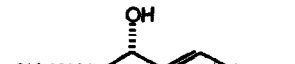
P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



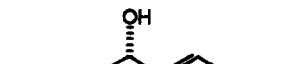
$C_7H_{12}O_3$

ee 84%; $[\alpha]_D^{23}$ = + 22.8 ($CHCl_3$, *c* 1)

(4*S*, 2*E*)-4-Hydroxyhept-2-enoic acid

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



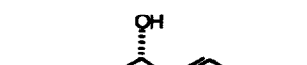
$C_8H_{14}O_3$

ee 82%; $[\alpha]_D^{23}$ = + 22.5 ($CHCl_3$, *c* 1)

(4*S*, 2*E*)-4-Hydroxyoct-2-enoic acid

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



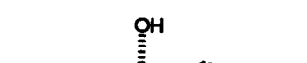
$C_9H_{16}O_3$

ee 74%; $[\alpha]_D^{23}$ = + 22.0 ($CHCl_3$, *c* 1)

(4*S*, 2*E*)-4-Hydroxynon-2-enoic acid

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



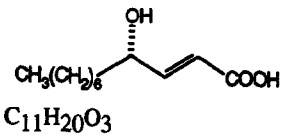
$C_{10}H_{18}O_3$

ee 82%; $[\alpha]_D^{23}$ = + 19.6 ($CHCl_3$, *c* 1)

(4*S*, 2*E*)-4-Hydroxydec-2-enoic acid

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



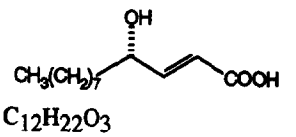
$C_{11}H_{20}O_3$

ee 85%; $[\alpha]_D^{23}$ = + 18.2 ($CHCl_3$, *c* 1)

(4*S*, 2*E*)-4-Hydroxyundec-2-enoic acid

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



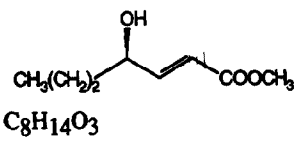
$C_{12}H_{22}O_3$

ee 83%; $[\alpha]_D^{23}$ = + 19.2 ($CHCl_3$, *c* 1)

(4*S*, 2*E*)-4-Hydroxydodec-2-enoic acid

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



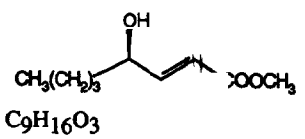
$C_8H_{14}O_3$

ee 75%; $[\alpha]_D^{23}$ = -16.5 ($CHCl_3$, *c* 1)

Methyl (4*R*, 2*E*)-4-hydroxyhept-2-enoate

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993**, *4*, 1397



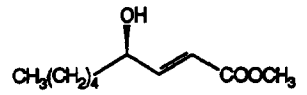
$C_9H_{16}O_3$

ee 77%; $[\alpha]_D^{23}$ = -18.3 ($CHCl_3$, *c* 1)

Methyl (4*R*, 2*E*)-4-hydroxyoct-2-enoate

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993,** *4*, 1397



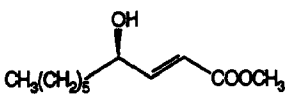
$C_{10}H_{18}O_3$

ee 95%; $[\alpha]_D^{23}$ = -22.8 ($CHCl_3$, *c* 1)

Methyl (4*R*, 2*E*)-4-hydroxynon-2-enoate

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993,** *4*, 1397



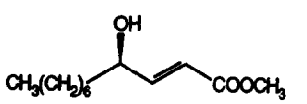
$C_{11}H_{20}O_3$

ee 93%; $[\alpha]_D^{23}$ = -20.2 ($CHCl_3$, *c* 1)

Methyl (4*R*, 2*E*)-4-hydroxydec-2-enoate

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993,** *4*, 1397



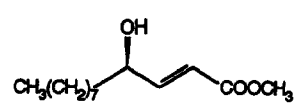
$C_{12}H_{22}O_3$

ee 85%; $[\alpha]_D^{23}$ = -20.3 ($CHCl_3$, *c* 1)

Methyl (4*R*, 2*E*)-4-hydroxyundec-2-enoate

P. Allevi, M. Anastasia, P. Ciuffreda and A.M. Sanvito

Tetrahedron: Asymmetry **1993,** *4*, 1397



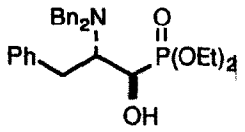
$C_{13}H_{24}O_3$

ee 88%; $[\alpha]_D^{23}$ = -18.0 ($CHCl_3$, *c* 1)

Methyl (4*R*, 2*E*)-4-hydroxydodec-2-enoate

Tsutomu Yokomatsu, Takehiro Yamagishi, and Shiroshi Shibuya

Tetrahedron: Asymmetry **1993**, *4*, 1401



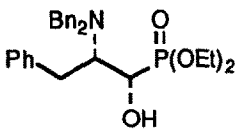
E.e.= >98%[by ^{1}H-NMR as (+)- and (–) Mosher esters]
$[\alpha]_D^{19}$ +28.6 (c 1.0, $CHCl_3$)
mp 127-129 °C (Hexane and EtOAc)
Source of chirality: Asymm. synth. from L-Phenylalanine
Absolute configuration: 2*R*, 3*S*

$C_{27}H_{34}O_4NP$

Diethyl (2*R*, 3*S*)-3-Dibenzylamino-2-hydroxy-4-phenylpropylphosphonate

Tsutomu Yokomatsu, Takehiro Yamagishi, and Shiroshi Shibuya

Tetrahedron: Asymmetry **1993**, *4*, 1401



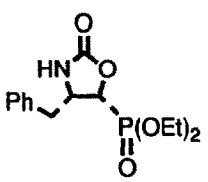
E.e.= >98%[by ^{1}H-NMR as (+)- and (–) Mosher esters]
$[\alpha]_D^{19}$ +39.0 (c 1.1, $CHCl_3$)
mp 87-88 °C (Hexane and EtOAc)
Source of chirality: Asymm. synth. from L-Phenylalanine
Absolute configuration: 2*S*, 3*S*

$C_{27}H_{34}O_4NP$

Diethyl (2*S*, 3*S*)-3-Dibenzylamino-2-hydroxy-4-phenylpropylphosphonate

Tsutomu Yokomatsu, Takehiro Yamagishi, and Shiroshi Shibuya

Tetrahedron: Asymmetry **1993**, *4*, 1401



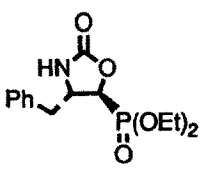
$[\alpha]_D^{20}$ -47.5 (c 1.0, $CHCl_3$)
an oil
Source of chirality: Asymm. synth. from L-Phenylalanine
Absolute configuration: 4*S*, 5*R*

$C_{14}H_{20}O_5NP$

(4*S*, 5*R*)-4-Benzyl-5-diethylphosphonooxazolidin-2-one

Tsutomu Yokomatsu, Takehiro Yamagishi, and Shiroshi Shibuya

Tetrahedron: Asymmetry **1993**, *4*, 1401



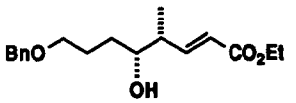
$[\alpha]_D^{20}$ -61.5 (c 1.3, $CHCl_3$)
an oil
Source of chirality: Asymm. synth. from L-Phenylalanine
Absolute configuration: 4*S*, 5*S*

$C_{14}H_{20}O_5NP$

(4*S*, 5*S*)-4-Benzyl-5-diethylphosphonooxazolidin-2-one

A. Satake and I. Shimizu

Tetrahedron: Asymmetry **1993**, *4*, 1405



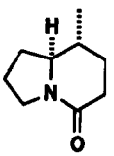
$C_{18}H_{26}O_4$

Ethyl (*E*)-(*4R, 5R*)-8-benzyloxy-5-hydroxy-4-methyl-2-octenoate

E. e = >98 % by ^{1}H NMR in the presence of $Eu(TFC)_3$
$[\alpha]^{24}_D$ +29.0 (c 4.4, $CHCl_3$)
Source of chirality: Sharpless asymmetric epoxidation
Absolute configuration 4R, 5R

A. Satake and I. Shimizu

Tetrahedron: Asymmetry **1993**, *4*, 1405



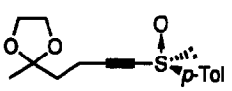
$C_9H_{15}ON$

(*8R,8aS*)-hexahydro-8-methyl-5(1H)-indolizinone

D. e = >99 % by ^{1}H NMR
$[\alpha]^{24}_D$ -21.5 (c 0.65, $CHCl_3$)
Source of chirality: Sharpless asymmetric epoxidation
Absolute configuration 8R, 8aS

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993**, *4*, 1409

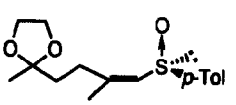


(*S*)-6-(*p*-toluenesulfinyl)hex-5-yn-2-one ethylene acetal

E.e.=100%
$[\alpha]_D^{23}$=+65.8 (*c* 0.152, $CHCl_3$)
Source of chirality: (-)-menthol and well-established Andersen method
Absolute configuration: *S* (based on the mechanism of the Andersen method)

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993**, *4*, 1409

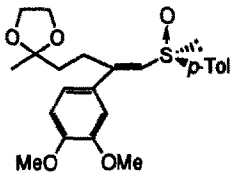


Z-(*R*)-5-methyl-6-(*p*-toluenesulfinyl)hex-5-en-2-one ethylene acetal

E.e.=100%
$[\alpha]_D^{23}$=-227.2 (*c* 0.340, $CHCl_3$)
Source of chirality: (-)-menthol
Absolute configuration: *R*

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993,** *4*, 1409

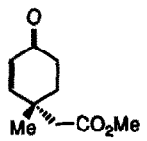


E-(*R*)-5-(3,4-dimethoxyphenyl)-6-(*p*-toluenesulfinyl)-hex-5-en-2-one ethylene acetal

E.e.=100%
$[\alpha]_D^{23}$=-46.6 (*c* 0.152, $CHCl_3$)
Source of chirality: (-)-menthol
Absolute configuration: *R*

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993,** *4*, 1409

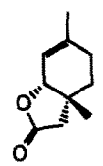


methyl (1-methyl-4-oxo-cyclohex-2-enyl)acetate

E.e>98% (by ^{1}H NMR of MTPA ester after transformation to a cyclohexenol)
$[\alpha]_D^{23}$=+4.31 (*c* 1.72, $CHCl_3$)
Source of chirality: enantiomerically pure sulfoxide derived from (-)-menthol and asymmetric cycloaddition
Absolute configuration: *R* (assigned by CD exciton method applied to the allylic benzoate of a later product)

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993,** *4*, 1409

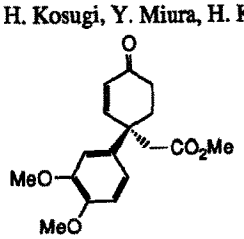


3a,4,5,7a-tetrahydro-3a,6-dimethyl-2(3*H*)-benzofuranone

E.e>98% (by ^{1}H NMR of MTPA ester after transformation to a cyclohexenol)
$[\alpha]_D^{23}$=-15.0 (*c* 0.181, $CHCl_3$)
m.p. 76-77 °C
Source of chirality: enantiomerically pure sulfoxide derived from (-)-menthol and asymmetric cycloaddition
Absolute configuration: 3a*R*,7a*R* (assigned by CD exciton chirality method applied to the allylic benzoate derived from a later product)

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993,** *4*, 1409

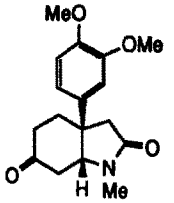


methyl (1-(3,4-dimethoxyphenyl)-4-oxo-cyclohex-2-enyl)acetate

E.e=100% (determined by comparison of optical rotation after transformation to (+)-mesembrine)
$[\alpha]_D^{23}$=+47.3 (*c* 0.237, $CHCl_3$)
m.p. 82-83 °C
Source of chirality: enantiomerically pure sulfoxide derived from (-)-menthol and asymmetric cycloaddition
Absolute configuration: *S* (assigned by comparison of optical rotation after transformation to (+)-mesembrine)

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993**, *4*, 1409



3a-(3,4-dimethoxyphenyl)octahydro-
1-methyl-(3a,*cis*)-6*H*-indole-2,6-dione

E.e=100% (determined by comparison of the optical rotation after conversion to (+)-mesembrine

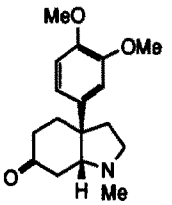
$[\alpha]_D^{23}$ +55.6 (*c* 0.345, $CHCl_3$)

Source of chirality: enantiomerically pure sulfoxide derived from (-)-menthol and asymmetric cycloaddition

Absolute configuration: 3a*R*,7a*R* (assigned by comparison of optical rotation after transformation to (+)-mesembrine)

H. Kosugi, Y. Miura, H. Kanna, and H. Uda

Tetrahedron: Asymmetry **1993**, *4*, 1409



(+)-mesembrine

E.e=100% (determined by comparison of the reported optical rotation value)

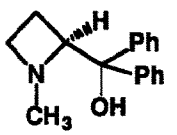
$[\alpha]_D^{23}$ +60.0 (*c* 0.164, MeOH)

Source of chirality: enantiomerically pure sulfoxide derived from (-)-menthol and asymmetric cycloaddition

Absolute configuration: 3a*R*,7a*R* (assigned by comparison of optical rotations)

W. Behnen, Th. Mehler, J. Martens*

Tetrahedron: Asymmetry **1993**, *4*, 1413



$C_{14}H_{17}NO$

(*S*)-1-methyl-2-(diphenylhydroxymethyl)azetidine

E.e. under investigation

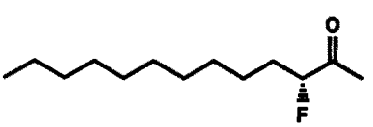
$[\alpha]_D^{20}$ = +39.3 (c = 5.0, $CHCl_3$)

Source of chirality: (*S*)-azetidinecarboxylic acid

Absolute configuration S

Marek M. Kabat

Tetrahedron: Asymmetry **1993**, *4*, 1417



$C_{13}H_{25}FO$
3-fluoro-tridecan-2-one

E.e=97% {by ^1H nmr with tris[3-(heptafluoropropylhydroxy-methylene)-(+)-camphorato]-europium (III)}.

$[\alpha]_D^{25}$=+50.7 (c 1.08, CH_2Cl_2)

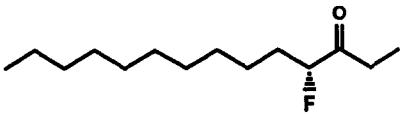
Source of chirality: Sharpless asymmetric method of olefin epoxidation using the L(+)-diethyl tartrate/^{t}BuOOH/Ti(OiPr)$_4$ system.

Absolute configuration: 3R

(assigned by a general rule of Sharpless asymmetric epoxidation of olefins and S_N2 opening of the chiral allene oxide ring by fluoride)

Marek M. Kabat

Tetrahedron: Asymmetry **1993,** *4*, 1417

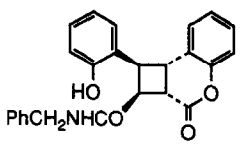


$C_{14}H_{27}FO$
4-fluoro-tridecan-3-one

E.e=97% {by ^1H nmr with tris[3-(heptafluoropropylhydroxy-methylene)-(+)-camphorato]-europium (III)}.
$[\alpha]_D^{25}$=+50.8 (c 1.14, CH_2Cl_2)
Source of chirality: Sharpless asymmetric method of olefin epoxidation using the L(+)-diethyl tartrate/^{t}BuOOH/Ti(OiPr)$_4$ system.
Absolute configuration: 4R
(assigned by a general rule of Sharpless asymmetric epoxidation of olefins and S_N2 opening of the chiral allene oxide ring by fluoride)

Yutaka Adegawa, Takeshi Kashima, and Kazuhiko Saigo

Tetrahedron: Asymmetry **1993,** *4*, 1421

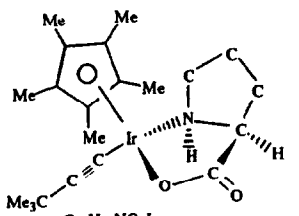


$C_{25}H_{21}NO_4$
(*1S,2S,2aS,8bS*)-2-(*N*-benzylcarbamoyl)-1-(2-hydroxyphenyl)-2a,8b-dihydro-*3H*-cyclobuta[*c*]chromen-3-one

$[\alpha]_D$ -155 (*c* 0.5, acetone); mp 209.0-210.5 °C
Absolute configuration: (*1S,2S,2aS,8bS*)
Source of chirality: (*S,S,S,S*)-(-)-*anti* head-to-head coumarin dimer

D Carmona, F.J Lahoz, R. Atencio, L.A Oro, M.P. Lamata, E. San José

Tetrahedron: Asymmetry **1993,** *4*, 1425

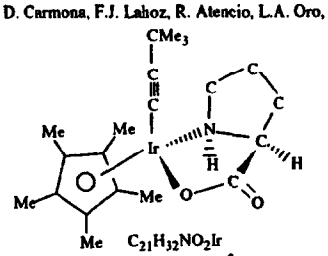


$C_{21}H_{32}NO_2Ir$
(S_{Ir},S_N,S_C)-(η^5-pentamethylcyclopentadienyl)prolinate (*tert*-butylacetylide)iridium(III)

E.e. = 100 %
$[\alpha]_D^{20}$ = -4 (*c* 0.4, $CHCl_3$)
Absolute configuration S_{Ir},S_N,S_C
Source of chirality: [(η^5-C_5Me_5)Ir(L-prolinate)Cl]
(D. Carmona, A. Mendoza, F.J. Lahoz, L.A. Oro, M.P. Lamata and E. San José, *J. Organomet. Chem.* **1990**, *396*, C17.)

D. Carmona, F.J. Lahoz, R. Atencio, L.A. Oro, M.P. Lamata, E. San José

Tetrahedron: Asymmetry **1993,** *4*, 1425

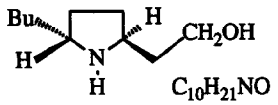


$C_{21}H_{32}NO_2Ir$
(R_{Ir},S_N,S_C)-(η^5-pentamethylcyclopentadienyl)prolinate (*tert*-butylacetylide)iridium(III)

E e. = 100 %
$[\alpha]_D^{20}$ = +31 (*c* 0.4, $CHCl_3$)
Absolute configuration R_{Ir},S_N,S_C (X-ray crystal structure)
Source of chirality: [(η^5-C_5Me_5)Ir(L-prolinate)Cl]
(D. Carmona, A. Mendoza, F.J. Lahoz, L.A. Oro, M P. Lamata and E. San José, *J. Organomet. Chem.* **1990**, *396*, C17.)

A. Fleurant, J.P. Célérier, and G. Lhommet

Tetrahedron: Asymmetry **1993,** *4*, 1429



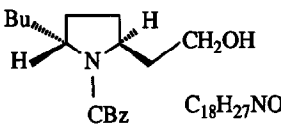
$C_{10}H_{21}NO$

(2S,5R)-2-Hydroxyethyl-5-butylpyrrolidine

E.e.>98%, $[\alpha]^{22}_D$=-20.2 (c=0.56, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid (U.C.I.B. France)
Absolute configuration : 2(S), 5(R)

A. Fleurant, J.P. Célérier, and G. Lhommet

Tetrahedron: Asymmetry **1993,** *4*, 1429



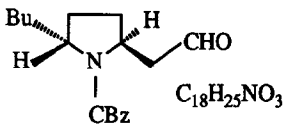
$C_{18}H_{27}NO_3$

(2S,5R)-1-carbobenzyloxy-2-hydroxyethyl-5-butylpyrrolidine

E.e.>98%, $[\alpha]^{20}_D$=-31.7 (c=1.25, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid (U.C.I.B. France)
Absolute configuration : 2(S), 5(R)

A. Fleurant, J.P. Célérier, and G. Lhommet

Tetrahedron: Asymmetry **1993,** *4*, 1429



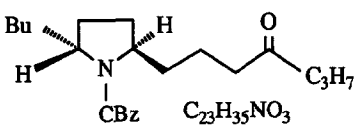
$C_{18}H_{25}NO_3$

(2S,5R)-1-carbobenzyloxy-2-(1-oxoethyl)-5-butylpyrrolidine

E.e.>98%, $[\alpha]^{20}_D$=-44.7 (c=1.05, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid (U.C.I.B. France)
Absolute configuration : 2(S), 5(R)

A. Fleurant, J.P. Célérier, and G. Lhommet

Tetrahedron: Asymmetry **1993,** *4*, 1429



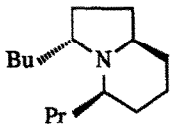
$C_{23}H_{35}NO_3$

(2R,5R)-1-carbobenzyloxy-2-(4-oxoheptyl)-5-butylpyrrolidine

E.e.>98%, $[\alpha]^{20}_D$=-52.5 (c=0.63, CH_2Cl_2)
Source of chirality: (S)-pyroglutamic acid (U.C.I.B. France)
Absolute configuration : 2(R), 5(R)
(Assigned by correlation of specific rotation with literature)

A. Fleurant, J.P. Célérier, and G. Lhommet

Tetrahedron: Asymmetry **1993**, *4*, 1429



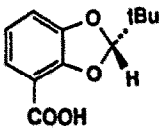
$C_{15}H_{29}N$

(3R,5R,9R)-3-Butyl-5-propyloctahydroindolizine
(-) - Gephyrotoxine 223AB

E.e.>98%, $[\alpha]^{20}_D$=-103 (c=1.12, Hexane)
Source of chirality: (S)-pyroglutamic acid (U.C.I.B. France)
Absolute configuration : 3(R), 5(R), 9 (R)
(Assigned by correlation of specific rotation with literature)

Y. Nishida, M. Abe, H. Ohrui and H. Meguro

Tetrahedron: Asymmetry **1993**, *4*, 1431

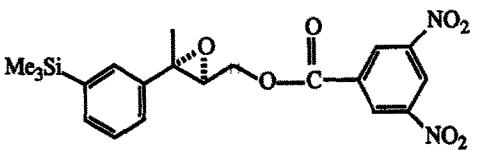


2-Tert-butyl-1,3-benzodioxole-4-carboxylic acid

$[\alpha]_D^{22}$ + 52.6 (c 0.5, MeOH)
E.e. = >95 % [^{1}H-NMR as (-)-cinchonidine salt]
Source of chirality : (-)-cinchonidine
Absolute configuration : 2S (assigned by CD)

D.P.G. Hamon, R.A. Massy-Westropp and J.L. Newton

Tetrahedron: Asymmetry **1993**, *4*, 1435



$C_{20}H_{22}N_2O_7Si$

3-Methyl-3-(3'-trimethylsilylphenyl) oxiranemethyl 3,5-dinitrobenzoate

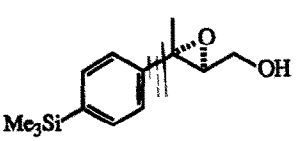
$[\alpha]^{20}_D$ -32.0 (c = 1.11, CCl_4)

Source of chirality: Sharpless epoxidation

Absolute configuration: 2*S*,3*S*
(assigned by conversion to (*S*)-ketoprofen)

D.P.G. Hamon, R.A. Massy-Westropp and J.L. Newton

Tetrahedron: Asymmetry **1993**, *4*, 1435



$C_{13}H_{20}O_2Si$

3-Methyl-3-(4'-trimethylsilylphenyl) oxiranemethanol

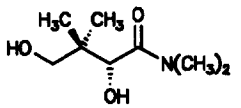
$[\alpha]^{20}_D$ -20.0 (c = 2.86, CCl_4)

Source of chirality: Sharpless epoxidation

Absolute configuration: 2*S*,3*S*
(assigned by conversion to (*S*)-ibuprofen)

F. Hoeper, F.-P. Montforts

Tetrahedron: Asymmetry **1993**, *4*, 1439



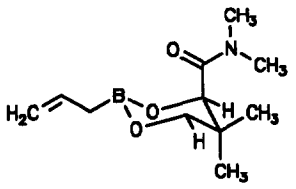
E.e. >99 % [by chiral phase HPLC on the dibenzoate derivative (Nucleosil Chiral 2®, Macherey-Nagel), n-heptane/1,4-dioxane: 70/30]
$[\alpha]^{20}_D$ = -88±2 (c = 1 in CH_2Cl_2)
Source of chirality: natural D(-)pantolactone
Absolute configuration: 2R
(assigned by comparision with D(-)pantolactone)

$C_8H_{17}NO_3$

D(-)2R,4-Dihydroxy-3,3-dimethyl-N,N-dimethyl-butyramide

F. Hoeper, F.-P. Montforts

Tetrahedron: Asymmetry **1993**, *4*, 1439



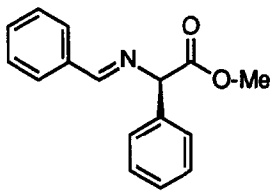
$[\alpha]^{20}_D$ = -140±2 (c = 1 in CH_2Cl_2)
Source of chirality: natural D(-)pantolactone
Absolute configuration: 4R
(assigned by comparision with D(-)pantolactone)

$C_{11}H_{20}BNO_3$

2-Allyl-5,5-dimethyl-1,3,2-dioxaborinane-4R-N,N-dimethyl carboxamide

Hendrik L. van Maanen, Johann T.B.H. Jastrzebski, Jan Verweij, Antonius P.G. Kieboom, Anthony L. Spek and Gerard van Koten.

Tetrahedron: Asymmetry **1993**, *4*, 1441

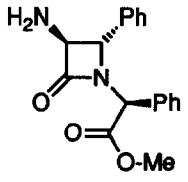


E.e. ≥ 97% (determined for product of reaction with an ester enolate)
$[\alpha]_D^{20}$ = + 89.7 (c = 2.5, benzene)
source of chirality : (*R*)-2-phenylglycine
absolute configuration : *R*

$C_{16}H_{15}NO_2$; N-(benzylidene)-2-phenyl-glycine methyl ester

Hendrik L. van Maanen, Johann T.B.H. Jastrzebski, Jan Verweij, Antonius P.G. Kieboom, Anthony L. Spek and Gerard van Koten.

Tetrahedron: Asymmetry **1993**, *4*, 1441

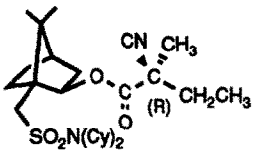


E.e. = 97% (by HPLC on Daicel Chiralcel OD)
$[\alpha]_D^{20}$ = + 132.1 (c = 2, benzene)
source of chirality : (*R*)-2-phenylglycine
absolute configuration : 3*S*, 4*S*, α*S* (from X-Ray structure)

$C_{18}H_{18}N_2O_3$; 1-[(methoxycarbonyl)(phenyl)]methyl-3-amino-4-phenyl-2-azetidinone

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 1445



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 55.68 (c = 1, $CHCl_3$)

Source of chirality : natural and diastereoselective methylation

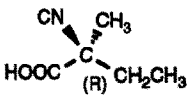
Absolute configuration : 2R

$C_{28}H_{46}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl 2-cyano-2-methylbutanoate

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 1445



$[\alpha]_D^{20}$ + 3.1 (c = 1, $CHCl_3$)

Source of chirality : natural and diastereoselective methylation

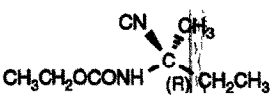
Absolute configuration : 2R

$C_6H_9NO_2$

(2R)- 2-cyano-2-methylbutanoic acid

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 1445



$[\alpha]_D^{20}$ - 1.7 (c = 0.8, $CHCl_3$)

Source of chirality : natural and diastereoselective methylation

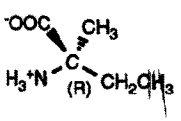
Absolute configuration : 2R

$C_8H_{14}N_2O_2$

(2R)- 2-ethoxycarbonylamino-2-methylbutyronitrile

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 1445



e.e.>99%

$[\alpha]_D^{20}$ -11.28 (c = 5%, H_2O)

Source of chirality : natural and diastereoselective methylation

Absolute configuration : 2R

$C_5H_{11}NO_2$

(2R) - amino-2-methylbutandioic acid

A. Chadha, U. Georgens and M. P. Schneider

Tetrahedron: Asymmetry **1993**, *4*, 1449

(*R*)

$C_6H_{12}O$

3,3-Dimethyl-1,2-epoxybutane

E.e.= 92% [by HPLC as BGIT derivative]

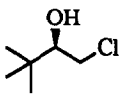
$[\alpha]_D^{25} = -18.4$ (c = 1.7, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration: *R*

A. Chadha, U. Georgens and M. P. Schneider

Tetrahedron: Asymmetry **1993**, *4*, 1449



$C_6H_{13}ClO$

3,3-Dimethyl-1-chloro-2-butanol

E.e.> 98% [by GC using Cyclodex β-I/P]

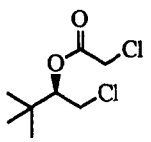
$[\alpha]_D^{25} = -41.0$ (c = 1.3, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration: *R*

A. Chadha, U. Georgens and M. P. Schneider

Tetrahedron: Asymmetry **1993**, *4*, 1449



$C_8H_{14}Cl_2O_2$

3,3-Dimethyl-1-chloro-2-[chloracetoxy]-butane

E.e > 98% [by GC using Cyclodex β I/P]

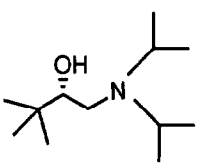
$[\alpha]_D^{25} = -15.5$ (c = 2.2, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration: *R*

A. Chadha, U. Georgens and M. P. Schneider

Tetrahedron: Asymmetry **1993**, *4*, 1449



$C_{12}H_{27}NO$

1-(Diisopropylamino)-3,3-dimethylbutan-2-ol

E.e.= 97% [by precursor]

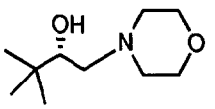
$[[\alpha]_D^{25} = +76.7$ (c = 1.0, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration: *S*

A. Chadha, U. Georgens and M. P. Schneider

Tetrahedron: Asymmetry **1993**, *4*, 1449



$C_{10}H_{21}NO_2$

3,3-Dimetyl-1-morpholinobutan-2-ol

E.e.= 97% [by precursor]

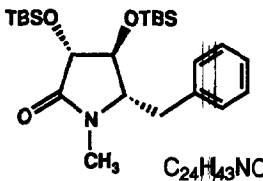
$[\alpha]_D^{25}$= +68.1 (c = 1.0, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration: *S*

H. Yoda, H. Kitayama, W. Yamada, T. Katagiri and K. Takabe

Tetrahedron: Asymmetry **1993**, *4*, 1451



$C_{24}H_{43}NO_3Si_2$

1-Methyl-3,4-bis[(*tert*-butyldimethylsilyl)oxy]-5-benzyl-2-pyrrolidinone

D.e.=100% [by HPLC using Chiralpak AS (Daicel)]

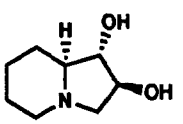
$[\alpha]_D^{24}$+74.8(c 3.57,$CHCl_3$)

Source of chirality: natural and synthetic by deoxgenation of α-hydroxylactam

Absolute configuration 3R,4S,5S
(assigned by observed chemical shift and vicinal coupling constants)

H. Yoda, H. Kitayama, T. Katagiri and K. Takabe

Tetrahedron: Asymmetry **1993**, *4*, 1455



$C_8H_{15}NO_2$

1,2-Dihydroxyindolizidine
(Lentiginosine)

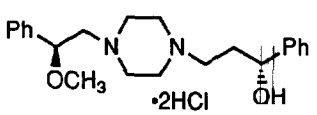
E.e.=100%
D.e.=92% [by HPLC using Chiralpak AS (Daicel)]
$[\alpha]_D^{23}$+0.19(c 6.10,MeOH)

Source of chirality: L-tartaric acid

Absolute configuration 1S,2S,8aS
(assigned by observed chemical shift and vicinal coupling constants of synth. intermed.)

S. Sakuraba, N. Nakajima and K. Achiwa

Tetrahedron: Asymmetry **1993**, *4*, 1457



$C_{22}H_{30}N_2O_2 \cdot 2HCl$

1-(2-methoxy-2-phenylethyl)-4-(3-hydroxy-3-phenylpropyl)piperazine hydrochloride

D.e.= 100% [by HPLC analysis of free amine]

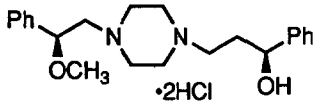
$[\alpha]_D^{22}$ +58.6 (*c* 0.6, MeOH)

Source of chirality: catalytic asymmetric hydrogenation of amino ketone derivatives

Absolute configuration: *S*, *R*

S. Sakuraba, N. Nakajima and K. Achiwa

Tetrahedron: Asymmetry **1993**, *4*, 1457



$C_{22}H_{30}N_2O_2 \cdot 2HCl$

D.e.= 98% [by HPLC analysis of free amine]

$[\alpha]_D^{22}$ +19.2 (*c* 0.7, MeOH)

Source of chirality: catalytic asymmetric hydrogenation of amino ketone derivatives

Absolute configuration: *S*, *S*

1-(2-methoxy-2-phenylethyl)-4-(3-hydroxy-3-phenylpropyl)piperazine hydrochloride

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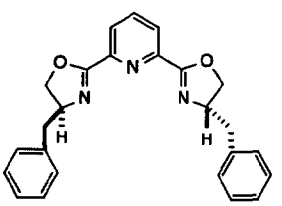
Hisao Nishiyama,* Tomonori Tajima, Masahiro Takayama, and Kenji Itoh

Tetrahedron: Asymmetry **1993**, *4*, 1461



Pybox-(*S,S*)-*bz*

$C_{25}H_{23}N_3O_2$

2,6-Bis[(*S*)-4'-benzyloxazolin-2'-yl]pyridine

E.e. = 100 %

$[\alpha]_D^{22}$ = -71.7 (c 1.02, CH_2Cl_2)

Source of chirality : natural

Absolute configuration: 4'S,4"S

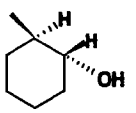
(derived from L-phenylalanine)

Toshifumi Hirata,* Shunsuke Izumi, Kenji Akita, Hiroaki Yoshida, and Shisei Gotoh

Tetrahedron: Asymmetry **1993**, *4*, 1465

Sourse of chirality: enantioselective hydrolysis with the cultured cells of *M. polymorpha*

Absolute configuration: assigned by ^1H NMR of corresponding MTPA ester



$C_7H_{14}O$

trans-2-Methylcyclohexanol

1*R*,2*R*

E.e.=80.0%

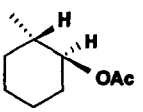
$[\alpha]_D^{25}$=-38.2 (*c* 9.6, EtOH)

Toshifumi Hirata,* Shunsuke Izumi, Kenji Akita, Hiroaki Yoshida, and Shisei Gotoh

Tetrahedron: Asymmetry **1993**, *4*, 1465

Sourse of chirality: enantioselective hydrolysis with the cultured cells of *M. polymorpha*

Absolute configuration: assigned by ^1H NMR of corresponding MTPA ester



$C_9H_{16}O_2$

trans-2-Methylcyclohexany acetate

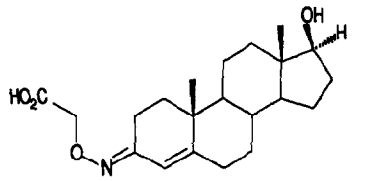
1*S*,2*S*

E.e.=99.5%

$[\alpha]_D^{25}$=+69.9 (*c* 0.64, EtOH)

M. Adamczyk, Y-Y Chen, J. R. Fishpaugh, and J. C. Gebler

Tetrahedron: Asymmetry **1993**, *4*, 1467



$C_{21}H_{31}NO_4$

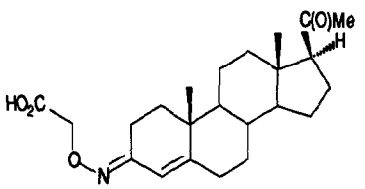
4-Androsten-17-β-ol-3-one 3-(O-carboxymethyl) oxime

Diastereomeric purity is 80 % determined by HPLC
Absolute configuration *anti:syn* assigned by ^{1}H NMR

Source of chirality: enzymatic hydrolysis

M. Adamczyk, Y-Y Chen, J. R. Fishpaugh, and J. C. Gebler

Tetrahedron: Asymmetry **1993**, *4*, 1467



$C_{23}H_{33}NO_4$

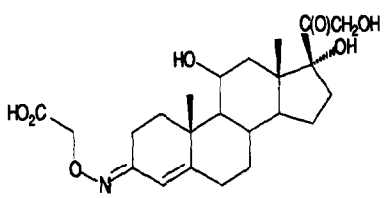
4-Pregnen-3,20-dione 3-(O-carboxymethyl) oxime

Diastereomeric purity is 80 % determined by HPLC
Absolute configuration *anti:syn* assigned by ^{1}H NMR

Source of chirality: enzymatic hydrolysis

M. Adamczyk, Y-Y Chen, J. R. Fishpaugh, and J. C. Gebler

Tetrahedron: Asymmetry **1993**, *4*, 1467



$C_{23}H_{33}NO_7$

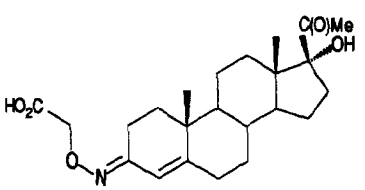
4-Pregnen-11-β, 17, 21,-triol-3, 20-dione 3-(O-carboxymethyl) oxime

Diastereomeric purity is 94 % determined by HPLC
Absolute configuration *anti:syn* assigned by ^{1}H NMR

Source of chirality: enzymatic hydrolysis

M. Adamczyk, Y-Y Chen, J. R. Fishpaugh, and J. C. Gebler

Tetrahedron: Asymmetry **1993**, *4*, 1467



$C_{23}H_{33}NO_5$

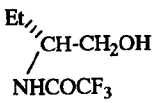
4-Pregnen-17-ol-3,20-dione 3-(O-carboxymethyl) oxime

Diastereomeric purity is 86 % determined by HPLC
Absolute configuration *anti:syn* assigned by ^{1}H NMR

Source of chirality: enzymatic hydrolysis

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



$C_6H_{10}F_3NO_2$

(R)-(+)-[1-(hydroxymethyl)propyl]tri-fluoroacetamide

m.p. 90°C

$[\alpha]_D$+22 (c=1, MeOH)

ee : 100%

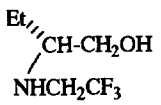
Chiral source :

(R)-(-)-2-aminobutan-1-ol

Absolute configuration : R

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



$C_6H_{12}F_3NO$

(R)-(-)-2-(2,2,2-trifluoroethylamino)butan-1-ol

$[\alpha]_D$-9.7 (c=6, MeOH)

ee : 100%

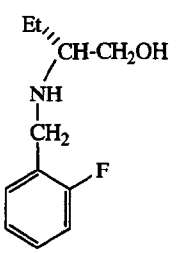
Chiral source :

(R)-(-)-2-aminobutan-1-ol

Absolute configuration : R

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



$C_{11}H_{16}FNO$ (R)-(-)-2-(2-fluorobenzylamino)butan-1-ol

m.p. 65°C

$[\alpha]_D$-23.7 (c=3.25, MeOH)

ee : 100%

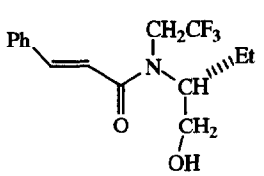
Chiral source :

(R)-(-)-2-aminobutan-1-ol

Absolute configuration : R

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



$C_{15}H_{18}F_3NO_2$

(R)-(+)-N-(2,2,2-trifluoroethyl)-N-[1-(hydroxymethyl)propyl]cinnamamide

$[\alpha]_D$+3 (c=2, MeOH)

ee : 100%

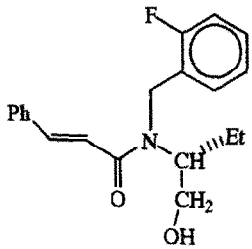
Chiral source :

(R)-(-)-2-aminobutan-1-ol

Absolute configuration : R

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469

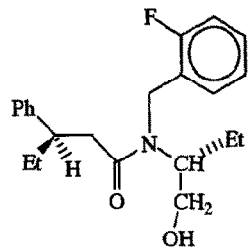


$[\alpha]_D$+12.9 (c=2, MeOH)
ee : 100%
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : R

$C_{20}H_{22}FNO_2$ (R)-(+)-N-(2-fluorobenzyl)-N-[1-(hydroxymethyl)propyl]cinnamamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469

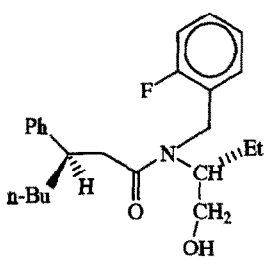


$[\alpha]_D$-3.8 (c=1.2, PhH)
de : 92.2% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{22}H_{28}FNO_2$ (R,R)-(-)-N-(2-fluorobenzyl)-N-[1-(hydroxymethyl)propyl]-3-phenylpentanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469

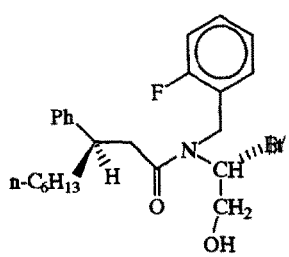


m.p. 100°C
$[\alpha]_D$-2 (c=1,5, PhH)
de : 94.4% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{24}H_{32}FNO_2$ (R,R)-(-)-N-(2-fluorobenzyl)-N-[1-(hydroxymethyl)propyl]-3-phenylheptanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469

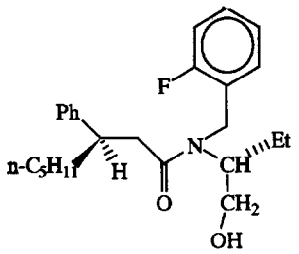


$[\alpha]_D$+1.3 (c=6, PhH)
de : 97% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{26}H_{36}FNO_2$ (R,R)-(+)-N-(2-fluorobenzyl)-N-[1-(hydroxymehyl)propyl]-3-phenylnonanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



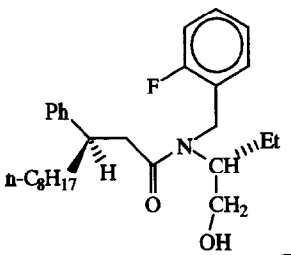
m.p. 63°C
$[\alpha]_D$-1 (c=5, PhH)
de : 95% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{25}H_{34}FNO_2$

(R,R)-(-)-N-(2-fluorobenzyl)-N-[1-(hydroxymethyl)propyl]-3-phenyloctanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



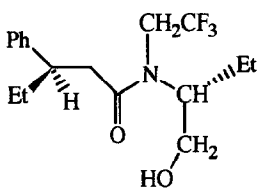
$[\alpha]_D$+1 (c=4, PhH)
de : 96% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{28}H_{40}FNO_2$

(R,R)-(+)-N-(2-fluorobenzyl)-N-[1-(hydroxymethyl)propyl]-3-phenylundecanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



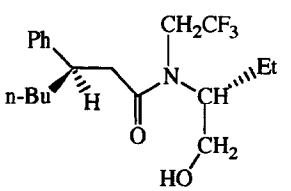
$[\alpha]_D$-32 (PhH)
de : 94% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{17}H_{24}F_3NO_2$

(R,R)-(-)-N-(2,2,2-trifluoroethyl)-N-[1-(hydroxymethyl)propyl]-3-phenylpentanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



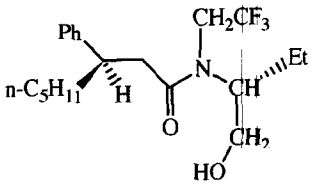
$[\alpha]_D$-23,1 (PhH)
de : 86% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{19}H_{28}F_3NO_2$

(R,R)-(-)-N-(2,2,2-trifluoroethyl)-N-[1-(hydroxymethyl)propyl]-3-phenylheptanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



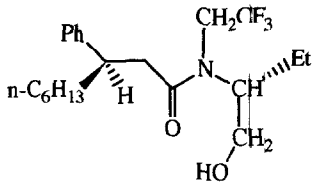
$[\alpha]_D$ -23,7 (PhH)
de : 88% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{20}H_{30}F_3NO_2$

(R,R)-(-)-N-(2,2,2-trifluoroethyl)-N-[1-(hydroxymethyl)propyl]-3-phenyloctanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



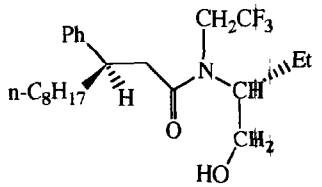
$[\alpha]_D$ -20,1 (PhH)
de : 87% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{21}H_{32}F_3NO_2$

(R,R)-(-)-N-(2,2,2-trifluoroethyl)-N-[1-(hydroxymethyl)propyl]-3-phenylnonanamide

J. Touet, C. Le Grumelec, F. Huet and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 1469



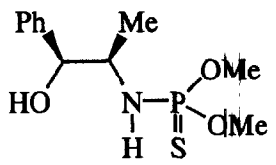
$[\alpha]_D$ -19 (PhH)
de : 88% (^{19}F NMR)
Chiral source :
(R)-(-)-2-aminobutan-1-ol
Absolute configuration : (R,R)

$C_{23}H_{36}F_3NO_2$

(R,R)-(-)-N-(2,2,2-trifluoroethyl)-N-[1-(hydroxymethyl)propyl]-3-phenylundecanamide

Kenso Soai, Yuji Hirose and Yoshiaki Ohno

Tetrahedron: Asymmetry **1993**, *4*, 1473



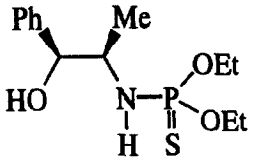
E.e.=100% [derived from optically pure norephedrine]
$[\alpha]_D^{22}$ = +12.8 (*c* 1.0, MeOH)
Source of chirality: norephedrine
Absolute configuration 1*S*,2*R*

$C_{11}H_{18}NO_3PS$

N-dimethoxyphosphinothioyl norephedrine

Kenso Soai, Yuji Hirose and Yoshiaki Ohno

Tetrahedron: Asymmetry **1993**, *4*, 1473

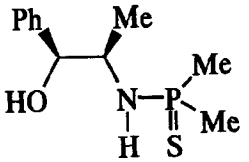


E.e.=100% [derived from optically pure norephedrine]
$[\alpha]_D^{22}$ = -16.7 (*c* 1.3, MeOH)
Source of chirality: norephedrine
Absolute configuration 1*S*,2*R*

$C_{13}H_{22}NO_3PS$
N-diethoxyphosphinothioyl norephedrine

Kenso Soai, Yuji Hirose and Yoshiaki Ohno

Tetrahedron: Asymmetry **1993**, *4*, 1473

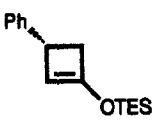


E.e.=100% [derived from optically pure norephedrine]
$[\alpha]_D^{22}$ = -16.1 (*c* 0.9, MeOH)
Source of chirality: norephedrine
Absolute configuration 1*S*,2*R*

$C_{11}H_{18}NOPS$
N-dimethylphosphinothioyl norephedrine

Toshio Honda,* Nobuaki Kimura and Masayoshi Tsubuki

Tetrahedron: Asymmetry **1993**, *4*, 1475



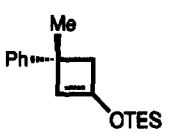
E.e. = 92% (based on the e.e. of the corresponding γ-lactone)
$[\alpha]_D$ = -3.7 (c = 1.0, $CHCl_3$)
Source of chirality: asymmetric deprotonation
Absolute configuration *R*

$C_{16}H_{24}OSi$

(*R*)-(-)-1-Triethylsiloxy-3-phenylcyclobut-1-ene

Toshio Honda,* Nobuaki Kimura and Masayoshi Tsubuki

Tetrahedron: Asymmetry **1993**, *4*, 1475



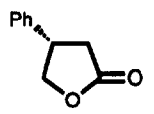
E.e. = 78% (based on the e.e. of the corresponding γ-lactone)
$[\alpha]_D$ = +46.3 (c = 1.0, $CHCl_3$)
Source of chirality: asymmetric deprotonation
Absolute configuration *R*

$C_{17}H_{26}OSi$

(*R*)-(+)-1-Triethylsiloxy-3-methyl-3-phenylcyclobut-1-ene

Toshio Honda,* Nobuaki Kimura and Masayoshi Tsubuki

Tetrahedron: Asymmetry **1993**, *4*, 1475



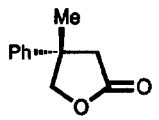
E.e. = 92% (by comparison of $[\alpha]_D$ with that reported)
$[\alpha]_D$ = +47.6 (c = 0.7, $CHCl_3$)
Source of chirality: asymmetric deprotonation
Absolute configuration *S*

$C_{10}H_{10}O_2$

(*S*)-(+)-3-Phenylbutyro-1,4-lactone

Toshio Honda,* Nobuaki Kimura and Masayoshi Tsubuki

Tetrahedron: Asymmetry **1993**, *4*, 1475



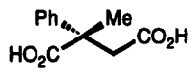
E.e. = 78% (determined by HPLC analysis using the chiral column CHIRALCEL OJ)
$[\alpha]_D$ = +13.6 (c = 0.7, $CHCl_3$)
Source of chirality: asymmetric deprotonation
Absolute configuration *S*

$C_{11}H_{12}O_2$

(*S*)-(+)-3-Methyl-3-phenylbutyro-1,4-lactone

Toshio Honda,* Nobuaki Kimura and Masayoshi Tsubuki

Tetrahedron: Asymmetry **1993**, *4*, 1475



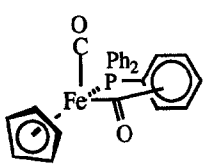
E.e. = 72% (by comparison of $[\alpha]_D$ with that reported)
$[\alpha]_D$ = -14.4 (c = 0.5, EtOH)
Source of chirality: asymmetric deprotonation
Absolute configuration *S*

$C_{11}H_{12}O_4$

(*S*)-(-)-2-Methyl-2-phenylsuccinic acid

Robert W. Baker and Stephen G. Davies*

Tetrahedron: Asymmetry **1993**, *4*, 1479



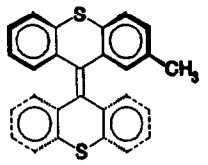
E.e. = >98% [by ^1H NMR with $Eu(tfc)_3$]
$[\alpha]_{546}^{22}$ -284 (c 0.21, C_6H_6)
Source of chirality: Resolution
Absolute configuration: R
(assigned by comparison with Chem. Comm., 1986, 607)

$C_{26}H_{23}FeO_2P$

Iron(cyclopentadienyl)(carbonyl)(triphenylphosphine)acetyl

W.F. Jager, B. de Lange, A.M. Schoevaars,
F. van Bolhuis and B.L. Feringa.

Tetrahedron: Asymmetry **1993**, *4*, 1481

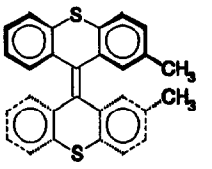


CD [λ_{max}/nm ($\Delta\epsilon$)]: 225 (-14.3) 244 (-14.6) 266 (3.8)
282 (-11.2) 303 (8.5) 330 (3.6)
Source of chirality: separation on
(+)-poly(triphenylmethyl)methacrylate
Absolute configuration is unknown

$C_{27}H_{18}S_2$
2-Methyl-9-(9'H-thioxanthene-9'-ylidene)-9H-thioxanthene

W.F. Jager, B. de Lange, A.M. Schoevaars,
F. van Bolhuis and B.L. Feringa.

Tetrahedron: Asymmetry **1993**, *4*, 1481



CD [λ_{max}/nm ($\Delta\epsilon$)]: 227 (-29.6) 246 (-25.6) 267 (6.6)
284 (-18.0) 304 (16.0) 330 s (9.3)
Source of chirality: separation on
(+)-poly(triphenylmethyl)methacrylate
Absolute configuration is unknown

$C_{28}H_{20}S_2$
Cis-2-methyl-9-(2'-methyl-9'H-thioxanthene-9'-ylidene)-9H-thioxanthene

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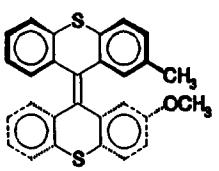
W.F. Jager, B. de Lange, A.M. Schoevaars,
F. van Bolhuis and B.L. Feringa.

Tetrahedron: Asymmetry **1993**, *4*, 1481



CD [λ_{max}/nm ($\Delta\epsilon$)]: 226 (-18.4) 247 (-27.4) 267 (12.9)
285 (-32.8) 306 (24.8) 335 s (9.9)
Source of chirality: separation on
(+)-poly(triphenylmethyl)methacrylate
Absolute configuration is unknown

$C_{28}H_{20}S_2O$
Cis-2-methoxy-9-(2'-methyl-9'H-thioxanthene-9'-ylidene)-9H-thioxanthene

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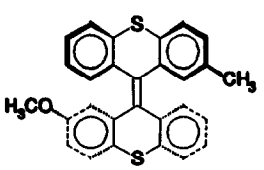
W.F. Jager, B. de Lange, A.M. Schoevaars,
F. van Bolhuis and B.L. Feringa.

Tetrahedron: Asymmetry **1993**, *4*, 1481

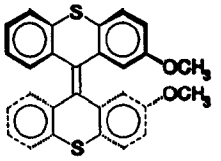


CD [λ_{max}/nm ($\Delta\epsilon$)]: 230 (-6.5) 248 (5.9) 267 (-4.7)
288 (16.7) 306 (-8.2) 330 s (-2.1)
Source of chirality: separation on
(+)-poly(triphenylmethyl)methacrylate
Absolute configuration is unknown

$C_{28}H_{20}S_2O$
Trans-2-methoxy-9-(2'-methyl-9'H-thioxanthene-9'-ylidene)-9H-thioxanthene

W.F. Jager, B. de Lange, A.M. Schoevaars, F. van Bolhuis and B.L. Feringa.

Tetrahedron: Asymmetry **1993**, *4*, 1481



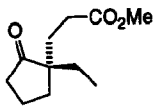
CD [λ_{max}/nm ($\Delta\epsilon$)]: 227 (-21.1) 247 (-21.3) 267 (14.4)
286 (-33.5) 306 (22.8) 335 s (8.1)
Source of chirality: separation on (+)-poly(triphenylmethyl)methacrylate
Absolute configuration is unknown

$C_{28}H_{20}S_2O_2$

Cis-2-methoxy-9-(2'-methoxy-9'H-thioxanthene-9'-ylidene)-9H-thioxanthene

P.R.R. Costa, R.N. Castro, F.M.C. Farias, O.A.C. Antunes and L. Bergter

Tetrahedron: Asymmetry **1993**, *4*, 1499

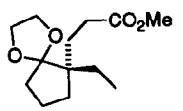


E.e. =90% (det. by ^{1}H NMR using Eu (tfc)$_3$)
$[\alpha]_D^{20}$ = +8.1 (c = 5.92 in CH_2Cl_2)
Source of chirality: (R)-(+)-1-phenylethylamine
Absolute configuration: S

(S)-(+)-2-Ethyl-2-[2'carboxymethyl ethyl]cyclopentanone

P.R.R. Costa, R.N. Castro, F.M.C. Farias, O.A.C. Antunes and L. Bergter

Tetrahedron: Asymmetry **1993**, *4*, 1499

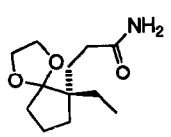


$[\alpha]_D^{20}$ = -6.2 (c = 6.09 in CH_2Cl_2)
Source of chirality: (R)-(+)-1-phenylethylamine
Absolute configuration: S

(S)-(-)-2-Ethyl-2-[2'carboxymethyl ethyl]cyclopentanone ethylene glycol ketal

P.R.R. Costa, R.N. Castro, F.M.C. Farias, O.A.C. Antunes and L. Bergter

Tetrahedron: Asymmetry **1993**, *4*, 1499

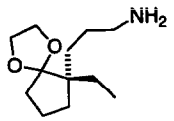


$[\alpha]_D^{20}$ = -10.16 (c = 1.87 in CH_2Cl_2)
Source of chirality: (R)-(+)-1-phenylethylamine
Absolute configuration: S

(S)-(-)-2-Ethyl-2-[2'amide ethyl]-cyclopentanone ethylene glycol ketal

P.R.R. Costa, R.N. Castro, F.M.C. Farias, O.A.C. Antunes and L. Bergter

Tetrahedron: Asymmetry **1993**, *4*, 1499

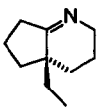


$[\alpha]_D^{20}$ = -7.2 (c = 2.08 in CH_2Cl_2)
Source of chirality: (R)-(+)-1-phenylethylamine
Absolute configuration: S

(S)-(-)-2-Ethyl-2-[3'amine propyl]-cyclopentanone ethylene glycol ketal

P.R.R. Costa, R.N. Castro, F.M.C. Farias, O.A.C. Antunes and L. Bergter

Tetrahedron: Asymmetry **1993**, *4*, 1499

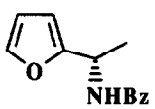


$[\alpha]_D^{20}$ = +5.1 (c = 1.03 in CH_2Cl_2)
Source of chirality: (R)-(+)-1-phenylethylamine
Absolute configuration: S

(S)-(+)-4a-Ethyl-3,4,4a,5,6,7, hexahydro-2H-1-pyridine

Tetrahedron: Asymmetry **1993**, *4*, 1501

Wei-Shan Zhou,* Xue-You Zhu, and Jie-Fei Cheng



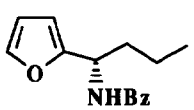
$C_{13}H_{13}NO_2$

E.e.=90% (by ^{1}HNMR of MTPA amide of the corresponding α-furfuryl amine)
$[\alpha]_D$ = -85.2 (c 0.4, EtOH)
Source of Chirality: Sharpless kinetic resolution
Absolute Configuration: S

(S)-N-Benzoyl-1-(α-furyl)-ethylamine

Tetrahedron: Asymmetry **1993**, *4*, 1501

Wei-Shan Zhou,* Xue-You Zhu, and Jie-Fei Cheng



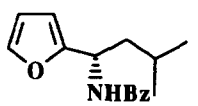
$C_{15}H_{17}NO_2$

E.e.=90% (by ^{1}HNMR of MTPA amide of the corresponding α-furfuryl amine)
$[\alpha]_D$ = -82.2 (c 0.4, EtOH)
Source of Chirality: Sharpless kinetic resolution
Absolute Configuration: S

(S)-N-Benzoyl-1-(α-furyl)-n-butylamine

Tetrahedron: Asymmetry **1993**, *4*, 1501

Wei-Shan Zhou,* Xue-You Zhu, and Jie-Fei Cheng



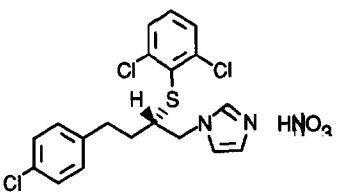
E.e.=91%(by ^{1}HNMR of MTPA amide of the corresponding α-furfuryl amine)
$[\alpha]_D$ = -78.2(c 0.5, EtOH)
Source of Chirality: Sharpless kinetic resolution
Absolute Configuration: S

$C_{16}H_{19}NO_2$

(S)-N-Benzoyl-1-(α-furyl)-3-methylbutylamine

D. M. Rotstein and K. A. M. Walker

Tetrahedron: Asymmetry **1993**, *4*, 1521



E.e. = 99.4% by chiral HPLC

$[\alpha]_D^{25}$ = +22.7 (c, 0.4, EtOH)

Source of chirality: *R*-(-)-glycidyl tosylate

$C_{19}H_{18}Cl_3N_3O_3S$

(2*S*)-1-[2-(2,6-Dichlorophenylthio-4-(4-chlorophenyl)butyl]-1*H*-imidazole nitrate

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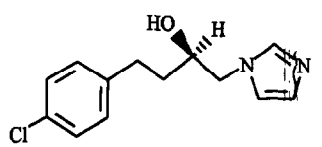
D. M. Rotstein and K. A. M. Walker

Tetrahedron: Asymmetry **1993**, *4*, 1521



E.e. = 100 % by chiral HPLC

$[\alpha]_D^{25}$ = +23.6 (c, 0.4, $CHCl_3$)

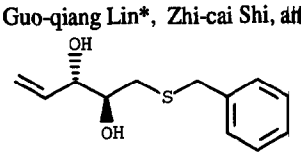
Source of chirality: *R*-(-)-glycidyl tosylate

$C_{13}H_{15}ClN_2O$

R-(+)-1-[2-Hydroxy-4-(4-chlorophenyl)butyl]-1*H*-imidazole

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



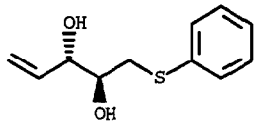
$[\alpha]_D^{25}$ = +18.8 (*c* 0.36, CH_2Cl_2)
Source of chirality: (2R,3S)-1,2-epoxy-4-penten-3-ol
Absolute configuration: 3S,4S

$C_{12}H_{16}O_2S$

5-benzylthio-(3S,4S)-3,4-dihydroxy-1-pentene.

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



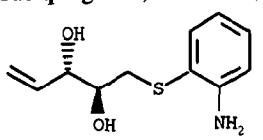
$C_{11}H_{14}O_2S$

$[\alpha]_D^{25}$ = +12.4 (*c* 1.45, $CHCl_3$)
Source of chirality: (2R,3S)-1,2-epoxy-4-penten-3-ol
Absolute configuration: 3S, 4S

5-phenylthio-(3S,4S)-3,4-dihydroxy-1-pentene

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



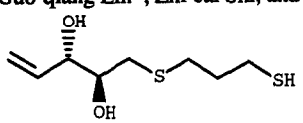
$C_{11}H_{15}NO_2S$

$[\alpha]_D^{25}$ = +37.5 (*c* 1.35, $CHCl_3$)
Source of chirality: (2R,3S)-1,2-epoxy-4-penten-3-ol
Absolute configuration: 3S, 4S

5-(*o*-aminophenyl)thio-(3S,4S)-3,4-dihydroxy-1-pentene

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



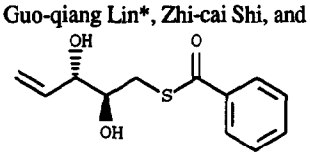
$C_8H_{16}O_2S_2$

$[\alpha]_D^{25}$ = +1.4 (*c* 1.08, $CHCl_3$)
Source of chirality: (2R,3S)-1,2-epoxy-4-penten-3-ol
Absolute configuration: 3S, 4S

5-(3'-mercapto-propyl)thio-(3S,4S)3,4-dihydroxy-1-pentene

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



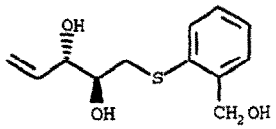
$C_{12}H_{14}O_3S$

$[\alpha]_D^{25}$ = -3.4 (*c* 1.94, $CHCl_3$)
Source of chirality: (2R,3S)-1,2-epoxy-4-penten-3-ol
Absolute configuration: 3S, 4S

5-benzoylthio-(3S,4S)-3,4-dihydroxy-1-pentene

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



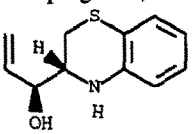
$C_{12}H_{16}O_3S$

$[\alpha]_D^{25}$ = +2.1 (*c* 0.29, $CHCl_3$)
Source of chirality: (2R,3S)-1,2-epoxy-4-penten-3-ol
Absolute configuration: 3S, 4S

5-(*o*-hydroxymethylphenyl)thio-(3S,4S)-3,4-dihydroxy-1-pentene

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



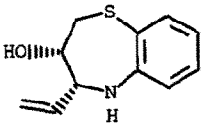
$C_{11}H_{13}NOS$

$[\alpha]_D^{25}$ = -37.3 (*c* 0.69, CH_2Cl_2)
Source of chirality:
Absolute configuration: 3'S, 3R

3R-3-(3'S-3'-hydroxy-1'-propenyl)-2,3,4-trihydro-[1,4]-benzothiazine

Guo-qiang Lin*, Zhi-cai Shi, and Chun-ming Zeng

Tetrahedron: Asymmetry **1993**, *4*, 1533



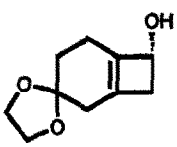
$C_{11}H_{13}NOS$

$[\alpha]_D^{25}$ = -6.2 (*c* 0.60, CH_2Cl_2)
Source of chirality:
Absolute configuration: 3S, 4R

(3S,4R)-3-hydroxy-4-vinyl-2,3,4,5-tetrahydro-[1,5]-benzothiazepine

Tetsuya Toya, Hiromasa Nagase, and Toshio Honda*

Tetrahedron: Asymmetry **1993**, *4*, 1537



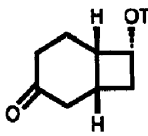
$C_{10}H_{14}O_3$

E.e. = 58% (determined by ^1H NMR analysis of the corresponding MTPA ester)
$[\alpha]_D$ = +6.25 (c = 1.0, $CHCl_3$)
Source of chirality: asymmetric reduction with (*S*)-oxazaborolidine and BH_3
Absolute configuration 7*R* (estimated based on a mechanism proposed for the asymmetric reduction)

(7*R*)-3,3-Ethylenedioxybicyclo[4.2.0]oct-1(6)-en-7-ol

Tetsuya Toya, Hiromasa Nagase, and Toshio Honda*

Tetrahedron: Asymmetry **1993**, *4*, 1537



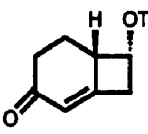
E.e. = >99% (determined by ^{1}H NMR analysis of the corresponding MTPA ester)
$[\alpha]_D$ = +30.8 (c = 1.0, $CHCl_3$)
Mp = 75-76°C (from methanol)
Source of chirality: asymmetric reduction with (*S*)-oxazaborolidine and BH_3
Absolute configuration 1*R*, 6*S*, 7*R*

$C_{24}H_{30}O_2Si$

(1*R*,6*S*,7*R*)-7-endo-*tert*-Butyldiphenylsiloxybicyclo[4.2.0]octan-3-one

Tetsuya Toya, Hiromasa Nagase, and Toshio Honda*

Tetrahedron: Asymmetry **1993**, *4*, 1537



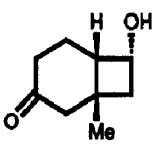
E.e. = >99% (determined by ^{1}H NMR analysis of the corresponding MTPA ester)
$[\alpha]_D$ = -39.0 (c = 1.0, $CHCl_3$)
Mp = 65-68°C
Source of chirality: asymmetric reduction with (*S*)-oxazaborolidine and BH_3
Absolute configuration 6*S*, 7*R*

$C_{24}H_{28}O_2Si$

(6*S*,7*R*)-7-endo-*tert*-Butyldiphenylsiloxybicyclo[4.2.0]oct-1-en-3-one

Tetsuya Toya, Hiromasa Nagase, and Toshio Honda*

Tetrahedron: Asymmetry **1993**, *4*, 1537



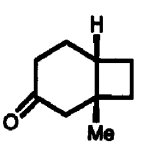
E.e. = >99% (determined by ^{1}H NMR analysis of the corresponding MTPA ester)
$[\alpha]_D$ = -25.2 (c = 0.35, $CHCl_3$)
Source of chirality: asymmetric reduction with (*S*)-oxazaborolidine and BH_3
Absolute configuration 1*R*, 6*S*, 7*R*

$C_9H_{14}O_2$

(1*R*,6*S*,7*R*)-7-endo-Hydroxy-1-methylbicyclo[4.2.0]octan-3-one

Tetsuya Toya, Hiromasa Nagase, and Toshio Honda*

Tetrahedron: Asymmetry **1993**, *4*, 1537



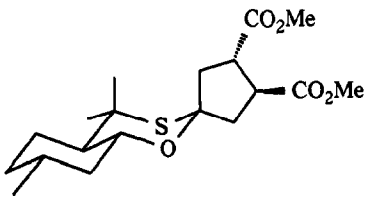
E.e. = >99% (based on the enantiomeric excess of the starting material)
$[\alpha]_D$ = +8.0 (c = 0.1, $CHCl_3$)
Source of chirality: asymmetric reduction with (*S*)-oxazaborolidine and BH_3
Absolute configuration 1*R*, 6*S*

$C_9H_{14}O$

(1*R*,6*S*)-1-Methylbicyclo[4.2.0]octan-3-one

Guy Solladié*, Olivier Lohse.

Tetrahedron: Asymmetry **1993,** *4*, 1547

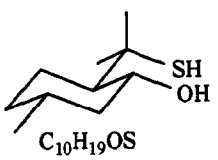


Spiro [(hexahydro-4,4,7-trimethyl-1,3-benzoxathiane)-2:1'-(dimethylcyclopentane-3',4'-dicarboxylate)]

$[\alpha]_D$ = -25.5 (c=2.46, $CHCl_3$)
e.e > 98%, (RMN)
m.p. 107-108.
Absolute configuration: 7R, 9R, 10S, 3'S, 4'S.
Source of chirality: resolution.

Guy Solladié*, Olivier Lohse.

Tetrahedron: Asymmetry **1993,** *4*, 1547



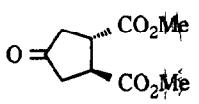
$C_{10}H_{19}OS$

5-methyl-2-(1-mercapto-1-methylethyl)-cyclohexanol

$[\alpha]_D$ = -6 (c=3.95, $CHCl_3$)
e.e > 98%
Liquid
Absolute configuration: 1R, 2R, 5R
Source of chirality: (+) pulegone

Guy Solladié*, Olivier Lohse.

Tetrahedron: Asymmetry **1993,** *4*, 1547



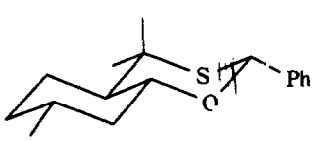
$C_9H_{12}O_5$

Dimethyl 4-oxocyclopentane dicarboxylate

$[\alpha]_D$ = +136 (c=0.66, $CHCl_3$), (lit. +134.4)
e.e > 98%
liquid
Absolute configuration: 1S, 2S.
Source of chirality: resolution.

Guy Solladié*, Olivier Lohse.

Tetrahedron: Asymmetry **1993,** *4*, 1547



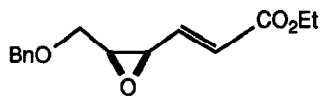
$C_{17}H_{24}OS$

Hexahydro-4,4,7-trimethyl-2-phenyl-1,3-benzoxathiane

$[\alpha]_D$ = +56.5 (c=2.52, $CHCl_3$)
e.e > 98%, (RMN)
m.p. 96-7°C
Absolute configuration: 2R, 7R, 9R, 10R.
Source of chirality: (+) pulegone

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



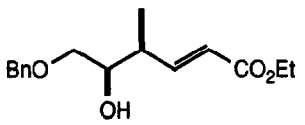
$C_{15}H_{18}O_4$

Ethyl 6-benzyloxy-4,5-epoxy-2-hexenoate

E.e. > 87% by precursor
$[\alpha]_D^{20}$ -6.1 (*c* 1.12, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 4*R*, 5*S*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



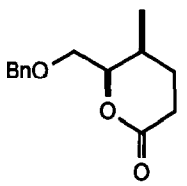
$C_{16}H_{22}O_4$

Ethyl 6-benzyloxy-5-hydroxy-4-methyl-2-hexenoate

E.e. > 87% by precursor
$[\alpha]_D^{18}$ -37.3 (*c* 1.10, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 4*S*, 5*R*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



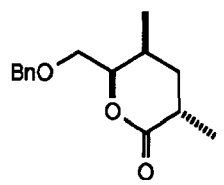
$C_{14}H_{18}O_3$

6-Benzyloxy-4-methyl-δ-valerolactone

E.e. > 87% by precursor
$[\alpha]_D^{16}$ -31.7 (*c* 0.98, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 4*S*, 5*R*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



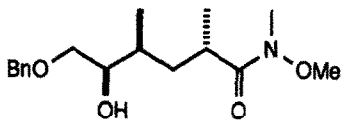
$C_{15}H_{20}O_3$

6-Benzyloxy-2,4-dimethyl-δ-valerolactone

E.e. > 99% (recrystallization)
$[\alpha]_D^{24}$ -21.9 (*c* 0.68, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 2*S*, 4*S*, 5*R*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



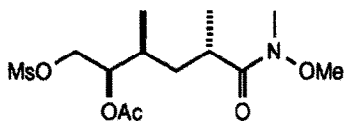
$C_{17}H_{27}NO_4$

6-Benzyloxy-2,4-dimethyl-5-hydroxy-N-methoxy-N-methylhexanamide

E.e. > 99% by precursor
$[\alpha]_D^{22}$ -9.02 (*c* 0.37, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 2*S*, 4*S*, 5*R*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



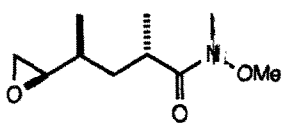
$C_{19}H_{29}NO_5$

5-Acetoxy-2,4-dimethyl-6-methanesulfonyloxy-N-methoxy-N-methylhexanamide

E.e. > 99% by precursor
$[\alpha]_D^{20}$ -0.39 (*c* 0.86, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 2*S*, 4*S*, 5*R*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



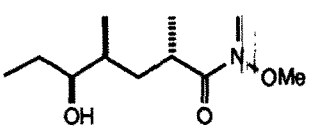
$C_{10}H_{19}NO_3$

5,6-Epoxy-2,4-dimethyl-N-methoxy-N-methylhexanamide

E.e. > 99% by precursor
$[\alpha]_D^{21}$ +28.7 (*c* 0.12, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 2*S*, 4*S*, 5*R*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993,** *4*, 1573



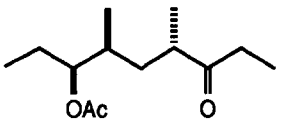
$C_{11}H_{23}NO_3$

2,4-Dimethyl-5-hydroxy-N-methoxy-N-methylhexanamide

E.e. > 99% by precursor
$[\alpha]_D^{15}$ -6.3 (*c* 0.16, $CHCl_3$)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 2*S*, 4*S*, 5*S*

M. Miyashita, Y. Toshimitsu, T. Shiratani, H. Irie

Tetrahedron: Asymmetry **1993**, *4*, 1573



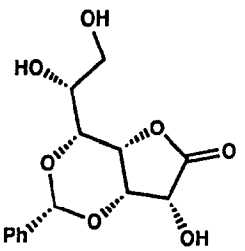
$C_{13}H_{24}O_3$

7-Acetoxy-4,6-dimethyl-3-nonanone

E.e. 92% based on the authentic compound
$[\alpha]_D^{22}$ -16.6 (*c* 0.10, hexane)
Source of chirality: D-Tartaric acid and asymmetric epoxidation
Absolute configuration: 4*S*, 6*S*, 7*S*

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

$[\alpha]_D^{20}$ = -56.1 (*c*, 1.0 in MeOH)

3,5(R)-O-Benzylidene-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{14}H_{16}O_7$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

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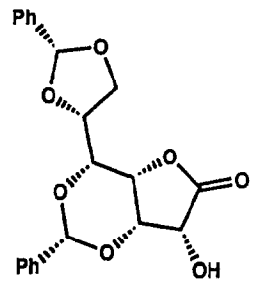
C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

$[\alpha]_D^{20}$ = -21.1 (*c*, 1.1 in Me_2CO)

3,5(R):6,7(R)-Di-*O*-benzylidene-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{21}H_{20}O_7$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

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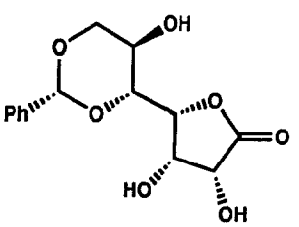
C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

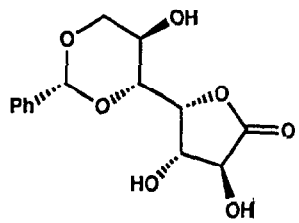
$[\alpha]_D^{20}$ = -90.6 (*c*, 1.01 in MeCN)

5,7(R)-O-Benzylidene-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{14}H_{16}O_7$

Source of chirality: D-glucose as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993,** *4*, 1579



E.e. = 100%

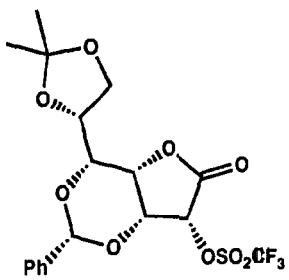
$[\alpha]_D^{20}$ = -64.7 (*c*, 0.99 in MeCN)

5,7(R)-O-Benzylidene-D-*glycero*-D-*ido*-heptono-1,4-lactone
$C_{14}H_{16}O_7$

Source of chirality: D-glucose as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993,** *4*, 1579



E.e. = 100%

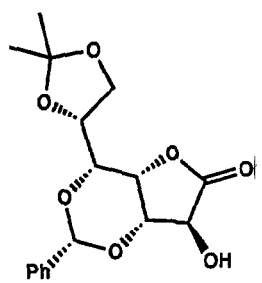
$[\alpha]_D^{20}$ = -83.6 (*c*, 1.04 in $CHCl_3$)

3,5(R)-O-Benzylidene-6,7-O-isopropylidene-2-O-trifluoromethanesulphonyl-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{18}H_{19}F_3O_9S$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993,** *4*, 1579



E.e. = 100%

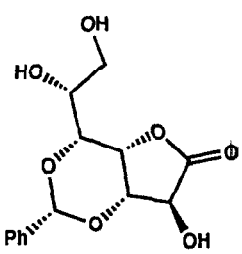
$[\alpha]_D^{20}$ = -73.8 (*c*, 0.52 in $CHCl_3$)

3,5(R)-O-Benzylidene-6,7-O-isopropylidene-D-*glycero*-D-*ido*-heptono-1,4-lactone
$C_{17}H_{20}O_7$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993,** *4*, 1579



E.e. = 100%

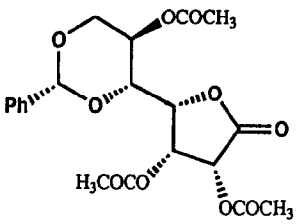
$[\alpha]_D^{20}$ = -67.1 (*c*, 1.01 in MeCN)

3,5(R)-O-Benzylidene-D-*glycero*-D-*ido*-heptono-1,4-lactone
$C_{14}H_{16}O_7$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

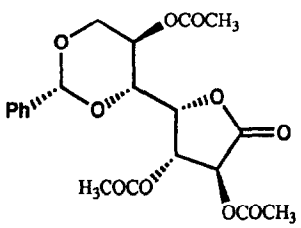
$[\alpha]_D^{20}$ = -100.3 (*c*, 0.89 in $CHCl_3$)

5,7(R)-O-Benzylidene-2,3,6-O-triacetyl-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{20}H_{22}O_{10}$

Source of chirality: D-glucose as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

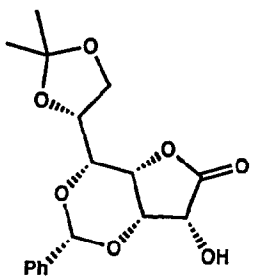
$[\alpha]_D^{20}$ = -128.6 (*c*, 1.02 in $CHCl_3$)

5,7(R)-O-Benzylidene-2,3,6-O-triacetyl-D-*glycero*-D-*ido*-heptono-1,4-lactone
$C_{20}H_{22}O_{10}$

Source of chirality: D-glucose as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

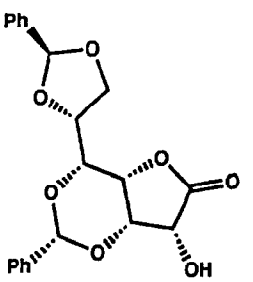
$[\alpha]_D^{20}$ = -36.9 (*c*, 0.99 in $CHCl_3$)

3,5(R)-O-Benzylidene-6,7-O-isopropylidene-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{17}H_{20}O_7$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

C. J. F. Bichard, I. Bruce, A. Girdhar, D. J. Hughes, G. W. J. Fleet and D. J. Watkin

Tetrahedron: Asymmetry **1993**, *4*, 1579



E.e. = 100%

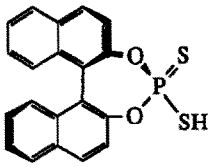
$[\alpha]_D^{20}$ = -19.2 (*c*, 1.0 in $CHCl_3$)

3,5(R):6,7(S)-Di-*O*-benzylidene-D-*glycero*-D-*gulo*-heptono-1,4-lactone
$C_{21}H_{20}O_7$

Source of chirality: D-*glycero*-D-*gulo*-heptono-1,4-lactone as starting material

D. Fabbri, G. Delogu and O. De Lucchi

Tetrahedron: Asymmetry **1993,** *4*, 1591



E.e.= >99%

$[\alpha]_D^{25}$= -589.5 (c = 1, $CHCl_3$)

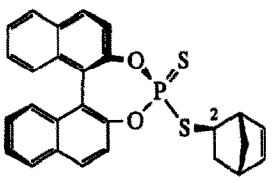
Source of chirality: obtained from enantiopure *R*-(+)-1,1'-binaphthalene-2,2'-diol

$C_{20}H_{13}O_3PS$

Dinaphtho[2,1-*d*:1',2'-*f*][1,3,2]dioxaphosphepin, 4-mercapto, 4-sulfide

D. Fabbri, G. Delogu and O. De Lucchi

Tetrahedron: Asymmetry **1993,** *4*, 1591



E.e.= > 99%

$[\alpha]_D^{25}$= -249.0 (c = 1.1, $CHCl_3$)

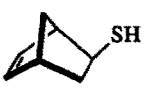
Source of chirality: obtained from enantiopure *R*-(+)-1,1'-binaphthalene-2,2'-diol

Absolute configuration of C-2 uncertain

$C_{27}H_{21}O_3PS$

D. Fabbri, G. Delogu and O. De Lucchi

Tetrahedron: Asymmetry **1993,** *4*, 1591



E.e.= > 99%

$[\alpha]_D^{25}$= +22.0 (c = 0.8, $CHCl_3$)

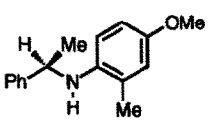
Absolute configuration uncertain

$C_7H_{10}S$

Exo-2-Mercaptonorbornene

K. Tomioka, I. Inoue, M. Shindo and K. Koga

Tetrahedron: Asymmetry **1993,** *4*, 1603



$C_{16}H_{19}NO$

E.e.>99% [by HPLC (OptiPak TA)]

$[\alpha]_D^{20}$= -45.5 (c 1.23, $CHCl_3$)

Source of chirality: Asymmetric methylation with MeLi

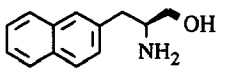
Absolute configuration: *R*

(assigned by correlation with *R*-α-phenethylamine

N-(4-Methoxy-2-methylphenyl)-α-phenethylamine

Y. Combret, J. Duflos, G. Dupas, J. Bourguignon and G. Quéguiner

Tetrahedron: Asymmetry **1993**, *4*, 1635



E.e = 100 % [by GPC analysis of Mosher's derivatives of the corresponding amino ester and assuming that the reduction is non-racemizing]

Source of chirality : enzymic resolution

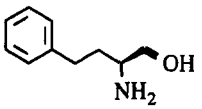
Absolute configuration : S

$C_{13}H_{15}NO$

2-amino-3-(2-naphthyl)propanol

Y. Combret, J. Duflos, G. Dupas, J. Bourguignon and G. Quéguiner

Tetrahedron: Asymmetry **1993**, *4*, 1635



E.e = 100 % [by GPC analysis of Mosher's derivatives of the corresponding amino ester and assuming that the reduction is non-racemizing]

Source of chirality : enzymic resolution

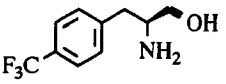
Absolute configuration : S

$C_{10}H_{15}NO$

2-amino-4-phenylbutanol

Y. Combret, J. Duflos, G. Dupas, J. Bourguignon and G. Quéguiner

Tetrahedron: Asymmetry **1993**, *4*, 1635



E.e = 100 % [by GPC analysis of Mosher's derivatives of the corresponding amino ester and assuming that the reduction is non-racemizing]

Source of chirality : enzymic resolution

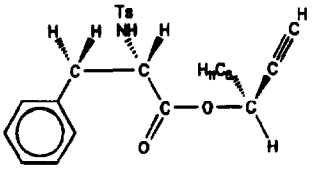
Absolute configuration : S

$C_{10}H_{12}F_3NO$

2-amino-3-(4-trifluoromethylphenyl)propanol

Th. Künstler, D. Schollmeyer, H. Singer*and M. Steigerwald

Tetrahedron: Asymmetry **1993**, *4*, 1645

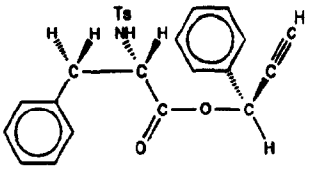


D.e. >97% (by ^{1}H-NMR with 0.2 eq. Eu(fod)$_3$)
(S)-oct-1-yn-3-ol: $[\alpha]_D^{22}$ = -22,0
(c=1.0,ether)
Source of chirality: (S)-phenylalanine

N-p-tosyl-(S)-phenylalanine (S)-oct-1-yn-3-yl ester

Tetrahedron: Asymmetry **1993**, *4*, 1645

Th. Künstler, D. Schollmeyer, H. Singer*and M. Steigerwald

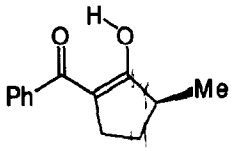


D.e. >97% (by ^{1}H-NMR with 0.2 eq. Eu(fod)$_3$)
(R)-1-phenylprop-2-yn-1-ol: $[\alpha]_D^{27}$ = -24,0 (c=2.1, ethanol)
Source of chirality: (S)-phenylalanine

N-p-tosyl-(S)-phenylalanine (R)-1-phenylprop-2-yn-1-yl ester

G. Bartoli, M. Bosco, C. Cimarelli, R. Dalpozzo, G. De Munno, G. Palmieri

Tetrahedron: Asymmetry **1993**, *4*, 1651



$C_{13}H_{14}O_2$
2-benzoyl-5-Methyl-cyclopentanone

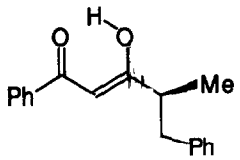
E.e. > 98%
$[\alpha]_D^{20}$ = + 14.9 (c = 1.9, $CHCl_3$)

Source of chirality: (R)-(+)-1-phenylethylamine

Absolute configuration 4S
(assigned by chemical correlation)

G. Bartoli, M. Bosco, C. Cimarelli, R. Dalpozzo, G. De Munno, G. Palmieri

Tetrahedron: Asymmetry **1993**, *4*, 1651



$C_{18}H_{18}O_2$
1,5-Diphenyl-4-methyl-pentan-1,3-dione

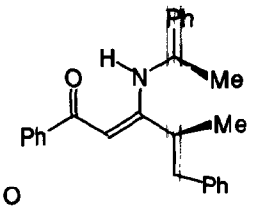
E.e. > 98 %
$[\alpha]_D^{20}$ = + 91.6 (c = 1.5, $CHCl_3$); mp 77 °C

Source of chirality: (R)-(+)-1-phenylethylamine

Absolute configuration 4S
(assigned by chemical correlation)

G. Bartoli, M. Bosco, C. Cimarelli, R. Dalpozzo, G. De Munno, G. Palmieri

Tetrahedron: Asymmetry **1993**, *4*, 1651



$C_{26}H_{27}NO$
1,5-Diphenyl-3-(N-1'-phenylethyl)-amino-4-methyl-pent-2-en-1-one

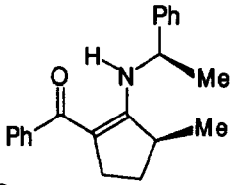
E.e. > 98% (by nmr)
$[\alpha]_D^{20}$ = – 545.0 (c =1.0, $CHCl_3$)

Source of chirality: (R)-(+)-1-phenylethylamine

Absolute configuration 4S,1'R
(assigned by X-Ray)

G. Bartoli, M. Bosco, C. Cimarelli, R. Dalpozzo, G. De Munno, G. Palmieri

Tetrahedron: Asymmetry **1993**, *4*, 1651



E.e. > 98% (by nmr)
$[\alpha]_D^{20}$ = – 459.4 (c =1.1, $CHCl_3$); mp 94-95 °C

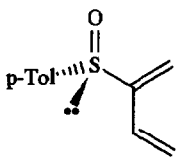
Source of chirality: (R)-(+)-1-phenylethylamine

Absolute configuration 3S,1'R
(assigned by X-Ray)

$C_{21}H_{23}NO$
1-benzoyl-2-(N-1'-phenylethyl)-amino-3-methylcyclopentene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

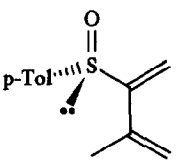


E.e. = 100% (by chiral HPLC with chiracel OB column)
$[\alpha]_D^{20}$ = +174 (c = 2.0, ethanol)
Source of chirality : Synthetis by E $_2'$ reaction of the corresponding sulfinylallylic bromide
Absolute configuration : R

$C_{11}H_{12}OS$
2-p-Tolylsulfinyl-1,3-butadiene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

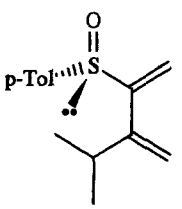


E.e. = 100% (by chiral HPLC with chiracel OB column)
$[\alpha]_D^{20}$ = +252 (c = 0.75, ethanol)
Source of chirality : Synthetis by E $_2'$ reaction of the corresponding sulfinylallylic bromide
Absolute configuration : S

$C_{12}H_{14}OS$
3-Methyl-2-p-tolylsulfinyl-1,3-butadiene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

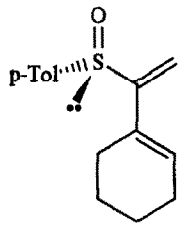


E.e. = 100% (by chiral HPLC with chiracel OB column)
$[\alpha]_D^{20}$ = +234 (c = 2.0, ethanol)
Source of chirality : Synthetis by E $_2'$ reaction of the corresponding sulfinylallylic bromide
Absolute configuration : S

$C_{14}H_{18}OS$
3-Isopropyl-2-p-tolylsulfinyl-1,3-butadiene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

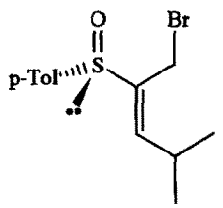


E.e. = 100% (by chiral HPLC with chiralcel OB column)
$[\alpha]_D^{20}$ = +152 (c = 1.5, ethanol)
Source of chirality : Synthetis by E $_2'$ reaction of the corresponding sulfinylallylic bromide
Absolute configuration : S

$C_{15}H_{18}OS$
1-(1-Cyclohexenyl)-1-p-tolylsulfinylethene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

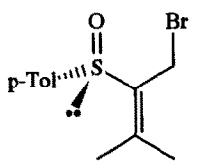


E.e. ≥ 99% (Inferred from e.e. of precursor)
$[\alpha]_D^{25}$ = 79 (c = 1.50, EtOH)
Source of chirality : from (R)-(+)-p-tolylvinyl-sulfoxyde (e.e ≥99%)
Absolute configuration : S

$C_{13}H_{17}OSBr$
(E)-1-Bromo-4-methyl-2-p-tolylsulfinyl-2-pentene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

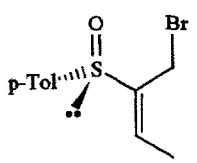


E.e. ≥ 99% (Inferred from e.e. of precursor)
$[\alpha]_D^{25}$ = -142 (c = 1.00, EtOH)
Source of chirality : from (R)-(+)-p-tolylvinyl-sulfoxyde (e.e ≥ 99%)
Absolute configuration : S

$C_{12}H_{15}OSBr$
1-Bromo-3-methyl-2-p-tolylsulfinyl-2-butene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993**, *4*, 1667

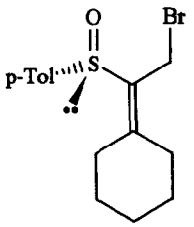


E.e. ≥ 99% (Inferred from e.e. of precursor)
$[\alpha]_D^{25}$ = 67 (c = 1.25, EtOH)
Source of chirality : from (R)-(+)-p-tolylvinyl-sulfoxyde (e.e ≥ 99%)
Absolute configuration : S

$C_{11}H_{13}OSBr$
(E)-1-Bromo-2-p-tolylsulfinyl-2-butene

E. Bonfand, P. Gosselin and C. Maignan

Tetrahedron: Asymmetry **1993,** *4*, 1667

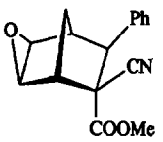


E.e.≥99% (Inferred from e.e. of precursor)
$[\alpha]_D^{25}$ = -157 (c = 1.00, EtOH)
Source of chirality : from (R)-(+)-p-tolylvinyl-sulfoxyde (e.e ≥99%)
Absolute configuration : S

$C_{15}H_{19}OSBr$
2-Bromo-1-cyclohexylidene-1-p-tolylsulfinyl ethane

Tetrahedron: Asymmetry **1993,** *4*, 1677

C. Cativiela, A. Avenoza and J. M. Peregrina



Absolute configuration: 1R, 2R, 3S, 4S, 5S, 6R

(assigned by comparison with the (+)-iodolactone)

$[\alpha]_D^{25}$ (c=1.12 x 10^{-2} g/mL, $CHCl_3$): - 70.0 ±0.5

$C_{16}H_{15}NO_3$

Methyl (1R,2R,3S,4S,5S,6R)-2-exo-cyano-3-exo-phenyl-5,6-exo-epoxybicyclo[2.2.1]heptane-2-endo-carboxylate

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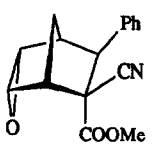
Tetrahedron: Asymmetry **1993,** *4*, 1677

C. Cativiela, A. Avenoza and J. M. Peregrina



Absolute configuration: 1R, 2R, 3S, 4S, 5R, 6S

(assigned by comparison with the (+)-iodolactone)

$[\alpha]_D^{25}$ (c=2.00 x 10^{-2} g/mL, $CHCl_3$): - 8.5 ±0.5

$C_{16}H_{15}NO_3$

Methyl (1R,2R,3S,4S,5R,6S)-2-exo-cyano-3-exo-phenyl-5,6-endo-epoxybicyclo[2.2.1]heptane-2-endo-carboxylate

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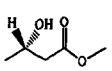
J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

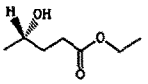
Tetrahedron: Asymmetry **1993,** *4*, 1683



	Absolute configuration	:	*S*
$C_5H_{10}O_3$	E.e.	:	99% (GC, γ-cyclodextrin phase)
Methyl 3-hydroxybutanoate	Source of chirality	:	enzymatic reduction

J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

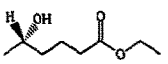
Tetrahedron: Asymmetry **1993,** *4*, 1683



	Absolute configuration	:	*S*
$C_7H_{14}O_3$	E.e.	:	99% (GC, γ-cyclodextrin phase)
Ethyl 4-hydroxypentanoate	Source of chirality	:	enzymatic reduction

J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

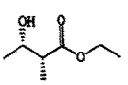
Tetrahedron: Asymmetry **1993,** *4*, 1683



	Absolute configuration	:	*S*
$C_8H_{16}O_3$	E.e.	:	>99% (GC, γ-cyclodextrin phase)
Ethyl 5-hydroxyhexanoate	Source of chirality	:	enzymatic reduction

J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

Tetrahedron: Asymmetry **1993,** *4*, 1683



	Absolute configuration	:	2*R*, 3*S*
	D.e.	:	> 95% (GC, γ-cyclodextrin phase)
$C_7H_{14}O_3$	$[\alpha]_D$	:	+7 (c = 1, $CHCl_3$)
Ethyl 2-methyl 3-hydroxybutanoate	Source of chirality	:	enzymatic reduction

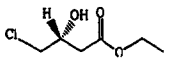
J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

Tetrahedron: Asymmetry **1993,** *4*, 1683

	Absolute configuration	:	*S*
$C_5H_{12}O_3$	E.e.	:	> 99% (GC, γ-cyclodextrin phase)
L-Lactaldehyde dimethyl acetal	Source of chirality	:	enzymatic reduction

J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

Tetrahedron: Asymmetry **1993**, *4*, 1683



	Absolute configuration	:	*R*
	E.e.	:	> 99% (GC, γ-cyclodextrin phase)
$C_6H_{11}OCl$	$[\alpha]_D$	:	+31.8 (c = 0.5, $CHCl_3$)
Ethyl 4-chloro 3-hydroxybutanoate	Source of chirality	:	enzymatic reduction

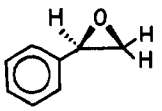
J. Peters, T. Zelinski, T. Minuth, M.-R. Kula

Tetrahedron: Asymmetry **1993**, *4*, 1683

	Absolute configuration	:	*S*
$C_8H_{10}O$	E.e.	:	94% (GC, γ-cyclodextrin phase)
1-Phenylethanol	Source of chirality	:	enzymatic reduction

Rukhsana I.Kureshy*, Noor-ul H.Khan, Sayed H.R.Abdi and Ketan N.Bhatt

Tetrahedron: Asymmetry **1993**, *4*, 1693

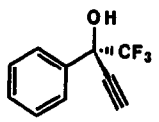


S(-)styrene oxide

ee > 50-80%[by nmr with $Eu(hfc)_3$]
Source of chirality: Asymmetric epoxidation of styrene by chiral Ru(II) Schiff base complexes.
Absolute configuration: S

D. O'Hagan, N. A. Zaidi and R. B. Lamont

Tetrahedron: Asymmetry **1993**, *4*, 1703



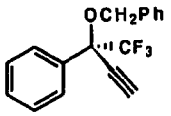
$C_{10}H_7F_3O$
1,1,1-Trifluoro-2-phenylbut-3-yne-2-ol

E.e. = >98% [by nmr of acetate with $Eu(hfc)_3$]
$[\alpha]_D^{20} = -7.2$ (c0.7, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (S)
(follows from lipase resolution)

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

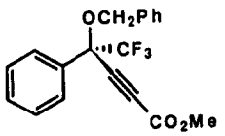
$[\alpha]_D^{20}$ = -12.1 (c1.9, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (S)
(follows from lipase resolution)

$C_{17}H_{13}F_3O$
1,1,1-Trifluoro-2-benzyloxy-2-phenylbut-3-yne

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

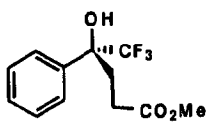
$[\alpha]_D^{20}$ = +30.2 (c0.86, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (R)
(follows from lipase resolution)

$C_{19}H_{15}F_3O_3$
Methyl 5,5,5,-trifluoro-4-benzyloxy-4-phenylpent-2-yneoate

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

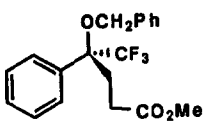
$[\alpha]_D^{20}$ = -83.3 (c0.3, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (R)
(follows from lipase resolution)

$C_{12}H_{13}F_3O_3$
Methyl 5,5,5-trifluoro-4-hydroxy-4-phenylpentanoate

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

$[\alpha]_D^{20}$ = -5.6 (c0.9, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (R)
(follows from lipase resolution)

$C_{19}H_{19}F_3O_3$
Methyl 5,5,5-trifluoro-4-benzyloxy-4-phenylpentanoate

Tetrahedron: Asymmetry **1993,** *4*, 1703

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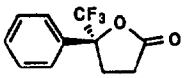


E.e. = >98%

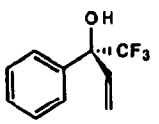
$[\alpha]_D^{20}$ = -58.6 (c0.6, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (R)
(follows from lipase resolution)

$C_{11}H_9F_3O_2$
γ-Phenyl-γ-(trifluoromethyl)butyrolactone

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

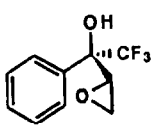
$[\alpha]_D^{20}$ = -63.2 (c0.9, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (S)
(follows from lipase resolution)

$C_{10}H_9F_3O$
1,1,1-Trifluoro-2-phenylbut-3-ene-2-ol

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

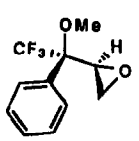
$[\alpha]_D^{20}$ = -48.8 (c1.6, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (2R,3S)
(follows from lipase resolution)

$C_{10}H_9F_3O_2$
1,1,1-Trifluoro-2-phenyl-3,4-epoxybutane-2-ol

Tetrahedron: Asymmetry **1993,** *4*, 1703

D. O'Hagan, N. A. Zaidi and R. B. Lamont



E.e. = >98%

$[\alpha]_D^{20}$ = -80 (c0.44, CH_2Cl_2)

Source of chirality: Lipase resolution.
Absolute configuration (2R,3S)
(follows from lipase resolution)

$C_{11}H_{11}F_3O_2$
1,1,1-Trifluoro-2-methoxy-2-phenyl-3,4-epoxybutane