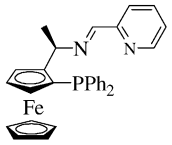
Xiangping Hu, Huicong Dai, Changmin Bai, Huilin Chen and Zhuo Zheng*

Tetrahedron: Asymmetry *15 (2004) 1065*



$C_{30}H_{27}FeN_2P$

(*R*)-*N*-(Pyridin-2-methylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Ee >98%

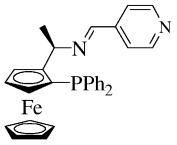
$[\alpha]_D^{25} = -378$ (*c* 0.15, $CHCl_3$)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*

Xiangping Hu, Huicong Dai, Changmin Bai, Huilin Chen and Zhuo Zheng*

Tetrahedron: Asymmetry *15 (2004) 1065*



$C_{30}H_{27}FeN_2P$

(*R*)-*N*-(Pyridin-4-methylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Ee >98%

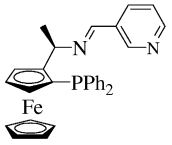
$[\alpha]_D^{25} = -454$ (*c* 0.166, CH_2Cl_2)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*

Xiangping Hu, Huicong Dai, Changmin Bai, Huilin Chen and Zhuo Zheng*

Tetrahedron: Asymmetry *15 (2004) 1065*



$C_{30}H_{27}FeN_2P$

(*R*)-*N*-(Pyridin-3-methylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Ee >98%

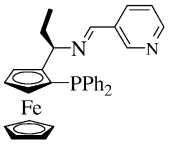
$[\alpha]_D^{25} = -495$ (*c* 0.14, CH_2Cl_2)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*

Xiangping Hu, Huicong Dai, Changmin Bai, Huilin Chen and Zhuo Zheng*

Tetrahedron: Asymmetry *15 (2004) 1065*



$C_{31}H_{29}FeN_2P$

(*R*)-*N*-(Pyridin-3-methylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]propylamine

Ee >98%

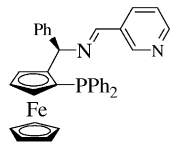
$[\alpha]_D^{25} = -404$ (*c* 0.20, CH_2Cl_2)

Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]propylamine

Absolute configuration: central chirality: *R*, planar chirality: *S*

Xiangping Hu, Huicong Dai, Changmin Bai, Huilin Chen and Zhuo Zheng*

Tetrahedron: Asymmetry *15 (2004) 1065*

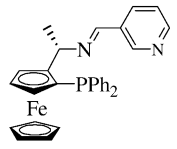


Ee >98%
$[\alpha]_D^{25} = -421$ (*c* 0.22, CH_2Cl_2)
Source of chirality: (*R*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]phenylmethylamine
Absolute configuration: central chirality: *R*, planar chirality: *S*

$C_{35}H_{29}FeN_2P$
(*R*)-*N*-(Pyridin-3-methylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]phenylmethylamine

Xiangping Hu, Huicong Dai, Changmin Bai, Huilin Chen and Zhuo Zheng*

Tetrahedron: Asymmetry *15 (2004) 1065*

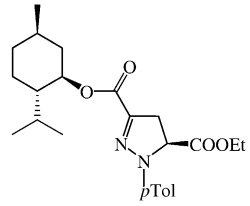


Ee >98%
$[\alpha]_D^{25} = -69$ (*c* 0.21, CH_2Cl_2)
Source of chirality: (*S*)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine
Absolute configuration: central chirality: *S*, planar chirality: *S*

$C_{30}H_{27}FeN_2P$
(*S*)-*N*-(Pyridin-3-methylene)-1-[(*S*)-2-(diphenylphosphino)ferrocenyl]ethylamine

Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1077*

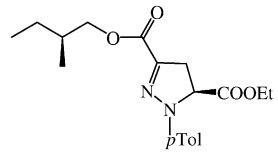


$[\alpha]_D^{25} = -16.0$ (*c* 0.41, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: 3-(1*R*,2*S*,5*R*),5-(*S*)

$C_{24}H_{34}N_2O_4$
1-(4-Methylphenyl)-3-[(1*R*,2*S*,5*R*)-menthyloxycarbonyl]-5-(*S*)-ethoxycarbonyl-4,5-dihydropyrazole

Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1077*

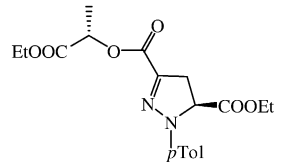


$[\alpha]_D^{25} = -31.2$ (*c* 0.53, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: 3-(2*S*),5-(*S*)

$C_{19}H_{26}N_2O_4$
1-(4-Methylphenyl)-3-[(2*S*)-2-methylbutoxycarbonyl]-5-(*S*)-ethoxycarbonyl-4,5-dihydropyrazole

Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1077*

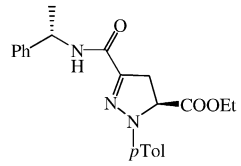


$[\alpha]_D^{25} = -11.8$ (*c* 0.32, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: 3-(2*S*),5-(*S*)

$C_{19}H_{24}N_2O_6$
1-(4-Methylphenyl)-3-[(2*S*)-(2-ethoxycarbonyl)ethoxycarbonyl]-5-(*S*)-ethoxycarbonyl-4,5-dihydropyrazole

Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1077*

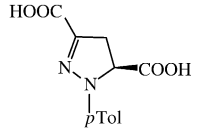


$[\alpha]_D^{25} = -36.2$ (*c* 0.24, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: 3-(2*S*),5-(*S*)

$C_{22}H_{25}N_3O_3$
1-(4-Methylphenyl)-3-[1-(2*S*)-(2-phenyl)ethylamino]-5-(*S*)-ethoxycarbonyl-4,5-dihydropyrazole

Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1077*

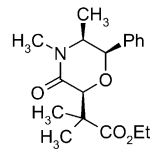


$[\alpha]_D^{25} = -5.8$ (*c* 0.40, DMSO)
Source of chirality: the precursor
Absolute configuration: 5-(*S*)

$C_{12}H_{12}N_2O_4$
1-(4-Methylphenyl)-3-hydroxycarbonyl-5-(*S*)-hydroxycarbonyl-4,5-dihydropyrazole

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

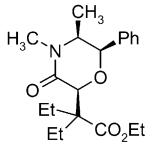


De >97%
$[\alpha]_D^{25} = -131.5$ (*c* 1.17, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{18}H_{25}NO_4$
2-(4,5-Dimethyl-3-oxo-6-phenyl morpholin-2-yl)-2-methyl propionic acid ethyl ester

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

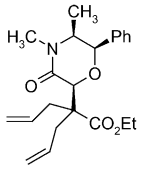


De >98%
$[\alpha]_D^{25} = -139.6$ (*c* 0.5, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{20}H_{29}NO_4$
2-(4,5-Dimethyl-3-oxo-6-phenyl morpholin-2-yl)-2-ethyl butyric acid ethyl ester

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

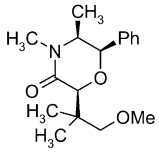


De >97%
$[\alpha]_D^{25} = -110.6$ (*c* 0.5, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{22}H_{29}NO_4$
2-Allyl-2-(4,5-dimethyl-3-oxo-6-phenyl morpholin-2-yl)-pent-4-enoic acid ethyl ester

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

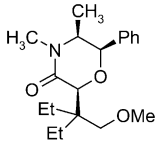


De >97%
$[\alpha]_D^{25} = -191.7$ (*c* 3.6, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{17}H_{25}NO_3$
2-(2-Methoxy-1,1-dimethyl ethyl)-4,5-dimethyl-6-phenyl morpholin-3-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

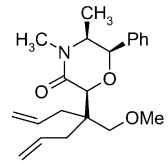


De >98%
$[\alpha]_D^{25} = -168.6$ (*c* 0.9, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{19}H_{29}NO_3$
2-(1-Ethyl-1-methoxymethyl propyl)-4,5-dimethyl-6-phenyl morpholin-3-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*



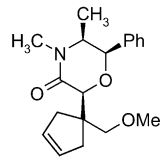
De >97%
$[\alpha]_D^{25} = -148.9$ (*c* 1.05, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{21}H_{29}NO_3$

2-(1-Allyl-1-methoxymethyl but-3-enyl)-4,5-dimethyl-6-phenyl morpholin-3-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*



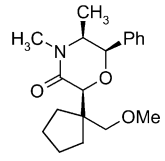
De >97%
$[\alpha]_D^{25} = -160.3$ (*c* 2.5, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{19}H_{25}NO_3$

2-(1-Methoxymethyl-cyclopent-3-enyl)-4,5-dimethyl-6-phenyl morpholin-3-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*



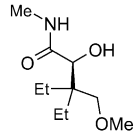
De >96%
$[\alpha]_D^{25} = -144.6$ (*c* 2.6, $CHCl_3$)
Source of chirality: (−)-ephedrine
Absolute configuration: 2*S*,5*S*,6*R*

$C_{19}H_{27}NO_3$

2-(1-Methoxymethyl cyclopentyl)-4,5-dimethyl-6-phenyl morpholin-3-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*



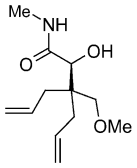
Ee >98%
$[\alpha]_D^{25} = -51.6$ (*c* 0.8, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: 2*S*

$C_{10}H_{21}NO_3$

3-Ethyl-2-hydroxy-3-methoxymethyl pentanoic acid methylamide

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

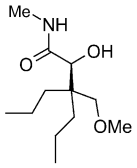


Ee >98%
$[\alpha]_D^{25} = -47.5$ (*c* 0.8, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: 2*S*

$C_{12}H_{21}NO_3$
3-Allyl-2-hydroxy-3-methoxymethyl hex-5-enoic acid methylamide

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

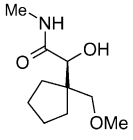


Ee >98%
$[\alpha]_D^{25} = -39.4$ (*c* 1.4, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: 2*S*

$C_{12}H_{25}NO_3$
2-Hydroxy-3-methoxymethyl-3-propyl-hexanoic acid methylamide

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

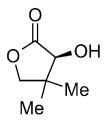


Ee >98%
$[\alpha]_D^{25} = -47.7$ (*c* 1.3, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: 2*S*

$C_{10}H_{19}NO_3$
2-Hydroxy-2-(1-methoxymethyl cyclopentyl)-*N*-methyl acetamide

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

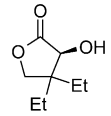


Ee >98%
$[\alpha]_D^{25} = +51.8$ (*c* 2.0, H_2O)
Source of chirality: synthesis
Absolute configuration: 3*S*

$C_6H_{10}O_3$
3-Hydroxy-4,4-dimethyl dihydro furan-2-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

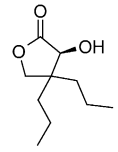


Ee >98%
$[\alpha]_D^{25} = +14.9$ (*c* 1.95, CH_3OH)
Source of chirality: synthesis
Absolute configuration: 3*S*

$C_8H_{14}O_3$
4,4-Diethyl-3-hydroxy-dihydro-furan-2-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

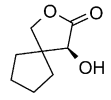


Ee >98%
$[\alpha]_D^{25} = +8.4$ (*c* 3.8, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: 3*S*

$C_{10}H_{18}O_3$
3-Hydroxy-4,4-dipropyl-dihydro-furan-2-one

Bidhan A. Shinkre and A. R. A. S. Deshmukh*

Tetrahedron: Asymmetry *15 (2004) 1081*

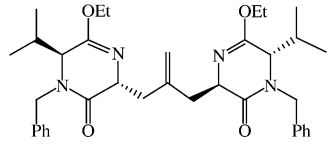


Ee >98%
$[\alpha]_D^{25} = +18.6$ (*c* 0.70, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: 3*S*

$C_8H_{12}O_3$
4-Hydroxy-2-oxa spiro[4.4]nonan-3-one

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

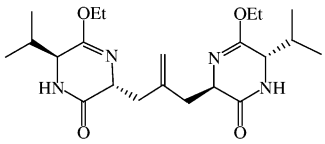


$[\alpha]_D = +41.6$ (*c* 1, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{36}H_{48}N_4O_4$
1-[(3′*R*,6′*S*)-1′-Benzyl-3′,6′-dihydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

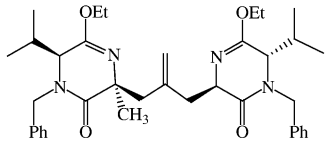


$[\alpha]_D = +58.7$ (c 1.1, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{22}H_{36}N_4O_4$
1-[(3′*R*,6′*S*)-3′,6′-Dihydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

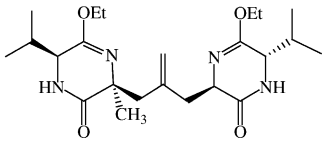


$[\alpha]_D = +29.4$ (c 1.6, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*S*,6′*S*,3″*R*,6″*S*

$C_{37}H_{50}N_4O_4$
1-[(3′*S*,6′*S*)-1′-Benzyl-3′-methyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

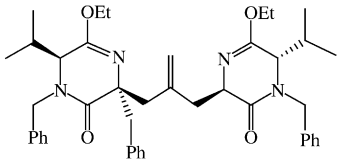


$[\alpha]_D = +56$ (c 1.7, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*S*,6′*S*,3″*R*,6″*S*

$C_{23}H_{38}N_4O_4$
1-[(3′*S*,6′*S*)-3′-Methyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

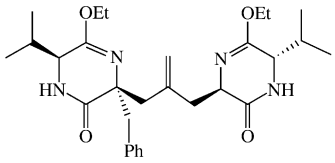


$[\alpha]_D = -10.5$ (c 1.6, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{43}H_{54}N_4O_4$
1-[(3′*R*,6′*S*)-l′,3′-Dibenzyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

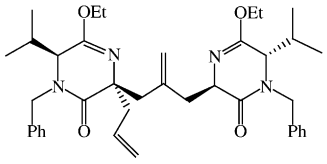


$[\alpha]_D = +10.2$ (c 1, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{29}H_{42}N_4O_4$
1-[(3′*R*,6′*S*)-3′-Benzyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

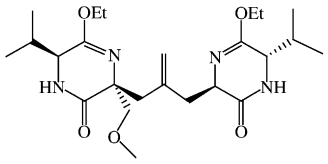


$[\alpha]_D = +6.7$ (c 1,$CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*S*,6′*S*,3″*R*,6″*S*

$C_{39}H_{52}N_4O_4$
1-[(3′*S*,6′*S*)-1′-Benzyl-3′-allyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

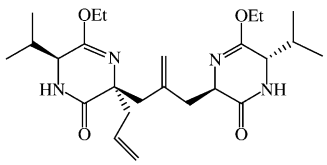


$[\alpha]_D = +17.9$ (c 2.5, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{24}H_{40}N_4O_5$
1-[(3′*R*,6′*S*)-3′-Methoxy-methyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

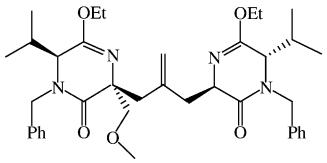


$[\alpha]_D = +42.6$ (c 0.8, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*S*,6′*S*,3″*R*,6″*S*

$C_{25}H_{40}N_4O_4$
1-[(3′*S*,6′*S*)-3′-Allyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

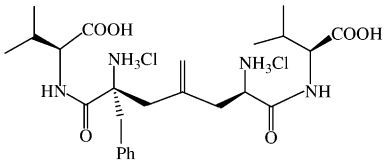


$[\alpha]_D = +38$ (c 0.6, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{38}H_{52}N_4O_5$
1-[(3′*R*,6′*S*)-1′-Benzyl-3′-methoxymethyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2′-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

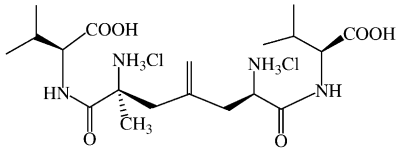


$[\alpha]_D = +11.5$ (c 2.4, 1M HCl)
Source of chirality: L-valine
Absolute configuration: 2*R*,6*R*

$C_{25}H_{40}Cl_2N_4O_6$
Tripeptide [(OH)-(L)-Val-2-benzyl-4-methylene-(2*R*,6*R*)-DAP-(L)-Val(OH)]·2HCl

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

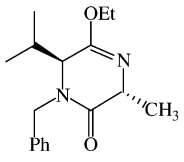


$[\alpha]_D = -25.5$ (c 0.6, 1M HCl)
Source of chirality: L-valine
Absolute configuration: 2*S*,6*R*

$C_{19}H_{36}Cl_2N_4O_6$
Tripeptide [(OH)-(L)-Val-2-methyl-4-methylene-(2*S*,6*R*)-DAP-(L)-Val(OH)]·2HCl

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

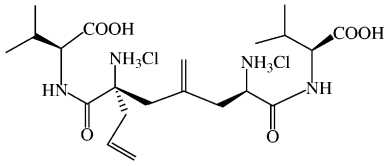


$[\alpha]_D = +24.2$ (c 1.7, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3*R*,6*S*

$C_{17}H_{24}N_2O_2$
(3*R*,6*S*)-1-Benzyl-5-hetoxy-6-isopropyl-3-methyl-3,6-dihydropirazin-2-one

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

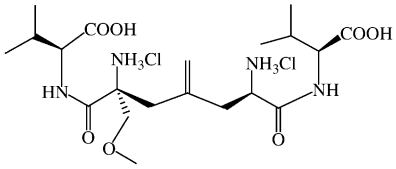


$[\alpha]_D = -17.4$ (*c* 1.1, 1M HCl)
Source of chirality: L-valine
Absolute configuration: 2*S*,6*R*

$C_{21}H_{38}Cl_2N_4O_6$
Tripeptide [(OH)-(L)-Val-2-allyl-4-methylene-(2*S*,6*R*)-DAP-(L)-Val(OH)]·2HCl

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

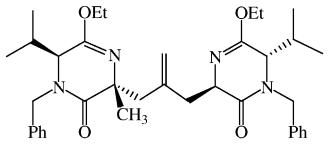


$[\alpha]_D = -32.9$ (*c* 0.55, 1M HCl)
Source of chirality: L-valine
Absolute configuration: 2*R*,6*R*

$C_{20}H_{38}Cl_2N_4O_7$
Tripeptide [(OH)-(L)-Val-2-metoxymethyl-4-methylene-(2*R*,6*R*)-DAP-(L)-Val(OH)]·2HCl

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

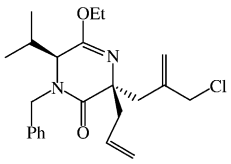


$[\alpha]_D = -26.6$ (*c* 1, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{37}H_{50}N_4O_4$
1-[(3′*R*,6′*S*)-1′-Benzyl-3′-methyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

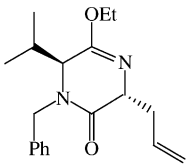


$[\alpha]_D = -36$ (*c* 1.7, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3*R*,6*S*

$C_{23}H_{31}ClN_2O_2$
(3*R*,6*S*)-3-Allyl-1-benzyl-5-hetoxy-6-isopropyl-3-(2-chloromethyl-2-propenyl)-6-hydropirazin-2-one

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

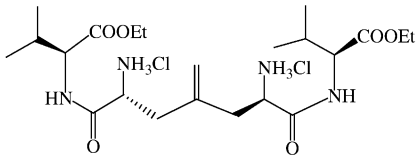


$[\alpha]_D = +44.8$ (c 2.1, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3*R*,6*S*

$C_{19}H_{26}N_2O_2$
(3*R*,6*S*)-3-Allyl-1-benzyl-5-hetoxy-6-isopropyl-3,6-dihydropirazin-2-one

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

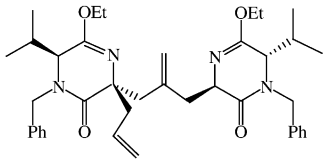


$[\alpha]_D = -23.5$ (c 0.8, 1M HCl)
Source of chirality: L-valine
Absolute configuration: 2*R*,6*R*

$C_{22}H_{42}Cl_2N_4O_6$
Tripeptide [(L)-Val ethylester-4-methylene-(2*R*,6*R*)-DAP-(L)-Val ethylester]·2HCl

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

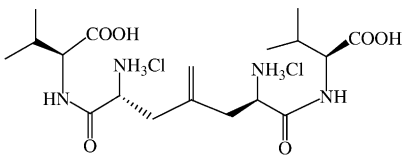


$[\alpha]_D = -31$ (c 0.5, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3′*R*,6′*S*,3″*R*,6″*S*

$C_{39}H_{52}N_4O_4$
1-[(3′*R*,6′*S*)-3′-Allyl-1′-benzyl-6′-hydro-5′-hetoxy-6′-isopropyl-pirazin-3′-yl-2-one]-3-[(3″*R*,6″*S*)-1″-benzyl-3″,6″-dihydro-5″-hetoxy-6″-isopropyl-pirazin-3″-yl-2″-one]-2-methylenepropane

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*

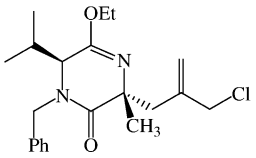


$[\alpha]_D = -47.2$ (c 1.1, 1M HCl)
Source of chirality: L-valine
Absolute configuration: 2*R*,6*R*

$C_{18}H_{34}Cl_2N_4O_6$
Tripeptide [(OH)-(L)-Val-4-methylene-(2*R*,6*R*)-DAP-(L)-Val(OH)]·2HCl

Daniele Balducci, Gianni Porzi* and Sergio Sandri*

Tetrahedron: Asymmetry *15 (2004) 1085*



$[\alpha]_D = -51.5$ (c 1, $CHCl_3$)
Source of chirality: L-valine
Absolute configuration: 3*R*,6*S*

$C_{21}H_{29}ClN_2O_2$
(3*R*,6*S*)-1-Benzyl-5-hetoxy-6-isopropyl-3-methyl-3-(2-chloromethyl-2-propenyl)-6-hydropirazin-2-one

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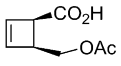
Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



Ee = 98.2%
$[\alpha]_D^{20} = +118.5$ (c 1.1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,4*S*)

$C_8H_{10}O_4$
(1*R*,4*S*)-4-Acetoxymethylcyclobut-2-ene carboxylic acid

Christophe Pichon, Christian Alexandre* and François Huet*

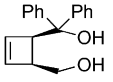
Tetrahedron: Asymmetry *15 (2004) 1103*

Ee = 98.2%
$[\alpha]_D^{20} = -338$ (c 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,5*S*)

$C_6H_6O_2$
(1*R*,5*S*)-3-Oxabicyclo[3.2.0]hept-6-en-2-one

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



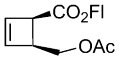
Ee = 98.2%
$[\alpha]_D^{20} = +126$ (c 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,4*S*)

$C_{18}H_{18}O_2$
(1*R*,4*S*)-4-(Hydroxymethylcyclobut-2-enyl)diphenylmethanol

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

Ee = 98.2%
$[\alpha]_D^{20} = -2$ (*c* 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,4*S*)

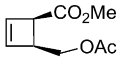


$C_{21}H_{18}O_4$
(1*R*,4*S*)-4-Acetoxymethylcyclobut-2-ene carboxylic acid 9*H*-fluoren-9-yl ester

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

Ee = 98.2%
$[\alpha]_D^{20} = +4.2$ (*c* 1.1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,4*S*)

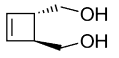


$C_9H_{12}O_4$
(1*R*,4*S*)-4-Acetoxymethylcyclobut-2-ene carboxylic acid methyl ester

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

Ee = 98.2%
$[\alpha]_D^{20} = +4.1$ (*c* 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*S*,4*S*)

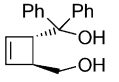


$C_6H_{10}O_2$
(1*S*,4*S*)-(4-Hydroxymethylcyclobut-2-enyl)methanol

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

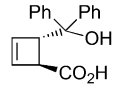
Ee = 98.2%
$[\alpha]_D^{20} = +75$ (*c* 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*S*,4*S*)



$C_{18}H_{18}O_2$
(1*S*,4*S*)-(4-Hydroxymethylcyclobut-2-enyl)diphenylmethanol

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{18}H_{16}O_3$

(1*S*,4*S*)-(4-Hydroxydiphenylmethyl)cyclobut-2-ene carboxylic acid

Ee = 98.2%

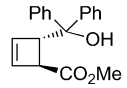
$[\alpha]_D^{20} = +170$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{19}H_{18}O_3$

(1*S*,4*S*)-(4-Hydroxydiphenylmethyl)cyclobut-2-ene carboxylic acid methyl ester

Ee = 98.2%

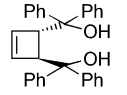
$[\alpha]_D^{20} = +176$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{30}H_{26}O_2$

(1*S*,4*S*)-[4-(Hydroxydiphenylmethyl)cyclobut-2-enyl]diphenylmethanol

Ee = 98.2%

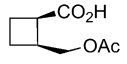
$[\alpha]_D^{20} = +76$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_8H_{12}O_4$

(1*R*,2*S*)-2-Acetoxymethylcyclobutane carboxylic acid

Ee = 99.9%

$[\alpha]_D^{20} = +9.1$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

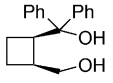
Ee = 99.9%
$[\alpha]_D^{20} = -62$ (*c* 1.3, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,5*S*)

$C_6H_8O_2$
(1*R*,5*S*)-3-Oxa-bicyclo[3.2.0]hept-6-en-2-one

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

Ee = 99.9%
$[\alpha]_D^{20} = +72$ (*c* 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,2*S*)

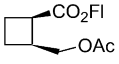


$C_{18}H_{20}O_2$
(1*R*,2*S*)-(2-Hydroxymethylcyclobutyl)diphenylmethanol

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

Ee = 99.9%
$[\alpha]_D^{20} = +16$ (*c* 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,2*S*)

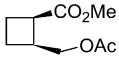


$C_{21}H_{20}O_4$
(1*R*,2*S*)-2-Acetoxymethylcyclobutane carboxylic acid 9*H*-fluoren-9-yl ester

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*

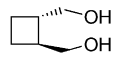
Ee = 99.9%
$[\alpha]_D^{20} = +38$ (*c* 1, $CHCl_3$)
Source of chirality: enzymatic acetylation
Absolute configuration: (1*R*,2*S*)



$C_9H_{14}O_4$
(1*R*,2*S*)-2-Acetoxymethylcyclobutane carboxylic acid methyl ester

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_6H_{12}O_2$

(1*S*,2*S*)-(2-Hydroxymethylcyclobutyl)methanol

Ee = 99.9%

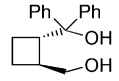
$[\alpha]_D^{20} = +4.8$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{18}H_{20}O_2$

(1*S*,2*S*)-(2-Hydroxymethylcyclobutyl)diphenylmethanol

Ee = 99.9%

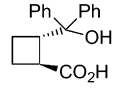
$[\alpha]_D^{20} = +99$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{18}H_{18}O_3$

(1*S*,2*S*)-(2-Hydroxydiphenylmethyl)cyclobutane carboxylic acid

Ee = 99.9%

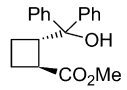
$[\alpha]_D^{20} = +93$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{19}H_{20}O_3$

(1*S*,2*S*)-(2-Hydroxydiphenylmethyl)cyclobutanecarboxylic acid methyl ester

Ee = 99.9%

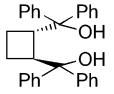
$[\alpha]_D^{20} = +135$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{30}H_{28}O_2$

(1*S*,2*S*)-[(2-Hydroxydiphenylmethyl)cyclobutyl]diphenylmethanol

Ee = 99.9%

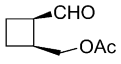
$[\alpha]_D^{20} = +189$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_8H_{12}O_3$

(1*R*,2*S*)-(2-Hydroxymethyl)cyclobutane carbaldehyde

Ee = 99.9%

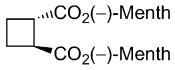
$[\alpha]_D^{20} = -31.5$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic acetylation

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_{24}H_{42}O_4$

(1*S*,2*S*)-Cyclobutane-1,2-dicarboxylic acid di-(−)-menthyl ester

De = 99.9%

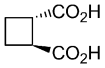
$[\alpha]_D^{20} = -69$ (*c* 1, $CHCl_3$)

Source of chirality: resolution

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

Christophe Pichon, Christian Alexandre* and François Huet*

Tetrahedron: Asymmetry *15 (2004) 1103*



$C_6H_8O_4$

(1*S*,2*S*)-Cyclobutane-1,2-dicarboxylic acid

Ee = 99.9%

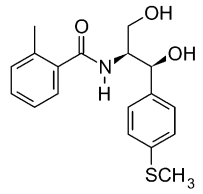
$[\alpha]_D^{20} = +115$ (*c* 1, EtOH)

Source of chirality: resolution

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

Maria Chrzanowska,* Agnieszka Dreas and Maria D. Rozwadowska

Tetrahedron: Asymmetry *15 (2004) 1113*

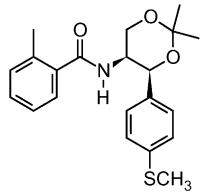


Ee = 100%
$[\alpha]_D^{20} = +84.7$ (*c* 1.005, MeOH)
Source of chirality: (1*S*,2*S*)-thiomicamine
Absolute configuration: (1*S*,2*S*)

$C_{18}H_{21}NO_3S$
(1*S*,2*S*)-2-*o*-Toluamide-1-[4-(methylthio)phenyl]-1,3-propanediol

Maria Chrzanowska,* Agnieszka Dreas and Maria D. Rozwadowska

Tetrahedron: Asymmetry *15 (2004) 1113*

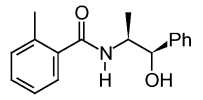


Ee = 100%
$[\alpha]_D^{20} = +119.8$ (*c* 1.065, $CHCl_3$)
Source of chirality: (1*S*,2*S*)-thiomicamine
Absolute configuration: (1*S*,2*S*)

$C_{21}H_{25}NO_3S$
(1*S*,2*S*)-2-*o*-Toluamide-1-[4-(methylthio)phenyl]-1,3-*O*-isopropylidenepropane

Maria Chrzanowska,* Agnieszka Dreas and Maria D. Rozwadowska

Tetrahedron: Asymmetry *15 (2004) 1113*

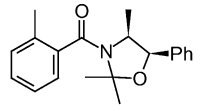


Ee = 100%
$[\alpha]_D^{20} = -99.7$ (*c* 1.02, $CHCl_3$)
Source of chirality: (1*R*,2*S*)-2-amino-1-phenylpropanol
Absolute configuration: (1*R*,2*S*)

$C_{17}H_{19}NO_2$
(1*R*,2*S*)-2-*o*-Toluamide-1-phenylpropanol

Maria Chrzanowska,* Agnieszka Dreas and Maria D. Rozwadowska

Tetrahedron: Asymmetry *15 (2004) 1113*

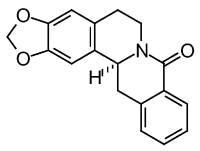


Ee = 100%
$[\alpha]_D^{20} = +22.9$ (*c* 0.995, $CHCl_3$)
Source of chirality: (1*R*,2*S*)-2-amino-1-phenylpropanol
Absolute configuration: (4*S*,5*R*)

$C_{20}H_{23}NO_2$
(4*S*,5*R*)-2,2,4-Trimethyl-3-*o*-toluoyl-5-phenyloxazolidine

Maria Chrzanowska,* Agnieszka Dreas and Maria D. Rozwadowska

Tetrahedron: Asymmetry *15 (2004) 1113*

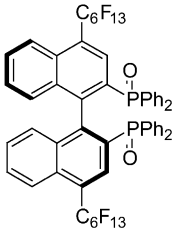


Ee >99%
$[\alpha]_D^{20} = -432.6$ (*c* 0.80, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (13a*S*)

$C_{18}H_{15}NO_3$
(13a*S*)-5,6,13,13a-Tetrahydro-2,3-methylenedioxy-8H-dibenzo[*a*,*g*]quinolizin-8-one

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

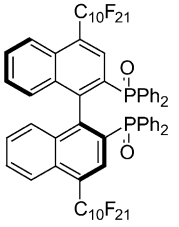


$[\alpha]_D^{25} = +33.2$ (*c* 2.3, DMF)

$C_{56}H_{30}F_{26}O_2P_2$
(*R*)-4,4′-PerfluorohexylBINAPO

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

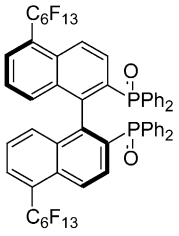


$[\alpha]_D^{25} = +31.3$ (*c* 2.3, DMF)

$C_{64}H_{30}F_{42}O_2P_2$
(*R*)-4,4′-PerfluorodecylBINAPO

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

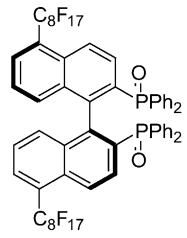


$[\alpha]_D^{25} = +35.7$ (*c* 1, DCM)

$C_{56}H_{30}F_{26}O_2P_2$
(*R*)-5,5′-PerfluorohexylBINAPO

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

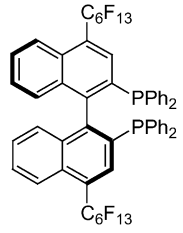


$[\alpha]_D^{25} = +73.4$ (c 1, DMF)

$C_{60}H_{30}F_{34}O_2P_2$
(*R*)-5,5′-PerfluorooctylBINAPO

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

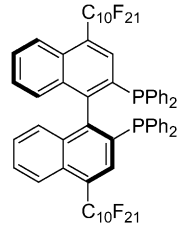


$[\alpha]_D^{25} = +37.5$ (c 1, DCM)

$C_{56}H_{30}F_{26}P_2$
(*R*)-4,4′-PerfluorohexylBINAP

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

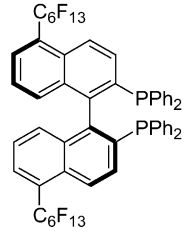


$[\alpha]_D^{25} = +37.3$ (c 1, DCM)

$C_{64}H_{30}F_{42}P_2$
(*R*)-4,4′-PerfluorodecylBINAP

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

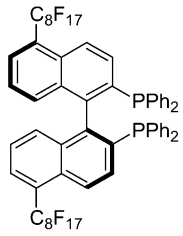


$[\alpha]_D^{25} = +35.7$ (c 1, DCM)

$C_{56}H_{30}F_{26}P_2$
(*R*)-5,5′-PerfluorohexylBINAP

Mikaël Berthod, Gerard Mignani and Marc Lemaire*

Tetrahedron: Asymmetry *15 (2004) 1121*

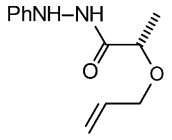


$[\alpha]_D^{25} = +35.5$ (*c* 1, DCM)

$C_{60}H_{30}F_{34}P_2$
(*R*)-5,5′-PerfluorooctylBINAP

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*

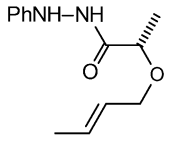


$[\alpha]_D^{25} = -16.6$ (*c* 0.16, $CHCl_3$)
Source of chirality: ethyl (*S*)-2-allyloxypropanoate
Absolute configuration: (2*S*)

$C_{12}H_{16}N_2O_2$
N-(2*S*)-Allyloxypropanoyl-*N*′-phenylhydrazine

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*

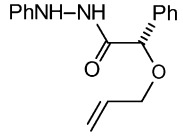


$[\alpha]_D^{25} = -18.3$ (*c* 0.75, $CHCl_3$)
Source of chirality: (2*S*)-(but-2-enyloxy)propanoate
Absolute configuration: (2*S*)

$C_{13}H_{18}N_2O_2$
N-(2*S*)-(But-2-enyloxy)propanoyl-*N*′-phenylhydrazine

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*

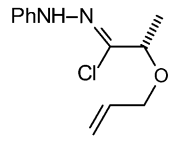


$[\alpha]_D^{25} = -4.3$ (*c* 1.12, $CHCl_3$)
Source of chirality: ethyl (2*S*)-allyloxyphenylacetate
Absolute configuration: (2*S*)

$C_{17}H_{18}N_2O_2$
N-(2*S*)-Allyloxyphenylacetyl-*N*′-phenylhydrazine

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*



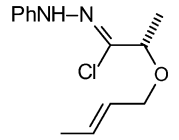
$C_{12}H_{15}ClN_2O$

N-[1-Chloro-(2*S*)-allyloxy]propylidene-*N*′-phenylhydrazine

$[\alpha]_D^{25} = +13.1$ (*c* 0.23, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: (2*S*)

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*



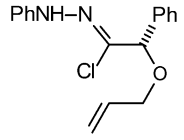
$C_{13}H_{17}ClN_2O$

N-[1-Chloro-(2*S*)-(but-2-enyloxy)]propylidene-*N*′-phenylhydrazine

$[\alpha]_D^{25} = +96.7$ (*c* 0.75, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: (2*S*)

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*



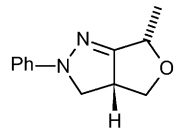
$C_{17}H_{17}ClN_2O$

N-[(1-Chloro-(2*S*)-allyloxy)phenylacetylidene]-*N*′-phenylhydrazine

$[\alpha]_D^{25} = +54.6$ (*c* 0.80, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: (2*S*)

Lara De Benassuti, Luisa Garanti and Giorgio Molteni*

Tetrahedron: Asymmetry *15 (2004) 1127*



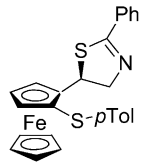
$C_{12}H_{14}N_2O$

2-Phenyl-(3a*S*)-(6*S*)-methyl-2,3,3a,4,5,6-hexahydro-furo[3,4-*c*]pyrazole

$[\alpha]_D^{25} = -24.7$ (*c* 0.56, $CHCl_3$)
Source of chirality: the precursor
Absolute configuration: (3a*S*),(6*S*)

Luca Bernardi, Bianca F. Bonini,* Mauro Comes-Franchini, Cristina Femoni, Mariafrancesca Fochi* and Alfredo Ricci

Tetrahedron: Asymmetry *15 (2004) 1133*



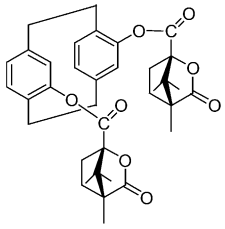
$C_{26}H_{23}FeNS_2$

(5*S*)-5-[(*S*$_{Fc}$)-2-(*p*-Tolylsulfanyl)ferrocenyl]-2-phenyl-1,3-thiazoline

$[\alpha]_D^{20} = +421.5$ (*c* 0.64,$CHCl_3$)
De >99
Ee >99
Source of chirality: asymmetric synthesis
Absolute configuration: (5*S*,*S*$_{Fc}$)

Biao Jiang* and Xiao-Long Zhao

Tetrahedron: Asymmetry *15 (2004) 1141*



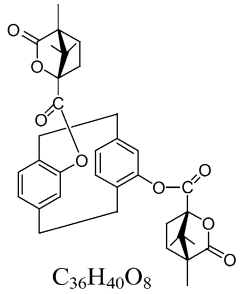
$C_{36}H_{40}O_8$

(*S*ρ,*S*)-(−)-[2.2]Paracyclophane-4,12-bis(camphanate)

De >99% (by NMR)
$[\alpha]_D^{20} = -55.9$ (*c* 1, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: *S*ρ,*S*

Biao Jiang* and Xiao-Long Zhao

Tetrahedron: Asymmetry *15 (2004) 1141*



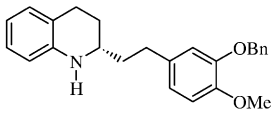
$C_{36}H_{40}O_8$

(*R*ρ,*S*)-(−)-[2.2]Paracyclophane-4,12-bis(camphanate)

De >99% (by NMR)
$[\alpha]_D^{20} = +21.8$ (*c* 1, $CHCl_3$)
Source of chirality: synthesis
Absolute configuration: *R*ρ,*S*

Peng-Yu Yang and Yong-Gui Zhou*

Tetrahedron: Asymmetry *15 (2004) 1145*



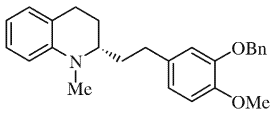
$C_{25}H_{27}NO_2$

(−)-(*S*)-2-(3′-Benzyloxy-4′-methoxy-phenethyl)-1,2,3,4-tetrahydroquinoline

Ee = 96% (by chiral HPLC)
$[\alpha]_D^{20} = -38.6$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric hydrogenation
Absolute configuration: *S*

Peng-Yu Yang and Yong-Gui Zhou*

Tetrahedron: Asymmetry *15 (2004) 1145*

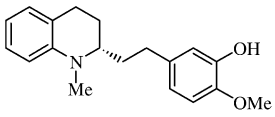


Ee = 96%
$[\alpha]_D^{20} = -16.1$ (*c* 0.8, $CHCl_3$)
Source of chirality: asymmetric hydrogenation
Absolute configuration: *S*

$C_{26}H_{29}NO_2$
(−)-(*S*)-2-(3′-Benzyloxy-4′-methoxy-phenethyl)-2,3,4-tetrahydro-1-methylquinoline

Peng-Yu Yang and Yong-Gui Zhou*

Tetrahedron: Asymmetry *15 (2004) 1145*

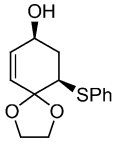


Ee = 96% (by chiral HPLC)
$[\alpha]_D^{20} = -26.1$ (*c* 0.44, $CHCl_3$)
Source of chirality: asymmetric hydrogenation
Absolute configuration: *S*

$C_{19}H_{23}NO_2$
(−)-(*S*)-2-(3′-Hydroxy-4′-methoxy-phenethyl)-2,3,4-tetrahydro-1-methylquinoline

Ramon Alibés, Pedro de March, Marta Figueredo,* Josep Font and Georgina Marjanet

Tetrahedron: Asymmetry *15 (2004) 1151*

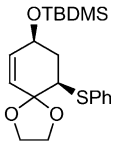


Ee = 100%
$[\alpha]_D^{20} = -15$ (*c* 0.95, $CHCl_3$)
Source of chirality: (*R*)-10-Phenylthio-1,4-dioxaspiro[4.5]dec-6-en-8-one
Absolute configuration: (8*S*,10*R*)

$C_{14}H_{16}O_3S$
(−)-(8*S*,10*R*)-10-Phenylthio-1,4-dioxaspiro[4.5]dec-6-en-8-ol

Ramon Alibés, Pedro de March, Marta Figueredo,* Josep Font and Georgina Marjanet

Tetrahedron: Asymmetry *15 (2004) 1151*

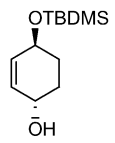


Ee = 100%
$[\alpha]_D^{20} = -56$ (*c* 0.85, $CHCl_3$)
Source of chirality: (*R*)-10-Phenylthio-1,4-dioxaspiro[4.5]dec-6-en-8-one
Absolute configuration: (8*S*,10*R*)

$C_{20}H_{30}O_3SSi$
(−)-(8*S*,10*R*)-8-(*tert*-Butyldimethylsilyloxy)-10-phenylthio-1,4-dioxaspiro[4.5]dec-6-ene

Ramon Alibés, Pedro de March, Marta Figueredo,* Josep Font and Georgina Marjanet

Tetrahedron: Asymmetry *15 (2004) 1151*



$C_{12}H_{24}O_2Si$

(−)-(1*S*,4*S*)-4-(*tert*-Butyldimethylsilyloxy)cyclohex-2-enol

Ee = 94%

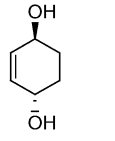
$[\alpha]_D^{20} = -95$ (*c* 0.95, $CHCl_3$)

Source of chirality: (*R*)-10-Phenylthio-1,4-dioxaspiro[4.5]dec-6-en-8-one

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

Ramon Alibés, Pedro de March, Marta Figueredo,* Josep Font and Georgina Marjanet

Tetrahedron: Asymmetry *15 (2004) 1151*



$C_6H_{10}O_2$

(−)-4-(1*S*,4*S*)-Cyclohex-2-ene-1,4-diol

Ee = 95%

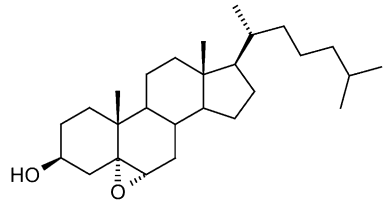
$[\alpha]_D^{20} = -112$ (*c* 0.25, $CHCl_3$)

Source of chirality: (*R*)-10-Phenylthio-1,4-dioxaspiro[4.5]dec-6-en-8-one

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

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*



$C_{27}H_{46}O_2$

5α,6α-Epoxycholestan-3β-ol

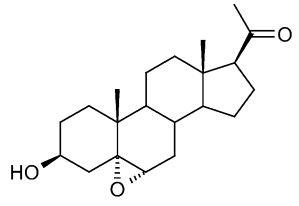
De = 100%

$[\alpha]_D^{21} = -44.5$ (*c* 0.5, $CHCl_3$)

Source of chirality: enzymatic kinetic resolution

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*



$C_{21}H_{32}O_3$

5α,6α-Epoxy-3β-hydroxypregnan-20-one

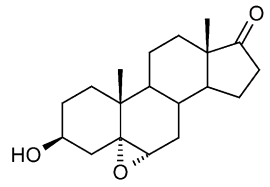
De = 100%

$[\alpha]_D^{21} = +6.35$ (*c* 0.84, $CHCl_3$)

Source of chirality: enzymatic kinetic resolution

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*



$C_{19}H_{28}O_3$

5α,6α-Epoxy-3β-hydroxyandrostan-17-one

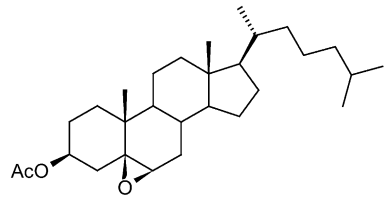
De = 100%

$[\alpha]_D^{21} = -4.3$ (*c* 0.5, $CHCl_3$)

Source of chirality: enzymatic kinetic resolution

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*



$C_{29}H_{48}O_3$

5β,6β-Epoxycholestan-3β-yl acetate

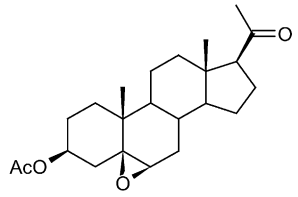
De = 100%

$[\alpha]_D^{21} = -0.6$ (*c* 1.09, $CHCl_3$)

Source of chirality: enzymatic kinetic resolution

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*



$C_{23}H_{34}O_4$

5β,6β-Epoxy-20-oxo-pregnan-3β-yl acetate

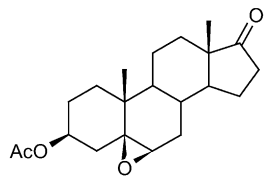
De = 100%

$[\alpha]_D^{21} = +50.6$ (*c* 1.18, $CHCl_3$)

Source of chirality: enzymatic kinetic resolution

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*



$C_{21}H_{30}O_4$

5β,6β-Epoxy-17-oxo-androstan-3β-yl acetate

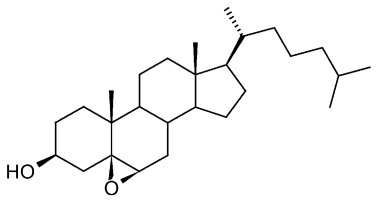
De = 100%

$[\alpha]_D^{21} = +43.0$ (*c* 1.4, $CHCl_3$)

Source of chirality: enzymatic kinetic resolution

M. Manuel Cruz Silva, Sergio Riva and M. Luisa Sá e Melo*

Tetrahedron: Asymmetry *15 (2004) 1173*

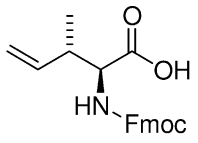


De = 100%
$[\alpha]_D^{21} = +8.0$ (*c* 0.5, $CHCl_3$)
Source of chirality: enzymatic kinetic resolution

$C_{27}H_{46}O_2$
5β,6β-Epoxycholestan-3β-ol

Irene Izzo,* Elvira Avallone, Luca Della Corte, Nakia Maulucci and Francesco De Riccardis*

Tetrahedron: Asymmetry *15 (2004) 1181*



Ee >95%
$[\alpha]_D^{25} = -3.8$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,3*S*)

$C_{21}H_{21}NO_4$
(2*S*,3*S*)-2-(9*H*-Fluoren-9-ylmethoxycarbonylamino)-3-methyl-4-pentenoic acid

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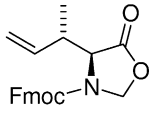
Irene Izzo,* Elvira Avallone, Luca Della Corte, Nakia Maulucci and Francesco De Riccardis*

Tetrahedron: Asymmetry *15 (2004) 1181*



Ee >95%
$[\alpha]_D^{25} = +68.2$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*S*,2′*S*)

$C_{22}H_{21}NO_4$
(4*S*)-3-(9*H*-Fluoren-9-ylmethoxycarbonyl)-4-[(*S*)-3-buten-2-yl]-oxazolidin-5-one

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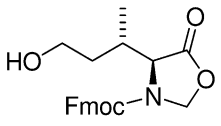
Irene Izzo,* Elvira Avallone, Luca Della Corte, Nakia Maulucci and Francesco De Riccardis*

Tetrahedron: Asymmetry *15 (2004) 1181*

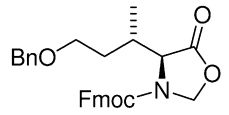


Ee >95%
$[\alpha]_D^{25} = +14.8$ (*c* 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*S*,2′*S*)

$C_{21}H_{23}NO_5$
(4*S*)-3-(9*H*-Fluoren-9-ylmethoxycarbonyl)-4-[(*S*)-4-hydroxybutan-2-yl]-oxazolidin-5-one

Irene Izzo,* Elvira Avallone, Luca Della Corte, Nakia Maulucci and Francesco De Riccardis*

Tetrahedron: Asymmetry *15 (2004) 1181*



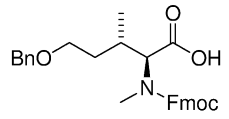
Ee >95%
$[\alpha]_D^{25} = +25.6$ (c 1.0, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*S*,2′*S*)

$C_{29}H_{29}NO_5$

(4*S*)-3-(9*H*-Fluoren-9-ylmethoxycarbonyl)-4-[(*S*)-4-benzyloxybutan-2-yl]-oxazolidin-5-one

Irene Izzo,* Elvira Avallone, Luca Della Corte, Nakia Maulucci and Francesco De Riccardis*

Tetrahedron: Asymmetry *15 (2004) 1181*



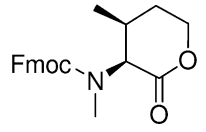
Ee >95%
$[\alpha]_D^{25} = -52.2$ (c 0.2, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,3*S*)

$C_{29}H_{31}NO_5$

(2*S*,3*S*)-5-Benzyloxy-2-[(9*H*-fluoren-9-ylmethoxycarbonyl)-methylamino]-3-methyl-pentanoic acid

Irene Izzo,* Elvira Avallone, Luca Della Corte, Nakia Maulucci and Francesco De Riccardis*

Tetrahedron: Asymmetry *15 (2004) 1181*



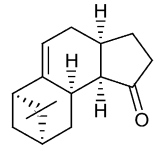
Ee >95%
$[\alpha]_D^{25} = -75.3$ (c 0.5, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (3*S*,4*S*)

$C_{22}H_{23}NO_4$

(3*S*,4*S*)-3-[(9*H*-Fluoren-9-ylmethoxycarbonyl)-methylamino]-4-methyl-tetrahydro-2H-pyran-2-one

Lucio Minuti,* Aldo Taticchi,* Assunta Marrocchi, Alessandra Broggi and Eszter Gacs-Baitz

Tetrahedron: Asymmetry *15 (2004) 1187*



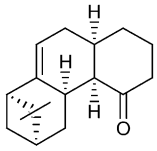
$[\alpha]_D^{25} = +16$ (c 1.24, $CHCl_3$)
Source of chirality: (+)-nopadiene

$C_{16}H_{22}O$

(3a*R*,6*R*,8*S*,9a*R*,9b*R*)-(+)-7,7-Dimethyl-2,3,3a,4,6,7,8,9,9a,9b-decahydro-1*H*-6,8-methanocyclopenta[*a*]-naphthalene-1-one

Lucio Minuti,* Aldo Taticchi,* Assunta Marrocchi, Alessandra Broggi and Eszter Gacs-Baitz

Tetrahedron: Asymmetry *15 (2004) 1187*



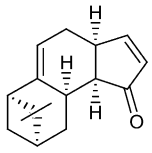
$[\alpha]_D^{25} = -74$ (c 0.21, $CHCl_3$)
Source of chirality: (+)-nopadiene

$C_{17}H_{24}O$

(1*R*,3*S*,4a*R*,4b*R*,8*R*)-(−)-2,2-Dimethyl-1,3,4,4a,4b,6,7,8,8a,9-decahydro-1,3-methanophenanthren-5(2*H*)-one

Lucio Minuti,* Aldo Taticchi,* Assunta Marrocchi, Alessandra Broggi and Eszter Gacs-Baitz

Tetrahedron: Asymmetry *15 (2004) 1187*



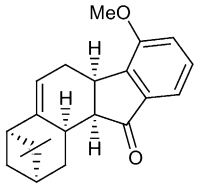
$[\alpha]_D^{25} = +38$ (c 0.95, $CHCl_3$)
Source of chirality: (+)-nopadiene

$C_{16}H_{22}O$

(3a*S*,6*R*,8*S*,9a*R*,9b*R*)-(+)-7,7-Dimethyl-3a,4,6,7,8,9,9a,9b-octahydro-1*H*-6,8-methanocyclopenta[*a*]-naphthalene-1-one

Lucio Minuti,* Aldo Taticchi,* Assunta Marrocchi, Alessandra Broggi and Eszter Gacs-Baitz

Tetrahedron: Asymmetry *15 (2004) 1187*



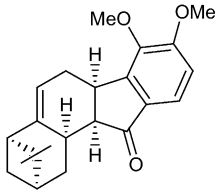
$[\alpha]_D^{25} = -180$ (c 0.86, $CHCl_3$)
Source of chirality: (+)-nopadiene

$C_{21}H_{24}O_2$

(2*S*,4*R*,6a*R*,11a*S*,11b*R*)-(−)-7-Methoxy-3,3-dimethyl-1,2,3,4,6,6a,11a,11b-octahydro-11*H*-2,4-methanobenzo[*a*]-fluoren-11-one

Lucio Minuti,* Aldo Taticchi,* Assunta Marrocchi, Alessandra Broggi and Eszter Gacs-Baitz

Tetrahedron: Asymmetry *15 (2004) 1187*



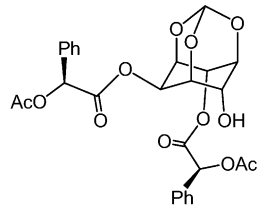
$[\alpha]_D^{25} = -111$ (c 0.60, $CHCl_3$)
Source of chirality: (+)-nopadiene

$C_{22}H_{26}O_3$

(2*S*,4*R*,6a*R*,11a*S*,11b*R*)-(−)-7,8-Dimethoxy-3,3-dimethyl-1,2,3,4,6,6a,11a,11b-octahydro-11*H*-2,4-methanobenzo[*a*]fluoren-11-one

Kana M. Sureshan and Yutaka Watanabe*

Tetrahedron: Asymmetry *15 (2004) 1193*

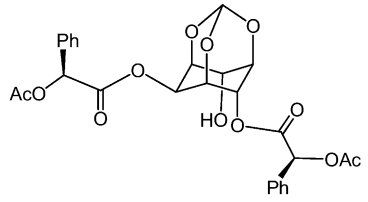


$[\alpha]_D^{25} = +60$ (c 1, $CHCl_3$)
Source of chirality: chemical resolution

$C_{27}H_{26}O_{12}$
L-2,4-Di-*O*-[(*S*)-*O*-acetylmandeloyl]-*myo*-inositol 1,3,5-orthoformate

Kana M. Sureshan and Yutaka Watanabe*

Tetrahedron: Asymmetry *15 (2004) 1193*

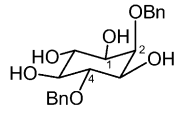


$[\alpha]_D^{25} = +65.7$ (c 2, $CHCl_3$)
Source of chirality: chemical resolution

$C_{27}H_{26}O_{12}$
D-2,4-Di-*O*-[(*S*)-*O*-acetylmandeloyl]-*myo*-inositol 1,3,5-orthoformate

Kana M. Sureshan and Yutaka Watanabe*

Tetrahedron: Asymmetry *15 (2004) 1193*

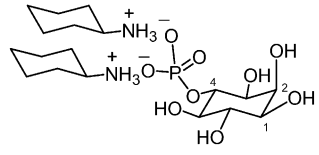


$[\alpha]_D^{25} = -28.9$ (c 1, EtOH)
Source of chirality: chemical resolution

$C_{20}H_{24}O_6$
L-2,4-Di-*O*-benzyl-*myo*-inositol

Kana M. Sureshan and Yutaka Watanabe*

Tetrahedron: Asymmetry *15 (2004) 1193*

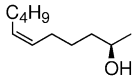


$[\alpha]_D^{25} = +2$ (c 2, H_2O)
Source of chirality: chemical resolution

$C_{18}H_{39}O_9N_2P$
Bis-cyclohexylammonium D-*myo*-inositol-4-phosphate

Nicolas Pétry, Arnaud Parenty and Jean-Marc Campagne*

Tetrahedron: Asymmetry *15 (2004) 1199*

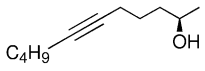


$C_{11}H_{22}O$
(*R*)-Nostrenol

Ee: >95%
$[\alpha]_D^{25} = -4.9$ (*c* 0.91, $CHCl_3$)
Source of chirality: asymmetric hydrogen transfer (Noyori)
Absolute configuration: (*R*)

Nicolas Pétry, Arnaud Parenty and Jean-Marc Campagne*

Tetrahedron: Asymmetry *15 (2004) 1199*

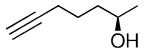


$C_{11}H_{20}O$
(*R*)-Undec-6-yn-2-ol

Ee: >95%
$[\alpha]_D^{25} = -10.9$ (*c* 0.92, $CHCl_3$)
Source of chirality: asymmetric hydrogen transfer (Noyori)
Absolute configuration: (*R*)

Nicolas Pétry, Arnaud Parenty and Jean-Marc Campagne*

Tetrahedron: Asymmetry *15 (2004) 1199*

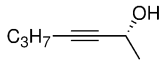


$C_7H_{12}O$
(*R*)-Hept-6-yn-2-ol

Ee: >95%
$[\alpha]_D^{25} = -14.5$ (*c* 1.01, $CHCl_3$)
Source of chirality: asymmetric hydrogen transfer (Noyori)
Absolute configuration: (*R*)

Nicolas Pétry, Arnaud Parenty and Jean-Marc Campagne*

Tetrahedron: Asymmetry *15 (2004) 1199*



$C_7H_{12}O$
(*R*)-Hept-3-yn-2-ol

Ee: >95%
$[\alpha]_D^{25} = +30.7$ (*c* 1.01, $CHCl_3$)
Source of chirality: asymmetric hydrogen transfer (Noyori)
Absolute configuration: (*R*)