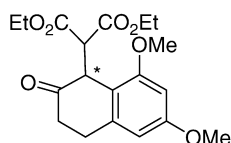
$[\alpha]_D^{16} = -6.3$  (c 0.66,  $CHCl_3$ )

Source of chirality: (–)-2,2'-methylenebis[(3*aS*,8*aR*)-  
3*a*,8*a*-dihydro-8*H*-indeno[1,2-*d*]oxazole]

Absolute configuration: (*R*)

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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$C_{19}H_{24}O_7$

Diethyl 2-(1,2,3,4-tetrahydro-6,8-dimethoxy-2-oxonaphthalen-1-yl)malonate

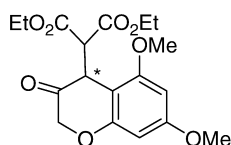
Ee = 48%

$[\alpha]_D^{31} = +90$  (c 0.75,  $CHCl_3$ )

Source of chirality: (+)-2,2'-isopropylidenebis[(4*R*)-4-  
benzyl-2-oxazoline]

Shoko Yamazaki\*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

*Tetrahedron: Asymmetry 20 (2009) 1224*



$C_{18}H_{22}O_8$

Diethyl 2-(5,7-dimethoxy-3-oxochroman-4-yl)malonate

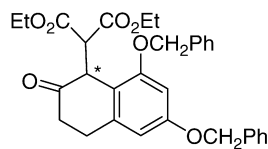
Ee = 20%

$[\alpha]_D^{26} = +38$  (c 1.19,  $CHCl_3$ )

Source of chirality: (*S,S*)-(–)-2,2'-isopropylidenebis(4-  
*tert*-butyl-2-oxazoline)

Shoko Yamazaki \*, Shinichi Kashima, Taiki Kuriyama, Yuko Iwata,  
Tsumoru Morimoto, Kiyomi Kakiuchi

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$C_{31}H_{32}O_7$

Diethyl 2-(6,8-bis(benzyloxy)-1,2,3,4-tetrahydro-2-oxonaphthalen-1-yl)malonate

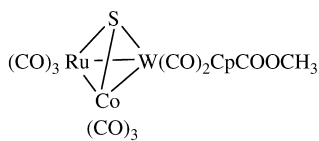
Ee = 56%

$[\alpha]_D^{30} = +109$  (c 0.85,  $CHCl_3$ )

Source of chirality: (+)-2,2'-isopropylidenebis[(4R)-4-benzyl-2-oxazoline]

Quanyi Zhao, Bin Hu \*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

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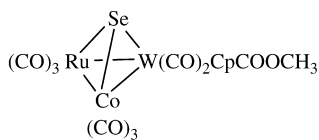


$C_{15}H_7O_{10}CoRuSW$

$[\Phi]_D^{19} = -154.4$  (c 0.03,  $CH_2Cl_2$ )

Quanyi Zhao, Bin Hu \*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

*Tetrahedron: Asymmetry 20 (2009) 1235*

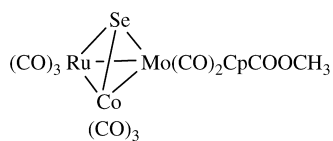


$C_{15}H_7O_{10}CoRuSeW$

$[\Phi]_D^{19} = -1003.4$  (c 0.05,  $CH_2Cl_2$ )

Quanyi Zhao, Bin Hu \*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

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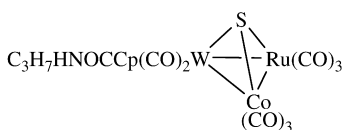


$C_{15}H_7O_{10}CoRuSeMo$

$[\Phi]_D^{19} = -1014.7$  (c 0.05,  $CH_2Cl_2$ )

Quanyi Zhao, Bin Hu\*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

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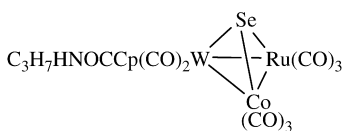


$$[\Phi]_D^{19} = +2483.0 \text{ (c 0.025, } CH_2Cl_2)$$

$C_{17}H_{12}O_9NCoRuSW$

Quanyi Zhao, Bin Hu\*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

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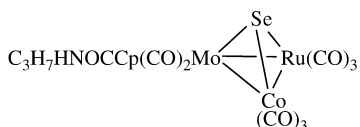


$$[\Phi]_D^{19} = -1086.6 \text{ (c 0.05, } CH_2Cl_2)$$

$C_{17}H_{12}O_9NCoRuSeW$

Quanyi Zhao, Bin Hu\*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

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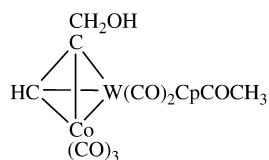


$$[\Phi]_D^{19} = +282.5 \text{ (c 0.05, } CH_2Cl_2)$$

$C_{17}H_{12}O_9NCoRuSeMo$

Quanyi Zhao, Bin Hu\*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

*Tetrahedron: Asymmetry* 20 (2009) 1235



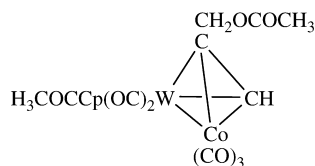
$$[\Phi]_D^{19} = +1048.3 \text{ (c 0.05, } CH_2Cl_2)$$

Absolute configuration: (R)

$C_{15}H_{11}O_7CoW$

Quanyi Zhao, Bin Hu\*, Yuhua Zhang, Wenzhi Li, Chungu Xia, Yuanqi Yin

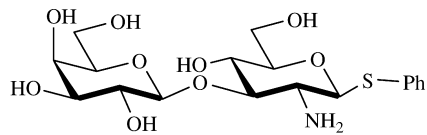
*Tetrahedron: Asymmetry* 20 (2009) 1235



$[\phi]_D^{19} = -68.2$  (c 0.05,  $CH_2Cl_2$ )  
Absolute configuration: (S)

Ayité D'Almeida, Marina Ionata, Vinh Tran, Charles Tellier, Michel Dion, Claude Rabiller\*

*Tetrahedron: Asymmetry* 20 (2009) 1243

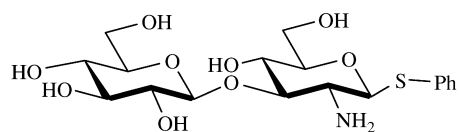


$[\alpha]_D^{22} = -23.7$  (c 0.35, MeOH)  
Source of chirality: enzymatic catalysis

Phenyl  $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 3)-2-amino-2-deoxy-1-thio- $\beta$ -D-glucopyranoside

Ayité D'Almeida, Marina Ionata, Vinh Tran, Charles Tellier, Michel Dion, Claude Rabiller\*

*Tetrahedron: Asymmetry* 20 (2009) 1243

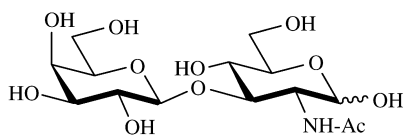


$[\alpha]_D^{22} = -29.6$  (c 0.45, MeOH)  
Source of chirality: enzymatic catalysis

Phenyl  $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-2-amino-2-deoxy-1-thio- $\beta$ -D-glucopyranoside

Ayité D'Almeida, Marina Ionata, Vinh Tran, Charles Tellier, Michel Dion, Claude Rabiller\*

*Tetrahedron: Asymmetry* 20 (2009) 1243

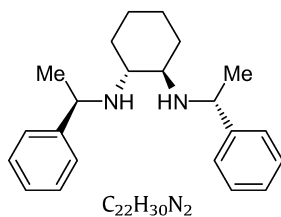


$[\alpha]_D^{22} = +3.1$  (c 0.65, MeOH): equilibrium mixture of anomers  
Source of chirality: enzymatic catalysis

$\beta$ -D-Galactopyranosyl-(1 $\rightarrow$ 3)-2-acetamido-2-deoxy- $\beta$ -D-glucopyranoside (lacto-N-biose)

Manasi Dalai, Mariappan Periasamy\*

*Tetrahedron: Asymmetry 20 (2009) 1247*



(1*R*,2*R*,1'*R*,1''*R*)-*N,N'*-Di(1-phenylethyl)-1,2-cyclohexanediamine

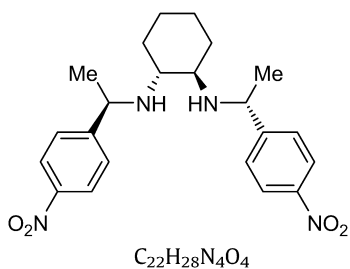
$[\alpha]_D^{25} = -40.4$  (c 1.1,  $CHCl_3$ )

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

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

Manasi Dalai, Mariappan Periasamy\*

*Tetrahedron: Asymmetry 20 (2009) 1247*



(1*R*,2*R*,1'*R*,1''*R*)-*N,N'*-Di[1-(4-nitrophenyl)ethyl]-1,2-cyclohexanediamine

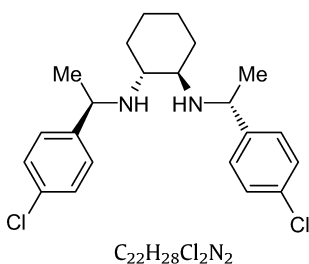
$[\alpha]_D^{25} = -21.0$  (c 1,  $CHCl_3$ )

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

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

Manasi Dalai, Mariappan Periasamy\*

*Tetrahedron: Asymmetry 20 (2009) 1247*



(1*R*,2*R*,1'*R*,1''*R*)-*N,N'*-Di[1-(4-chlorophenyl)ethyl]-1,2-cyclohexanediamine

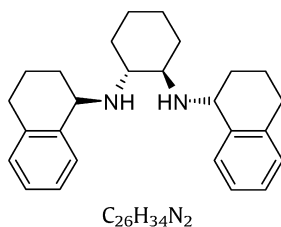
$[\alpha]_D^{25} = -17.5$  (c 1,  $CHCl_3$ )

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

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

Manasi Dalai, Mariappan Periasamy\*

*Tetrahedron: Asymmetry 20 (2009) 1247*



(1*R*,2*R*,1'*R*,1''*R*)-*N,N'*-Di(1,2,3,4-tetrahydro-1-naphthalenyl)-1,2-cyclohexanediamine

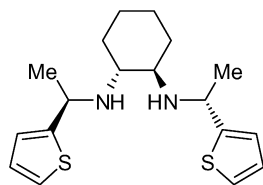
$[\alpha]_D^{25} = -115.1$  (c 1,  $CHCl_3$ )

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

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

Manasi Dalai, Mariappan Periasamy \*

*Tetrahedron: Asymmetry 20 (2009) 1247*



$C_{18}H_{26}N_2S_2$

(1R,2R,1'R,1''R)-N,N'-Di[1-(2-thienyl)ethyl]-1,2-cyclohexanediamine

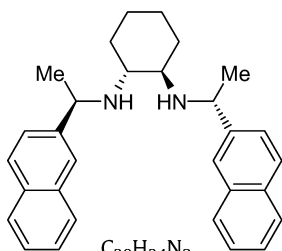
$[\alpha]_D^{25} = -27.9$  (c 1,  $CHCl_3$ )

Source of chirality: (R,R)-trans-1,2-diaminocyclohexane

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

Manasi Dalai, Mariappan Periasamy \*

*Tetrahedron: Asymmetry 20 (2009) 1247*



$C_{30}H_{34}N_2$

(1R,2R,1'R,1''R)-N,N'-Di[1-(2-naphthyl)ethyl]-1,2-cyclohexanediamine

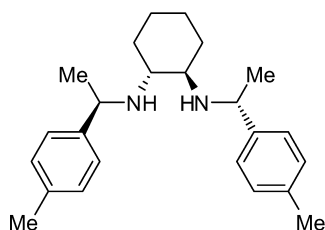
$[\alpha]_D^{25} = -9.1$  (c 0.5,  $CHCl_3$ )

Source of chirality: (R,R)-trans-1,2-diaminocyclohexane

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

Manasi Dalai, Mariappan Periasamy \*

*Tetrahedron: Asymmetry 20 (2009) 1247*



$C_{24}H_{34}N_2$

(1R,2R,1'R,1''R)-N,N'-Di[1-(4-methylphenyl)ethyl]-1,2-cyclohexanediamine

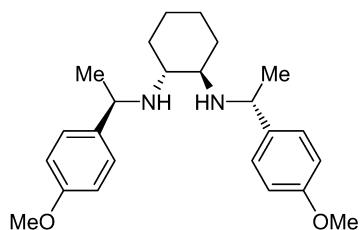
$[\alpha]_D^{25} = -29.2$  (c 1.2,  $CHCl_3$ )

Source of chirality: (R,R)-trans-1,2-diaminocyclohexane

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

Manasi Dalai, Mariappan Periasamy \*

*Tetrahedron: Asymmetry 20 (2009) 1247*



$C_{24}H_{34}N_2O_2$

(1R,2R,1'R,1''R)-N,N'-Di[1-(4-methoxyphenyl)ethyl]-1,2-cyclohexanediamine

$[\alpha]_D^{25} = +10.7$  (c 0.6,  $CHCl_3$ )

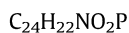
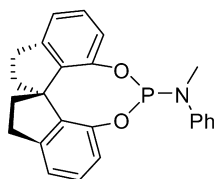
Source of chirality: (R,R)-trans-1,2-diaminocyclohexane

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



Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



*N*-Methyl-*N*-phenyl-[(*S*)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%

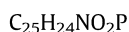
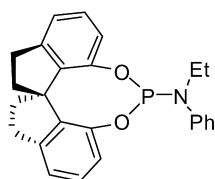
$[\alpha]_D^{25} = -25.5$  (c 1.0, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: resolution

Absolute configuration: (*S*)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



*N*-Ethyl-*N*-phenyl-[(*R*)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%

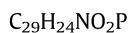
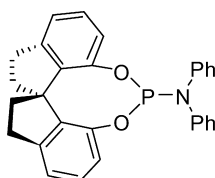
$[\alpha]_D^{25} = +89.8$  (c 1.0, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: resolution

Absolute configuration: (*R*)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



*N,N*-Diphenyl-[(*S*)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%

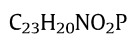
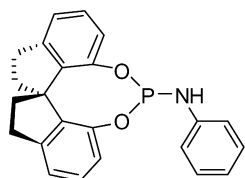
$[\alpha]_D^{25} = -171$  (c 1.0, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: resolution

Absolute configuration: (*S*)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



*N*-Phenyl-[(*S*)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%

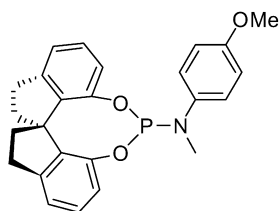
$[\alpha]_D^{17} = -103$  (c 0.5, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: resolution

Absolute configuration: (*S*)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



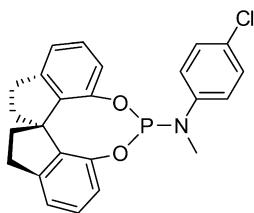
$C_{25}H_{24}NO_3P$

N-Methyl-N-(4-methoxyphenyl)-[(S)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%  
 $[\alpha]_D^{25} = -20.4$  (c 1.0,  $CH_2Cl_2$ )  
Source of chirality: resolution  
Absolute configuration: (S)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



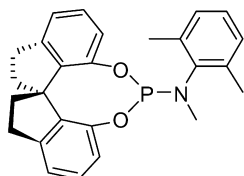
$C_{24}H_{21}NO_2Cl$

N-Methyl-N-(4-chlorophenyl)-[(S)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%  
 $[\alpha]_D^{25} = +8.9$  (c 1.0,  $CH_2Cl_2$ )  
Source of chirality: resolution  
Absolute configuration: (S)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



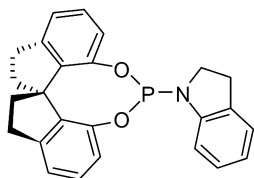
$C_{26}H_{26}NO_2P$

N-Methyl-N-(2,6-dimethylphenyl)-[(S)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%  
 $[\alpha]_D^{25} = -105$  (c 1.0,  $CH_2Cl_2$ )  
Source of chirality: resolution  
Absolute configuration: (S)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



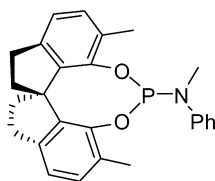
$C_{25}H_{22}NO_2P$

(Indolin-1-yl)-[(S)-1,1'-spirobiindane-7,7'-diyl]-phosphoramidite

Ee = 100%  
 $[\alpha]_D^{25} = -144$  (c 1.0,  $CH_2Cl_2$ )  
Source of chirality: resolution  
Absolute configuration: (S)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{26}H_{26}NO_2P$

*N*-Methyl-*N*-phenyl-[(*R*)-1,1'-spirobiindane-6,6'-dimethyl-7,7'-diyl]-phosphoramidite

Ee = 100%

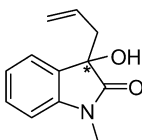
$[\alpha]_D^{25} = +219$  (c 1.0,  $CH_2Cl_2$ )

Source of chirality: resolution

Absolute configuration: (*R*)

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{12}H_{13}NO_2$

(+)-3-Allyl-3-hydroxy-1-methylindolin-2-one

Ee = 71%

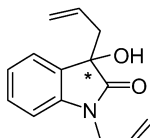
$[\alpha]_D^{29} = +21.4$  (c 1.05,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{14}H_{15}NO_2$

(+)-1,3-Diallyl-3-hydroxyindolin-2-one

Ee = 63%

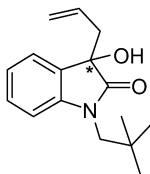
$[\alpha]_D^{29} = +18.9$  (c 0.98,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{16}H_{21}NO_2$

(+)-3-Allyl-3-hydroxy-1-neopentylindolin-2-one

Ee = 62%

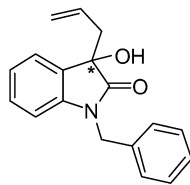
$[\alpha]_D^{29} = +37.3$  (c 1.35,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



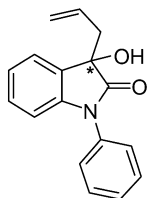
C<sub>18</sub>H<sub>17</sub>NO<sub>2</sub>

(+)-3-Allyl-1-benzyl-3-hydroxyindolin-2-one

Ee = 56%  
[α]<sub>D</sub><sup>29</sup> = +5.2 (c 1.55, CH<sub>2</sub>Cl<sub>2</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



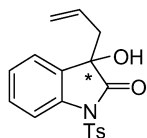
C<sub>17</sub>H<sub>15</sub>NO<sub>2</sub>

(+)-3-Allyl-3-hydroxy-1-phenylindolin-2-one

Ee = 62%  
[α]<sub>D</sub><sup>29</sup> = +23.3 (c 1.25, CH<sub>2</sub>Cl<sub>2</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



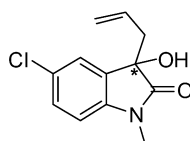
C<sub>18</sub>H<sub>17</sub>NO<sub>4</sub>S

(+)-3-Allyl-3-hydroxy-1-tosylindolin-2-one

Ee = 47%  
[α]<sub>D</sub><sup>29</sup> = +5.2 (c 1.33, CH<sub>2</sub>Cl<sub>2</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



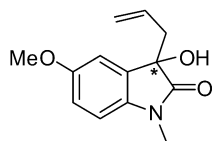
C<sub>12</sub>H<sub>12</sub>NO<sub>2</sub>Cl

(+)-3-Allyl-5-chloro-3-hydroxy-1-methylindolin-2-one

Ee = 46%  
[α]<sub>D</sub><sup>29</sup> = +2.7 (c 0.98, CH<sub>2</sub>Cl<sub>2</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{13}H_{15}NO_3$

(+)-3-Allyl-3-hydroxy-5-methoxy-1-methylindolin-2-one

Ee = 53%

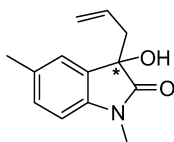
$[\alpha]_D^{29} = +8.0$  (c 1.33,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{13}H_{15}NO_2$

(+)-3-Allyl-3-hydroxy-1,5-dimethylindolin-2-one

Ee = 54%

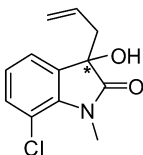
$[\alpha]_D^{29} = +7.0$  (c 1.33,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{12}H_{12}NO_2Cl$

(+)-3-Allyl-7-chloro-3-hydroxy-1-methylindolin-2-one

Ee = 52%

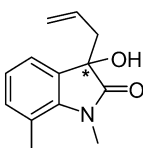
$[\alpha]_D^{29} = +11.3$  (c 1.40,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



$C_{13}H_{15}NO_2$

(+)-3-Allyl-3-hydroxy-1,7-dimethylindolin-2-one

Ee = 64%

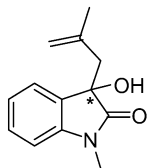
$[\alpha]_D^{29} = +15.8$  (c 1.33,  $CH_2Cl_2$ )

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



C<sub>13</sub>H<sub>15</sub>NO<sub>2</sub>

(+)-3-Hydroxy-1-methyl-3-(2-methylallyl)indolin-2-one

Ee = 48%

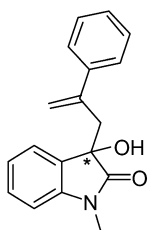
$[\alpha]_D^{29} = +15.1$  (c 1.18, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



C<sub>18</sub>H<sub>17</sub>NO<sub>2</sub>

(+)-3-Hydroxy-1-methyl-3-(2-phenylallyl)indolin-2-one

Ee = 57%

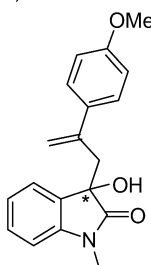
$[\alpha]_D^{29} = +6.0$  (c 1.55, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



C<sub>19</sub>H<sub>19</sub>NO<sub>3</sub>

(+)-3-Hydroxy-3-(2-(4-methoxyphenyl)allyl)-1-methylindolin-2-one

Ee = 50%

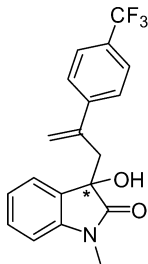
$[\alpha]_D^{29} = +1.1$  (c 1.70, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou\*

*Tetrahedron: Asymmetry 20 (2009) 1254*



C<sub>19</sub>H<sub>16</sub>F<sub>3</sub>NO<sub>2</sub>

(+)-3-Hydroxy-1-methyl-3-(2-(4-(trifluoromethyl)phenyl)allyl)indolin-2-one

Ee = 60%

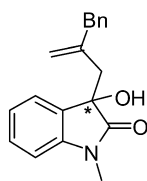
$[\alpha]_D^{29} = +3.0$  (c 1.90, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Xiang-Chen Qiao, Shou-Fei Zhu, Qi-Lin Zhou \*

*Tetrahedron: Asymmetry 20 (2009) 1254*



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

(+)-3-(2-Benzylallyl)-3-hydroxy-1-methylindolin-2-one

Ee = 48%

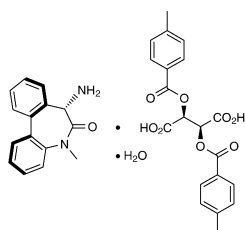
$[\alpha]_D^{29} = +9.7$  (c 1.80, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: unknown

Kevin P. Cole \*, David Mitchell, M. Austin Carr, James R. Stout, Matthew D. Belvo

*Tetrahedron: Asymmetry 20 (2009) 1262*



C<sub>35</sub>H<sub>34</sub>N<sub>2</sub>O<sub>10</sub>

(S,S)-7-Amino-5-methyl-5H-dibenzo[b,d]azepin-6(7H)-one (2S,3S)-2,3-bis(4-methylbenzoyloxy)succinate hydrate

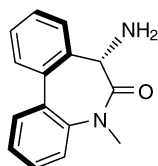
$[\alpha]_D^{23} = -22.5$  (c 1.07, DMSO)

Source of chirality: (+)-di-*p*-toluoyl tartaric acid

Absolute configuration: (S,S)

Kevin P. Cole \*, David Mitchell, M. Austin Carr, James R. Stout, Matthew D. Belvo

*Tetrahedron: Asymmetry 20 (2009) 1262*



C<sub>15</sub>H<sub>14</sub>N<sub>2</sub>O

(S)-7-Amino-5-methyl-5H-dibenzo[b,d]azepin-6(7H)-one

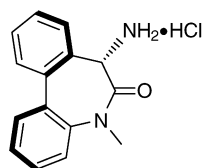
$[\alpha]_D^{23} = -160.0$  (c 0.96, MeOH)

Source of chirality: (+)-di-*p*-toluoyl tartaric acid

Absolute configuration: (S,S)

Kevin P. Cole \*, David Mitchell, M. Austin Carr, James R. Stout, Matthew D. Belvo

*Tetrahedron: Asymmetry 20 (2009) 1262*



C<sub>15</sub>H<sub>15</sub>N<sub>2</sub>OCl

(S)-7-Amino-5-methyl-5H-dibenzo[b,d]azepin-6(7H)-one hydrochloride

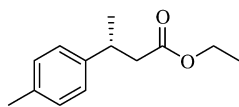
$[\alpha]_D^{23} = -90.6$  (c 0.97, water)

Source of chirality: (+)-di-*p*-toluoyl tartaric acid

Absolute configuration: (S,S)

Ahmed Kamal \*, M. Shaheer Malik, Shaik Azeeza, Shaik Bajee, Ahmad Ali Shaik

*Tetrahedron: Asymmetry 20 (2009) 1267*



C<sub>13</sub>H<sub>18</sub>O<sub>2</sub>

(3R)-Ethyl-3-(4-methylphenyl)butanoate

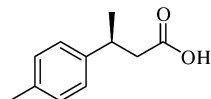
$[\alpha]_D^{25} = -26.2$  (c 3.5, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

Absolute configuration: (3R)

Ahmed Kamal \*, M. Shaheer Malik, Shaik Azeeza, Shaik Bajee, Ahmad Ali Shaik

*Tetrahedron: Asymmetry 20 (2009) 1267*



C<sub>11</sub>H<sub>14</sub>O<sub>2</sub>

(3S)-3-(4-Methylphenyl)butanoic acid

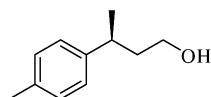
$[\alpha]_D^{25} = +34.2$  (c 1.0, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

Absolute configuration: (3S)

Ahmed Kamal \*, M. Shaheer Malik, Shaik Azeeza, Shaik Bajee, Ahmad Ali Shaik

*Tetrahedron: Asymmetry 20 (2009) 1267*



C<sub>11</sub>H<sub>16</sub>O

(3S)-3-(4-Methylphenyl)-1-butanol

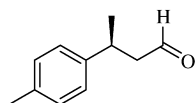
$[\alpha]_D^{25} = +30.1$  (c 1.0, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

Absolute configuration: (3S)

Ahmed Kamal \*, M. Shaheer Malik, Shaik Azeeza, Shaik Bajee, Ahmad Ali Shaik

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C<sub>11</sub>H<sub>14</sub>O

(3S)-3-(4-Methylphenyl)butanal

$[\alpha]_D^{25} = +41.9$  (c 1.0, CHCl<sub>3</sub>)

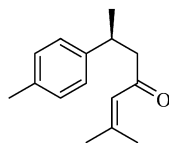
Source of chirality: enzymatic resolution

Absolute configuration: (3S)



Ahmed Kamal\*, M. Shaheer Malik, Shaik Azeeza, Shaik Bajee, Ahmad Ali Shaik

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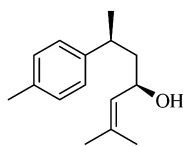
C<sub>15</sub>H<sub>20</sub>O

(6S)-2-Methyl-6-(4-methylphenyl)-2-hepten-4-one

$[\alpha]_D^{25} = +80.2$  (c 1.2, CHCl<sub>3</sub>)  
Source of chirality: enzymatic resolution  
Absolute configuration: (6S)

Ahmed Kamal\*, M. Shaheer Malik, Shaik Azeeza, Shaik Bajee, Ahmad Ali Shaik

*Tetrahedron: Asymmetry 20 (2009) 1267*



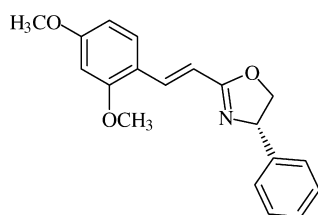
C<sub>15</sub>H<sub>22</sub>O

(4R,6S)-2-Methyl-6-(4-methylphenyl)-2-hepten-4-ol

$[\alpha]_D^{25} = +14.8$  (c 1.0, CHCl<sub>3</sub>)  
Source of chirality: enzymatic resolution  
Absolute configuration: (4R,6S)

Elisabete Palma Carreiro, Anthony J. Burke\*, J. P. Prates Ramalho, Ana Isabel Rodrigues

*Tetrahedron: Asymmetry 20 (2009) 1272*



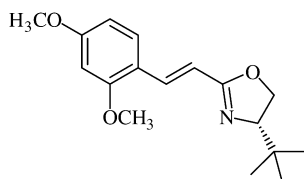
C<sub>19</sub>H<sub>19</sub>NO<sub>3</sub>

(+)-(S)-trans-2-(2,4-Dimethoxyphenyl)-1-(4-phenyloxazoline-2-yl)ethene

$[\alpha]_D^{22} = +7.7$  (c 0.57, CHCl<sub>3</sub>)  
Source of chirality: starting material  
Absolute configuration: (S)

Elisabete Palma Carreiro, Anthony J. Burke\*, J. P. Prates Ramalho, Ana Isabel Rodrigues

*Tetrahedron: Asymmetry 20 (2009) 1272*



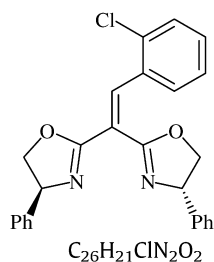
C<sub>17</sub>H<sub>23</sub>NO<sub>3</sub>

(-)-(S)-trans-2-(2,4-Dimethoxyphenyl)-1-(4-tert-butylloxazoline-2-yl)ethene

$[\alpha]_D^{21} = -38.3$  (c 1.44, CHCl<sub>3</sub>)  
Source of chirality: starting material  
Absolute configuration: (S)

Elisabete Palma Carreiro, Anthony J. Burke\*, J. P. Prates Ramalho, Ana Isabel Rodrigues

*Tetrahedron: Asymmetry 20 (2009) 1272*



(+)-Bis[(S)-4-phenyloxazoline-2-yl]-2-(2-chlorophenyl)ethene

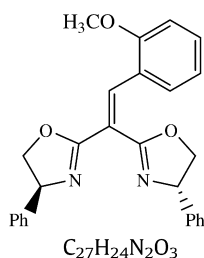
$[\alpha]_D^{20} = +50.3$  (c 1.89,  $\text{CHCl}_3$ )

Source of chirality: starting material

Absolute configuration: (S)

Elisabete Palma Carreiro, Anthony J. Burke\*, J. P. Prates Ramalho, Ana Isabel Rodrigues

*Tetrahedron: Asymmetry 20 (2009) 1272*



(+)-Bis[(S)-4-phenyloxazoline-2-yl]-2-(2-methoxyphenyl)ethene

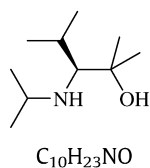
$[\alpha]_D^{20} = +137.8$  (c 0.94,  $\text{CHCl}_3$ )

Source of chirality: starting material

Absolute configuration: (S)

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



L-N-isopropyl-dimethyl valinol

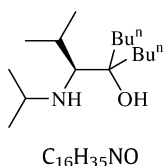
$[\alpha]_D = +24.3$  (c 5.49, EtOAc)

Absolute configuration: S

Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



L-N-isopropyl-dibutyl valinol

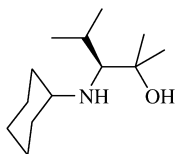
$[\alpha]_D = +17.8$  (c 2.485, EtOAc)

Absolute configuration: S

Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



C<sub>13</sub>H<sub>27</sub>NO

L-N-Cyclohexyl-dimethyl valinol

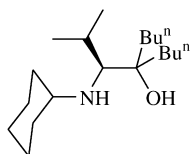
[ $\alpha$ ]<sub>D</sub> = +28.6 (c 2.885, EtOAc)

Absolute configuration: S

Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



C<sub>19</sub>H<sub>39</sub>NO

L-N-Cyclohexyl-dibutyl valinol

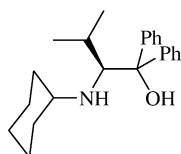
[ $\alpha$ ]<sub>D</sub> = +19.3 (c 1.985, EtOAc)

Absolute configuration: S

Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



C<sub>19</sub>H<sub>39</sub>NO

L-N-Cyclohexyl-diphenyl valinol

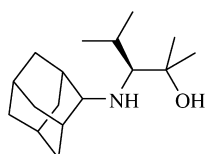
[ $\alpha$ ]<sub>D</sub> = -42.3 (c 2.23, CH<sub>2</sub>Cl<sub>2</sub>)

Absolute configuration: S

Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



C<sub>17</sub>H<sub>31</sub>NO

L-N-Adamantyl-dimethyl valinol

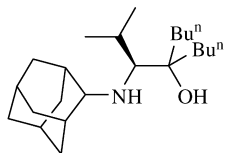
[ $\alpha$ ]<sub>D</sub> = +26.05 (c 4.78, EtOAc)

Absolute configuration: S

Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



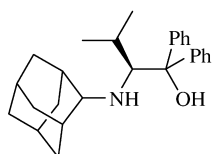
$C_{23}H_{43}NO$

L-N-Adamantyl-dibutyl valinol

$[\alpha]_D = +22.2$  (c 3.745, EtOAc)  
Absolute configuration: S  
Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



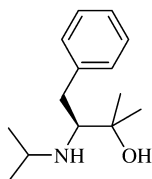
$C_{27}H_{35}NO$

L-N-Adamantyl-diphenyl valinol

$[\alpha]_D = -34.3$  (c 2.21,  $CH_2Cl_2$ )  
Absolute configuration: S  
Source of chirality: L-valine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



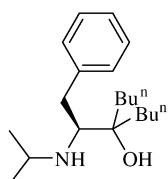
$C_{14}H_{23}NO$

L-N-Isopropyl-dimethyl phenylalaninol

$[\alpha]_D = -20.9$  (c 5.705, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

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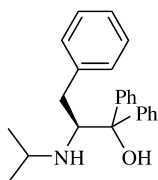
$C_{20}H_{35}NO$

L-N-Isopropyl-dibutyl phenylalaninol

$[\alpha]_D = +1.1$  (c 5.49, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



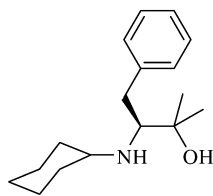
C<sub>24</sub>H<sub>27</sub>NO

L-N-Isopropyl-diphenyl phenylalanol

[ $\alpha$ ]<sub>D</sub> = +3.6 (c 5.00, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



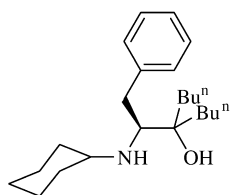
C<sub>17</sub>H<sub>27</sub>NO

L-N-Cyclohexyl-dimethyl phenylalanol

[ $\alpha$ ]<sub>D</sub> = -8.6 (c 5.945, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



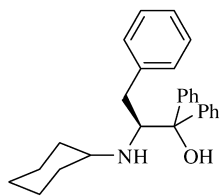
C<sub>23</sub>H<sub>39</sub>NO

L-N-Cyclohexyl-dibutyl phenylalanol

[ $\alpha$ ]<sub>D</sub> = +9.4 (c 5.205, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson \*

*Tetrahedron: Asymmetry 20 (2009) 1279*



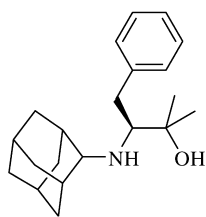
C<sub>27</sub>H<sub>31</sub>NO

L-N-Cyclohexyl-diphenyl phenylalanol

[ $\alpha$ ]<sub>D</sub> = +5.6 (c 2.885, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



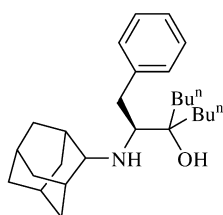
C<sub>21</sub>H<sub>31</sub>NO

L-N-Adamantyl-dimethyl phenylalaninol

[ $\alpha$ ]<sub>D</sub> = +0.2 (c 2.435, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

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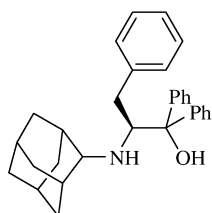
C<sub>27</sub>H<sub>43</sub>NO

L-N-Adamantyl-dibutyl phenylalaninol

[ $\alpha$ ]<sub>D</sub> = +9.9 (c 5.23, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Amanda J. Hickman, Lauren D. Hughs, Casey M. Jones, Hanhan Li, Joanne E. Redford, Samuel J. Sobelman, J. Andrew Kouzelos, Adam. R. Johnson\*

*Tetrahedron: Asymmetry 20 (2009) 1279*



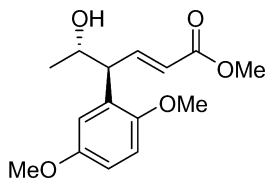
C<sub>31</sub>H<sub>35</sub>NO

L-N-Adamantyl-diphenyl phenylalaninol

[ $\alpha$ ]<sub>D</sub> = +4.1 (c 4.90, EtOAc)  
Absolute configuration: S  
Source of chirality: L-phenylalanine

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



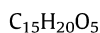
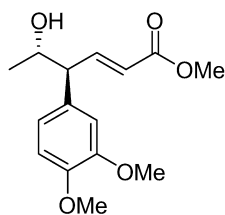
C<sub>15</sub>H<sub>20</sub>O<sub>5</sub>

(4S,5S)-Methyl 5-hydroxy-4-(2,5-dimethoxyphenyl)hex-2(E)-enoate

Ee = 95.2%ee  
[ $\alpha$ ]<sub>D</sub><sup>29</sup> = +4.1 (c 1.10, CHCl<sub>3</sub>)  
Source of chirality: enzymatic resolution  
Absolute configuration: (4S,5S)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(3,4-dimethoxyphenyl)hex-2(E)-enoate

Ee = 98.6%ee

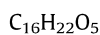
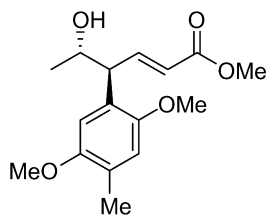
$[\alpha]_D^{27} = +15.1$  (c 1.26,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(2,5-dimethoxy-4-methylphenyl)hex-2(E)-enoate

Ee = 99.8%ee

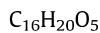
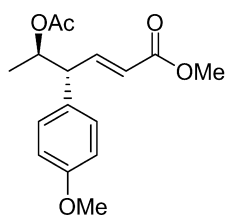
$[\alpha]_D^{29} = +10.5$  (c 1.36,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-acetoxy-4-(4-methoxyphenyl)hex-2(E)-enoate

Ee = 99.8%ee

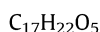
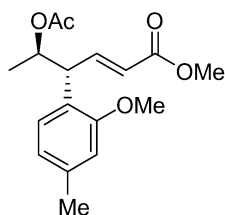
$[\alpha]_D^{21} = -5.5$  (c 2.44,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4R,5R)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-acetoxy-4-(2-methoxy-4-methylphenyl)hex-2(E)-enoate

Ee = 98.5%ee

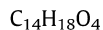
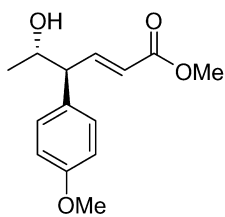
$[\alpha]_D^{23} = +1.8$  (c 1.12,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4R,5R)

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(4-methoxyphenyl)hex-2(E)-enoate

Ee = >99.9%ee

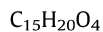
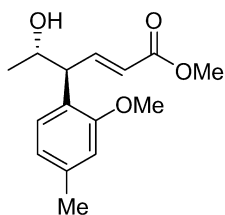
$[\alpha]_D^{23} = +21.2$  (c 2.07,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(2-methoxy-4-methylphenyl)hex-2(E)-enoate

Ee = >99%ee

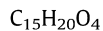
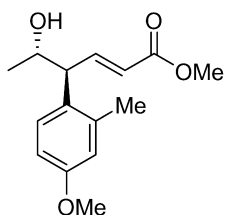
$[\alpha]_D^{23} = +2.0$  (c 1.10,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(4-methoxy-2-methylphenyl)hex-2(E)-enoate

Ee = >99%ee

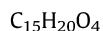
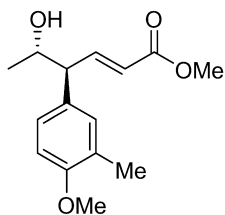
$[\alpha]_D^{29} = -14.2$  (c 1.00,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(2-methoxy-5-methylphenyl)hex-2(E)-enoate

Ee = 99.3%ee

$[\alpha]_D^{27} = +17.6$  (c 1.01,  $CHCl_3$ )

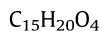
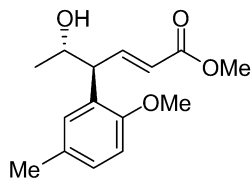
Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)



Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-hydroxy-4-(3-methoxy-4-methylphenyl)hex-2(E)-enoate

Ee = 98.2%ee

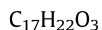
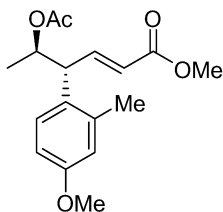
$[\alpha]_D^{27} = -1.7$  (c 1.01,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4S,5S)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-acetoxy-4-(4-methoxy-2-methylphenyl)hex-2(E)-enoate

Ee = 99.8%ee

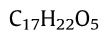
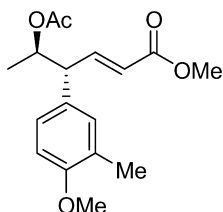
$[\alpha]_D^{29} = +18.6$  (c 1.11,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4R,5R)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-acetoxy-4-(2-methoxy-5-methylphenyl)hex-2(E)-enoate

Ee = 98.2%ee

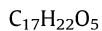
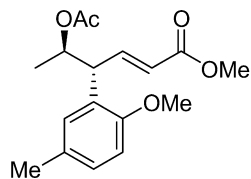
$[\alpha]_D^{27} = -10.0$  (c 1.01,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4R,5R)

Mikio Fujii\*, Sumie Yasuhara, Hiroyuki Akita\*

*Tetrahedron: Asymmetry 20 (2009) 1286*



(4S,5S)-Methyl 5-acetoxy-4-(3-methoxy-4-methylphenyl)hex-2(E)-enoate

Ee = 99.8%ee

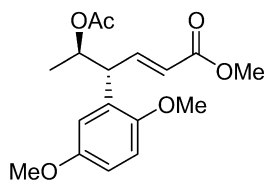
$[\alpha]_D^{23} = +12.5$  (c 1.07,  $CHCl_3$ )

Source of chirality: enzymatic resolution

Absolute configuration: (4R,5R)

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>17</sub>H<sub>22</sub>O<sub>6</sub>

(4*S*,5*S*)-Methyl 5-acetoxy-4-(2,5-dimethoxyphenyl)hex-2(*E*)-enoate

Ee = 98.2%ee

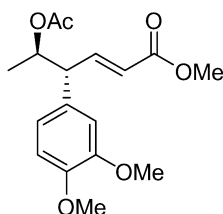
[ $\alpha$ ]<sub>D</sub><sup>25</sup> = +6.5 (c 1.03, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>17</sub>H<sub>22</sub>O<sub>6</sub>

(4*S*,5*S*)-Methyl 5-acetoxy-4-(3,4-dimethoxyphenyl)hex-2(*E*)-enoate

Ee = 98.0%ee

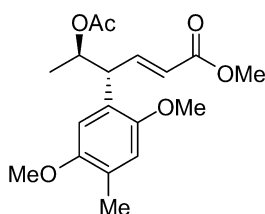
[ $\alpha$ ]<sub>D</sub><sup>27</sup> = +11.2 (c 1.07, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>18</sub>H<sub>24</sub>O<sub>6</sub>

(4*S*,5*S*)-Methyl 5-acetoxy-4-(2,5-dimethoxy-4-methylphenyl)hex-2(*E*)-enoate

Ee = 99.8%ee

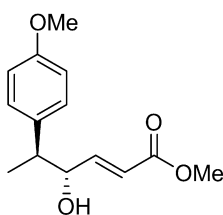
[ $\alpha$ ]<sub>D</sub><sup>14</sup> = +5.6 (c 0.36, CHCl<sub>3</sub>)

Source of chirality: enzymatic resolution

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



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

(4*S*,5*S*)-Methyl 4-hydroxy-5-(4-methoxyphenyl)hex-2(*E*)-enoate

Ee = >99%ee

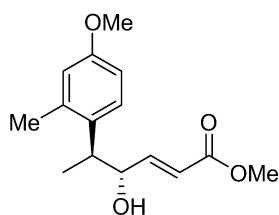
[ $\alpha$ ]<sub>D</sub><sup>23</sup> = -12.9 (c 1.01, CHCl<sub>3</sub>)

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>15</sub>H<sub>20</sub>O<sub>4</sub>

(4*S*,5*S*)-Methyl 4-hydroxy-5-(4-methoxy-2-methylphenyl)hex-2(*E*)-enoate

Ee = >99%ee

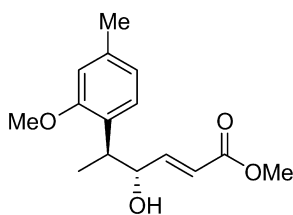
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = -11.7 (c 1.40, CHCl<sub>3</sub>)

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>15</sub>H<sub>20</sub>O<sub>4</sub>

(4*S*,5*S*)-Methyl 4-hydroxy-5-(2-methoxy-4-methylphenyl)hex-2(*E*)-enoate

Ee = >99%ee

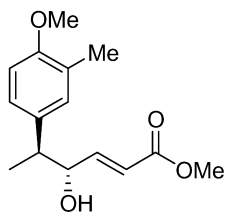
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +25.1 (c 0.53, CHCl<sub>3</sub>)

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>15</sub>H<sub>20</sub>O<sub>4</sub>

(4*S*,5*S*)-Methyl 4-hydroxy-5-(4-methoxy-3-methylphenyl)hex-2(*E*)-enoate

Ee = 99.3%ee

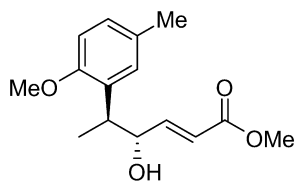
[ $\alpha$ ]<sub>D</sub><sup>21</sup> = -8.4 (c 1.00, CHCl<sub>3</sub>)

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



C<sub>15</sub>H<sub>20</sub>O<sub>4</sub>

(4*S*,5*S*)-Methyl 4-hydroxy-5-(2,5-dimethoxyphenyl)hex-2(*E*)-enoate

Ee = 98.2%ee

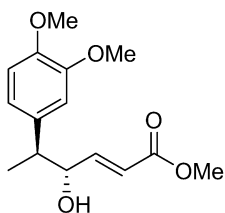
[ $\alpha$ ]<sub>D</sub><sup>21</sup> = 0 (c 0.78, CHCl<sub>3</sub>)

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



$C_{15}H_{20}O_5$

(4*S*,5*S*)-Methyl 4-hydroxy-5-(3,4-dimethoxyphenyl)hex-2(*E*)-enoate

Ee = 95.2%ee

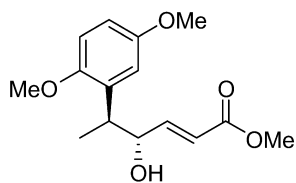
$[\alpha]_D^{21} = -4.1$  (c 0.60,  $CHCl_3$ )

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



$C_{15}H_{20}O_5$

(4*S*,5*S*)-Methyl 4-hydroxy-5-(2,5-dimethoxyphenyl)hex-2(*E*)-enoate

Ee = 98.6%ee

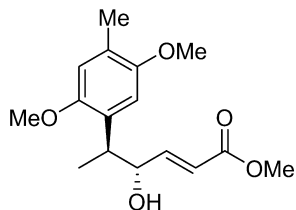
$[\alpha]_D^{23} = -12.1$  (c 1.21,  $CHCl_3$ )

Source of chirality: stereoselective rearrangement

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

Mikio Fujii \*, Sumie Yasuhara, Hiroyuki Akita \*

*Tetrahedron: Asymmetry 20 (2009) 1286*



$C_{16}H_{22}O_5$

(4*S*,5*S*)-Methyl 4-hydroxy-5-(2,5-dimethoxy-4-methylphenyl)hex-2(*E*)-enoate

Ee = 99.8%ee

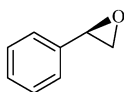
$[\alpha]_D^{23} = -5.8$  (c 1.22,  $CHCl_3$ )

Source of chirality: stereoselective rearrangement

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

Kuladip Sarma, Amrit Goswami \*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry 20 (2009) 1295*



$C_8H_8O$

(*R*)-(+)-Phenyloxirane

Ee = 46%

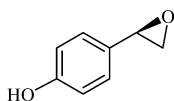
$[\alpha]_D^{22} = +21.5$  (c 0.8, PhH)

Source of chirality: chiral catalyst

Absolute configuration: (*R*)

Kuladip Sarma, Amrit Goswami\*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry 20 (2009) 1295*



(*R*)-(+)-4-Hydroxyphenyloxirane

Ee = 57%

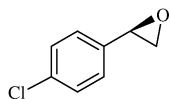
$[\alpha]_D^{25} = +4.95$  (c 0.8,  $CHCl_3$ )

Source of chirality: chiral catalyst

Absolute configuration: (*R*)

Kuladip Sarma, Amrit Goswami\*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry 20 (2009) 1295*



(*R*)-(-)-(4-Chlorophenyl) oxirane

Ee = 46%

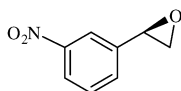
$[\alpha]_D^{22} = -11.5$  (c 0.65,  $CHCl_3$ )

Source of chirality: chiral catalyst

Absolute configuration: (*R*)

Kuladip Sarma, Amrit Goswami\*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry 20 (2009) 1295*



(*R*)-(-)-(3-Nitrophenyl) oxirane

Ee = 63%

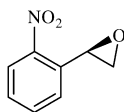
$[\alpha]_D^{20} = -1.6$  (c 2.1,  $CHCl_3$ )

Source of chirality: chiral catalyst

Absolute configuration: (*R*)

Kuladip Sarma, Amrit Goswami\*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry 20 (2009) 1295*



(*R*)-(-)-(2-Nitrophenyl) oxirane

Ee = 68%

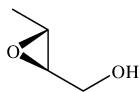
$[\alpha]_D^{19.5} = -72.9$  (c 1.20,  $CHCl_3$ )

Source of chirality: chiral catalyst

Absolute configuration: (*R*)

Kuladip Sarma, Amrit Goswami \*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry* 20 (2009) 1295



(2*R*,3*R*)-Epoxybutan-1-ol

Ee = 35%

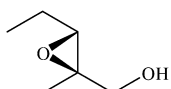
[ $\alpha$ ]<sub>D</sub><sup>25</sup> = +19.3 (c 0.05, CHCl<sub>3</sub>)

Source of chirality: chiral catalyst

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

Kuladip Sarma, Amrit Goswami \*, Bhabesh C. Goswami

*Tetrahedron: Asymmetry* 20 (2009) 1295



(2*R*,3*R*)-Epoxy-2-methylpentan-1-ol

Ee = 71%

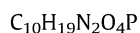
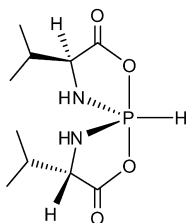
[ $\alpha$ ]<sub>D</sub><sup>25</sup> = +4.3 (c 0.03, CHCl<sub>3</sub>)

Source of chirality: chiral catalyst

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

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang \*, Yu-Fen Zhao \*

*Tetrahedron: Asymmetry* 20 (2009) 1301



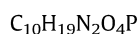
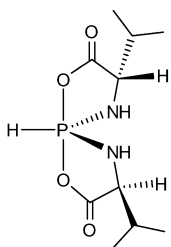
(3*S*,5*A*,8*S*)-3,8-Di(propan-2-yl)-1,6-dioxo-4,9-diaza-5 $\lambda$ <sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

[ $\alpha$ ]<sub>D</sub><sup>20</sup> = -60.3 (c 1.0, DMSO)

Absolute configuration: (3*S*,5*A*,8*S*)

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang \*, Yu-Fen Zhao \*

*Tetrahedron: Asymmetry* 20 (2009) 1301



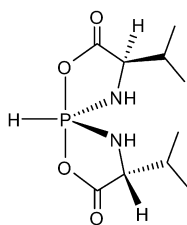
(3*S*,5*A*,8*S*)-3,8-Di(propan-2-yl)-1,6-dioxo-4,9-diaza-5 $\lambda$ <sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +22.6 (c 1.0, DMSO)

Absolute configuration: (3*S*,5*A*,8*S*)

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang\*, Yu-Fen Zhao\*

*Tetrahedron: Asymmetry 20 (2009) 1301*



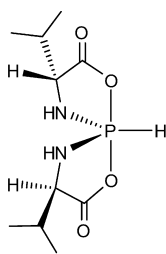
$[\alpha]_D^{20} = +60.1$  (c 1.0, DMSO)  
Absolute configuration: (3R,5A,8R)

C<sub>10</sub>H<sub>19</sub>N<sub>2</sub>O<sub>4</sub>P

(3R,5A,8R)-3,8-Di(propan-2-yl)-1,6-dioxo-4,9-diaza-5λ<sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang\*, Yu-Fen Zhao\*

*Tetrahedron: Asymmetry 20 (2009) 1301*



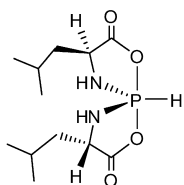
$[\alpha]_D^{20} = -22.6$  (c 1.0, DMSO)  
Absolute configuration: (3R,5A,8R)

C<sub>10</sub>H<sub>19</sub>N<sub>2</sub>O<sub>4</sub>P

(3R,5A,8R)-3,8-Di(propan-2-yl)-1,6-dioxo-4,9-diaza-5λ<sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang\*, Yu-Fen Zhao\*

*Tetrahedron: Asymmetry 20 (2009) 1301*



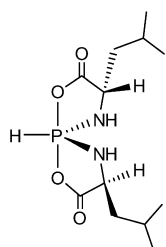
$[\alpha]_D^{20} = -55.7$  (c 1.0, acetone)  
Absolute configuration: (3S,5A,8S)

C<sub>12</sub>H<sub>23</sub>N<sub>2</sub>O<sub>4</sub>P

(3S,5A,8S)-3,8-Bis(2-methylpropyl)-1,6-dioxo-4,9-diaza-5λ<sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang\*, Yu-Fen Zhao\*

*Tetrahedron: Asymmetry 20 (2009) 1301*



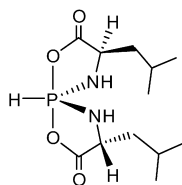
$[\alpha]_D^{20} = +31.7$  (c 1.0, acetone)  
Absolute configuration: (3S,5A,8S)

C<sub>12</sub>H<sub>23</sub>N<sub>2</sub>O<sub>4</sub>P

(3S,5A,8S)-3,8-Bis(2-methylpropyl)-1,6-dioxo-4,9-diaza-5λ<sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang\*, Yu-Fen Zhao\*

*Tetrahedron: Asymmetry 20 (2009) 1301*



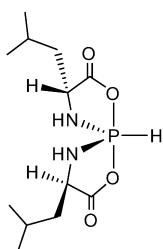
$[\alpha]_D^{20} = +55.4$  (c 1.0, acetone)  
Absolute configuration: (3R,5A,8R)

$C_{12}H_{23}N_2O_4P$

(3R,5A,8R)-3,8-Bis(2-methylpropyl)-1,6-dioxo-4,9-diaza-5λ<sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

Jian-Bo Hou, Guo Tang, Jian-Nan Guo, Yan Liu, Hui Zhang\*, Yu-Fen Zhao\*

*Tetrahedron: Asymmetry 20 (2009) 1301*



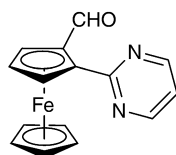
$[\alpha]_D^{20} = -31.9$  (c 1.0, acetone)  
Absolute configuration: (3R,5A,8R)

$C_{12}H_{23}N_2O_4P$

(3R,5A,8R)-3,8-Bis(2-methylpropyl)-1,6-dioxo-4,9-diaza-5λ<sup>5</sup>-phosphaspiro[4.4]-nonane-2,7-dione

Andrea-Nekane Alba, Pilar Gómez-Sal, Ramon Rios\*, Albert Moyano\*

*Tetrahedron: Asymmetry 20 (2009) 1314*



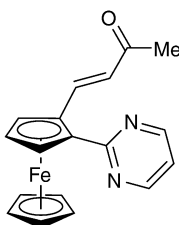
Ee = 78% (HPLC)  
 $[\alpha]_D^{20} = +26.0$  (c 1.1, CHCl<sub>3</sub>)  
Source of chirality: organocatalytic kinetic resolution  
Absolute configuration: (pR)

$C_{15}H_{12}FeN_2O$

(pR)-2-(2'-Pyrimidyl)ferrocenecarbaldehyde

Andrea-Nekane Alba, Pilar Gómez-Sal, Ramon Rios\*, Albert Moyano\*

*Tetrahedron: Asymmetry 20 (2009) 1314*



Ee = 56% (HPLC)  
 $[\alpha]_D^{20} = +648$  (c 0.05, CHCl<sub>3</sub>)  
Source of chirality: organocatalytic kinetic resolution  
Absolute configuration: (pS,E)

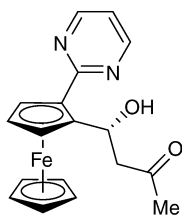
$C_{18}H_{16}FeN_2O$

(pS,E)-4-[2-(2'-Pyrimidyl)ferrocenyl]but-3-ene-2-one



Andrea-Nekane Alba, Pilar Gómez-Sal, Ramon Rios\*, Albert Moyano\*

*Tetrahedron: Asymmetry 20 (2009) 1314*



C<sub>18</sub>H<sub>18</sub>FeN<sub>2</sub>O<sub>2</sub>

(*R,pS*)-4-[2-(2'-Pyrimidyl)ferrocenyl]-4-hydroxy-2-butanone

Ee = 52% (HPLC)

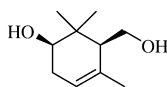
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = -28.0 (c 0.05, CHCl<sub>3</sub>)

Source of chirality: organocatalytic kinetic resolution

Absolute configuration: (*R,pS*)

Stefano Serra\*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>10</sub>H<sub>18</sub>O<sub>2</sub>

(*2R,6S*)-2-Hydroxy- $\alpha$ -cyclogeraniol

Ee = 99%

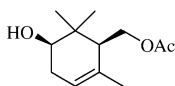
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +57.8 (c 2, CH<sub>2</sub>Cl<sub>2</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (*2R,6S*)

Stefano Serra\*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>12</sub>H<sub>20</sub>O<sub>3</sub>

(*2R,6S*)-2-Hydroxy- $\alpha$ -cyclogeraniol acetate

Ee = 37%

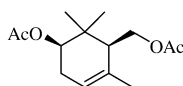
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +26.1 (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (*2R,6S*)

Stefano Serra\*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>14</sub>H<sub>22</sub>O<sub>4</sub>

(*2R,6S*)-2-Acetoxy- $\alpha$ -cyclogeraniol acetate

Ee = 96%

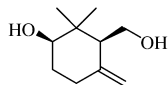
[ $\alpha$ ]<sub>D</sub><sup>20</sup> = +8.5 (c 2.5, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (*2R,6S*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>10</sub>H<sub>18</sub>O<sub>2</sub>

(2*R*,6*S*)-2-Hydroxy- $\gamma$ -cyclogeraniol

Ee = 99%

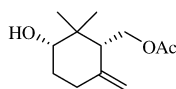
$[\alpha]_D^{20} = 47.2$  (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2*R*,6*S*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>12</sub>H<sub>20</sub>O<sub>3</sub>

(2*S*,6*R*)-2-Hydroxy- $\gamma$ -cyclogeraniol acetate

Ee = 32%

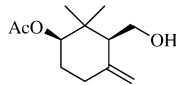
$[\alpha]_D^{20} = +2.5$  (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2*S*,6*R*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>12</sub>H<sub>20</sub>O<sub>3</sub>

(2*R*,6*S*)-2-Acetoxy- $\gamma$ -cyclogeraniol

Ee = 89%

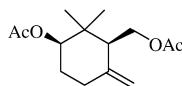
$[\alpha]_D^{20} = 52.5$  (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2*R*,6*S*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>14</sub>H<sub>22</sub>O<sub>4</sub>

(2*R*,6*S*)-2-Acetoxy- $\gamma$ -cyclogeraniol acetate

Ee = 99%

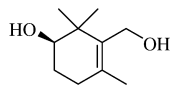
$[\alpha]_D^{20} = 20.1$  (c 1, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2*R*,6*S*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>10</sub>H<sub>18</sub>O<sub>2</sub>

(2R)-2-Hydroxy-β-cyclogeraniol

Ee = 99%

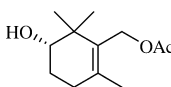
[α]<sub>D</sub><sup>20</sup> = +23.8 (c 1, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2R)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>12</sub>H<sub>20</sub>O<sub>3</sub>

(2S)-2-Hydroxy-β-cyclogeraniol acetate

Ee = 30%

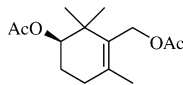
[α]<sub>D</sub><sup>20</sup> = 8.9 (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2S)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>14</sub>H<sub>22</sub>O<sub>4</sub>

(2R)-2-Acetoxy-β-cyclogeraniol acetate

Ee = 99%

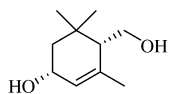
[α]<sub>D</sub><sup>20</sup> = 2.9 (c 2.5, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (2R)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>10</sub>H<sub>18</sub>O<sub>2</sub>

(3R,6S)-3-Hydroxy-α-cyclogeraniol

Ee = 99%

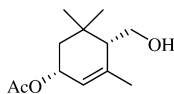
[α]<sub>D</sub><sup>20</sup> = 76.1 (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (3R,6S)

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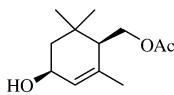


(3R,6S)-3-Acetoxy- $\alpha$ -cyclogeraniol

Ee = 7%  
 $[\alpha]_D^{20} = 8$  (c 2,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (3R,6S)

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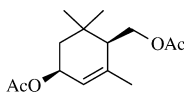


(3S,6R)-3-Hydroxy- $\alpha$ -cyclogeraniol acetate

Ee = 52%  
 $[\alpha]_D^{20} = +49.6$  (c 2,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (3S,6R)

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*Tetrahedron: Asymmetry 20 (2009) 1319*

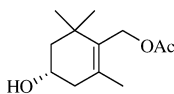


(3S,6R)-3-Acetoxy- $\alpha$ -cyclogeraniol acetate

Ee = 94%  
 $[\alpha]_D^{20} = +17.9$  (c 2,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (3S,6R)

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*Tetrahedron: Asymmetry 20 (2009) 1319*

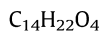
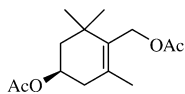


(3S)-3-Hydroxy- $\beta$ -cyclogeraniol acetate

Ee = 10%  
 $[\alpha]_D^{20} = +15.6$  (c 0.5,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (3S)

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*Tetrahedron: Asymmetry 20 (2009) 1319*



(3R)-3-Acetoxy- $\beta$ -cyclogeraniol acetate

Ee = 27%

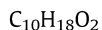
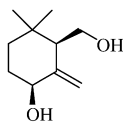
$[\alpha]_D^{20} = 20.8$  (c 1, MeOH)

Source of chirality: lipase-mediated resolution

Absolute configuration: (3R)

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*Tetrahedron: Asymmetry 20 (2009) 1319*



(4S,6R)-4-Hydroxy- $\gamma$ -cyclogeraniol

Ee = 99%

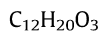
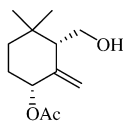
$[\alpha]_D^{20} = +29.7$  (c 2,  $CHCl_3$ )

Source of chirality: lipase-mediated resolution

Absolute configuration: (4S,6R)

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*Tetrahedron: Asymmetry 20 (2009) 1319*



(4R,6S)-4-Acetoxy- $\gamma$ -cyclogeraniol

Ee = 76%

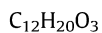
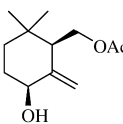
$[\alpha]_D^{20} = 4.9$  (c 2,  $CHCl_3$ )

Source of chirality: lipase-mediated resolution

Absolute configuration: (4R,6S)

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*Tetrahedron: Asymmetry 20 (2009) 1319*



(4S,6R)-4-Hydroxy- $\gamma$ -cyclogeraniol acetate

Ee = 90%

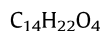
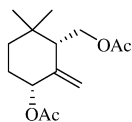
$[\alpha]_D^{20} = +28.1$  (c 2,  $CHCl_3$ )

Source of chirality: lipase-mediated resolution

Absolute configuration: (4S,6R)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*

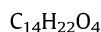
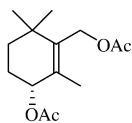


(4*R*,6*S*)-4-Acetoxy- $\gamma$ -cyclogeraniol acetate

Ee = 92%  
 $[\alpha]_D^{20} = 16.7$  (c 2,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (4*R*,6*S*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*

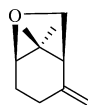


(4*R*)-4-Acetoxy- $\beta$ -cyclogeraniol acetate

Ee = 76%  
 $[\alpha]_D^{20} = +62.4$  (c 2,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (4*R*)

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*Tetrahedron: Asymmetry 20 (2009) 1319*

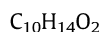
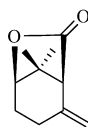


(1*S*,5*R*)-8,8-Dimethyl-2-methylene-6-oxabicyclo[3.2.1]octane

Ee = 99%  
 $[\alpha]_D^{20} = 79.9$  (c 0.6,  $CH_2Cl_2$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (1*S*,5*R*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*

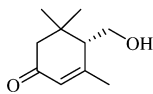


(1*S*,5*R*)-8,8-Dimethyl-2-methylene-6-oxabicyclo[3.2.1]octan-7-one

Ee = 99%  
 $[\alpha]_D^{20} = 288.1$  (c 1,  $CHCl_3$ )  
Source of chirality: lipase-mediated resolution  
Absolute configuration: (1*S*,5*R*)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>10</sub>H<sub>16</sub>O<sub>2</sub>

(6S)-3-Keto-α-cyclogeraniol

Ee = 99%

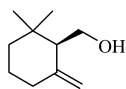
[α]<sub>D</sub><sup>20</sup> = -99.1 (c 1, MeOH)

Source of chirality: lipase-mediated resolution

Absolute configuration: (6S)

Stefano Serra \*, Francesco G. Gatti, Claudio Fuganti

*Tetrahedron: Asymmetry 20 (2009) 1319*



C<sub>10</sub>H<sub>18</sub>O

(6R)-γ-Cyclogeraniol

Ee = 99%

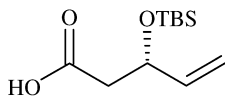
[α]<sub>D</sub><sup>20</sup> = 21.3 (c 2, CHCl<sub>3</sub>)

Source of chirality: lipase-mediated resolution

Absolute configuration: (6R)

Gowravaram Sabitha \*, P. Padmaja, K. Sudhakar, J.S. Yadav

*Tetrahedron: Asymmetry 20 (2009) 1330*



C<sub>11</sub>H<sub>22</sub>O<sub>3</sub>Si

(3S)-3-[[1-(*tert*-Butyl)-1,1-dimethylsilyl]oxy]-4-pentenoic acid

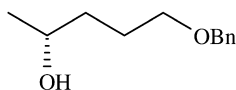
[α]<sub>D</sub><sup>25</sup> = +1.2 (c 1.2, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (3S)

Gowravaram Sabitha \*, P. Padmaja, K. Sudhakar, J.S. Yadav

*Tetrahedron: Asymmetry 20 (2009) 1330*



C<sub>12</sub>H<sub>18</sub>O<sub>2</sub>

(2R)-5-(Benzyloxy)pentan-2-ol

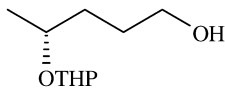
[α]<sub>D</sub><sup>25</sup> = +9.0 (c 1.25, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R)

Gowravaram Sabitha \*, P. Padmaja, K. Sudhakar, J.S. Yadav

*Tetrahedron: Asymmetry 20 (2009) 1330*

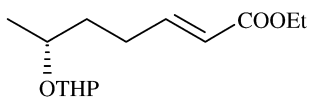


(4*R*)-4-(Tetrahydro-2*H*-2-pyran-2-yl)oxy)pentan-1-ol

$[\alpha]_D^{25} = +19.6$  (c 0.65, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (3*R*)

Gowravaram Sabitha \*, P. Padmaja, K. Sudhakar, J.S. Yadav

*Tetrahedron: Asymmetry 20 (2009) 1330*

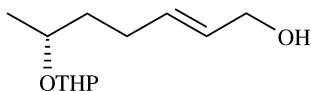


Ethyl (*E*,6*R*)-6-(tetrahydro-2*H*-2-pyran-2-yl)oxy)-2-heptenoate

$[\alpha]_D^{25} = +5.6$  (c 1.45, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (*E*,6*R*)

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*Tetrahedron: Asymmetry 20 (2009) 1330*

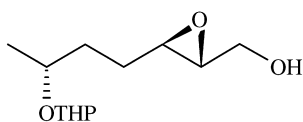


(*E*,6*R*)-6-(Tetrahydro-2*H*-2-pyran-2-yl)oxy)-2-hepten-1-ol

$[\alpha]_D^{25} = -1.4$  (c 1.25, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (*E*,6*R*)

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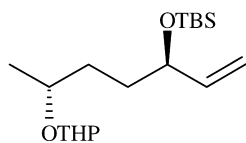
{(2*R*,3*R*)-3-[(3*R*)-3-(Tetrahydro-2*H*-2-pyran-2-yl)oxy)butyl]oxirane-2-yl)methanol

$[\alpha]_D^{25} = +15.1$  (c 1.15, CHCl<sub>3</sub>)  
Source of chirality: asymmetric synthesis  
Absolute configuration: (2*R*,3*R*) (3*R*)



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$C_{18}H_{36}O_3Si$

*tert*-Butyl(dimethyl)((*1R*)-1-[(*3R*)-3-(*tert*-butyl)-2-propenyloxy]butyl)-2-propenyloxy)silane

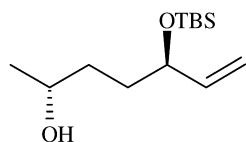
$[\alpha]_D^{25} = -0.8$  (c 0.75,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*1R*) (*3R*)

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$C_{13}H_{28}O_2Si$

(*2R,5R*)-5-[[1-(*tert*-butyl)-1,1-dimethylsilyloxy]-6-hepten-2-ol

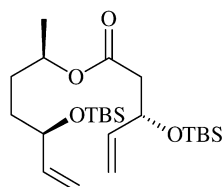
$[\alpha]_D^{25} = -0.8$  (c 0.7,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

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

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$C_{24}H_{48}O_4Si_2$

*tert*-Butyl[[(*1R,4R,8S*)-8-[[1-(*tert*-butyl)-1,1-dimethylsilyloxy]-4-methyl-6-methylene-1-vinyl-9-decenyl]oxy]dimethylsilane

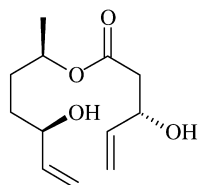
$[\alpha]_D^{25} = -7.7$  (c 0.4,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*1R,4R,8S*)

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$C_{12}H_{20}O_4$

(*3S,7R,10R*)-3,10-Dihydroxy-7-methyl-1,11-dodecadiene-5-one

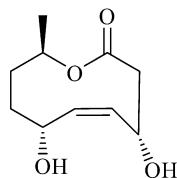
$[\alpha]_D^{25} = -6.6$  (c 0.75,  $CHCl_3$ )

Source of chirality: asymmetric synthesis

Absolute configuration: (*3S,7R,10R*)

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C<sub>10</sub>H<sub>16</sub>O<sub>4</sub>

(4S,7R,10R)-4,7-Dihydroxy-10-methyl-3,4,7,8,9,10-hexahydro-2H-2-oxecinone

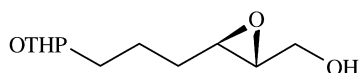
$[\alpha]_D^{25} = -29.2$  (c 0.5, MeOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (4S,7R,10R)

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C<sub>11</sub>H<sub>20</sub>O<sub>4</sub>

{{(2R,3R)-3-[3-(Tetrahydro-2H-2-pyran-2-yl)oxy]propyl}oxiran-2-yl}methanol

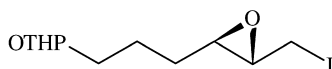
$[\alpha]_D^{25} = +17.5$  (c 2.95, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R,3R)

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C<sub>11</sub>H<sub>19</sub>O<sub>3</sub>I

2-{3-[(2R,3S)-3-(iodomethyl)oxiran-2-yl]propoxy}tetrahydro-2H-2-pyran

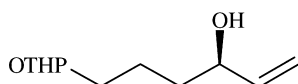
$[\alpha]_D^{25} = -3.8$  (c 2.4, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R,3S)

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C<sub>11</sub>H<sub>20</sub>O<sub>3</sub>

(3R)-6-(Tetrahydro-2H-2-pyran-2-yl)oxy-1-hexen-3-ol

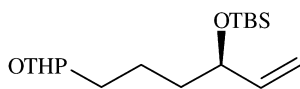
$[\alpha]_D^{25} = -9.1$  (c 0.45, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (2R)

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C<sub>17</sub>H<sub>34</sub>O<sub>3</sub>Si

*tert*-Butyl(dimethyl)((*1R*)-1-[3-(tetrahydro-2*H*-2-pyranyloxy)propyl]-2-propenyl)oxy)silane

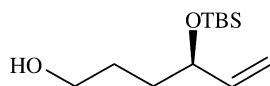
$[\alpha]_D^{25} = -7.1$  (c 1.95, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*1R*)

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C<sub>12</sub>H<sub>26</sub>O<sub>2</sub>Si

(*4R*)-4-[[1-(*tert*-Butyl)-1,1-dimethylsilyl]oxy]-5-hexen-1-ol

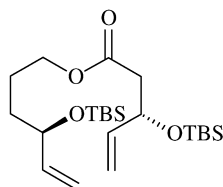
$[\alpha]_D^{25} = -5.3$  (c 2.55, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*4R*)

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C<sub>23</sub>H<sub>46</sub>O<sub>4</sub>Si<sub>2</sub>

*tert*-Butyl[[(*1R,8S*)-8-[[1-(*tert*-butyl)-1,1-dimethylsilyl]oxy]-6-methylene-1-vinyl-9-decenyloxy]dimethylsilane

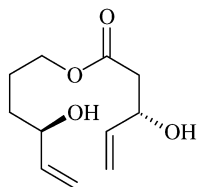
$[\alpha]_D^{25} = -2.8$  (c 0.7, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

Absolute configuration: (*1R,8S*)

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C<sub>11</sub>H<sub>18</sub>O<sub>4</sub>

(*4R*)-4-Hydroxy-5-hexenyl(*3S*)-3-hydroxy-4-pentenoate

$[\alpha]_D^{25} = -3.8$  (c 0.55, CHCl<sub>3</sub>)

Source of chirality: asymmetric synthesis

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