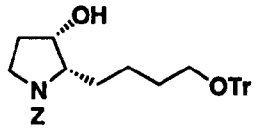
H. Takahata, Y. Banba, and T. Momose

Tetrahedron: Asymmetry **1992**, *3*, 999



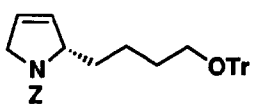
$C_{35}H_{37}NO_4$

E.e=92% [by nmr with MTPA ester of a precursor]
$[\alpha]^{25}_D$ +25.6 (*c* 1.46, $CHCl_3$)
Source of chirality: Katsuki-Sharpless kinetic resolution
Absolute configuration: 2*S*,3*S*

(2*S*,3*S*)-1-(Benzyloxycarbonyl)-2-[4-(triphenylmethoxy)butyl]-3-hydroxypyrrolidine

H. Takahata, Y. Banba, and T. Momose

Tetrahedron: Asymmetry **1992**, *3*, 999



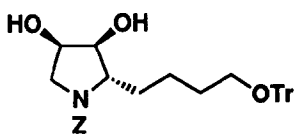
$C_{35}H_{35}NO_3$

E.e=92% [by nmr with MTPA ester of a precursor]
$[\alpha]^{24}_D$ +82.2 (*c* 0.46, $CHCl_3$)
Source of chirality: Katsuki-Sharpless kinetic resolution
Absolute configuration: *S*

(*S*)-1-(Benzyloxycarbonyl)-2-[4-(triphenylmethoxy)butyl]-3-pyrroline

H. Takahata, Y. Banba, and T. Momose

Tetrahedron: Asymmetry **1992**, *3*, 999



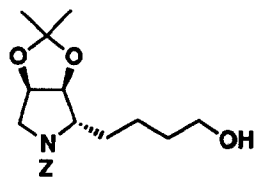
$C_{35}H_{37}NO_5$

E.e=92% [by nmr with MTPA ester of a precursor]
$[\alpha]^{25}_D$ +14.5 (*c* 0.52, $CHCl_3$)
Source of chirality: Katsuki-Sharpless kinetic resolution
Absolute configuration: 2*S*,3*S*,4*R*

(2*S*,3*S*,4*R*)-1-(Benzyloxycarbonyl)-2-[4-(triphenylmethoxy)butyl]-3,4-dihydroxypyrrolidine

H. Takahata, Y. Banba, and T. Momose

Tetrahedron: Asymmetry **1992**, *3*, 999



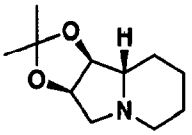
$C_{19}H_{27}NO_5$

E.e=92% [by nmr with MTPA ester of a precursor]
$[\alpha]^{24}_D$ +30.65 (*c* 1.55, $CHCl_3$)
Source of chirality: Katsuki-Sharpless kinetic resolution
Absolute configuration: 2*S*,3*S*,4*R*

(2*S*,3*S*,4*R*)-1-(Benzyloxycarbonyl)-2-(4-hydroxybutyl)-3,4-(isopropylidenedioxy)pyrrolidine

H. Takahata, Y. Banba, and T. Momose

Tetrahedron: Asymmetry **1992**, *3*, 999



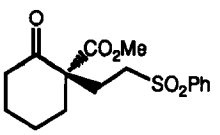
E.e=92% [by nmr with MTPA ester of a precursor]
$[\alpha]^{25}_D$ -48.3 (*c* 0.32, $CHCl_3$)
Source of chirality: Katsuki-Sharpless kinetic resolution
Absolute configuration: 1*S*,2*R*,8a*S*

$C_{11}H_{19}NO_2$

(1*S*,2*R*,8a*S*)-1,2-(Isopropylidenedioxy)indolizidine

Pinheiro, S.; Guingant, A.; Desmaële, D. and d'Angelo, J.

Tetrahedron: Asymmetry **1992**, *3*, 1003



ee 94% (by ^{1}H NMR with $Eu(hfc)_3$)
$[\alpha]_D^{25}$ -50.6 (c=8, MeOH)
Source of chirality : asymm. Michael addition
Absolute configuration : *S* (assigned by chemical correlation)

2-oxo-1-(2-phenylsulfonylethyl)-cyclohexane carboxylic acid, methyl ester

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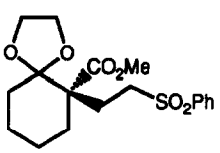
Pinheiro, S.; Guingant, A.; Desmaële, D. and d'Angelo, J.

Tetrahedron: Asymmetry **1992**, *3*, 1003



ee 94% (by ^{1}H NMR with $Eu(hfc)_3$)
$[\alpha]_D^{25}$ -9.6 (c=5.6, MeOH)
Source of chirality : asymm. Michael addition
Absolute configuration : S (assigned by chemical correlation)

2-ethylenedioxy-1-(2-phenylsulfonylethyl)-cyclohexane carboxylic acid, methyl ester

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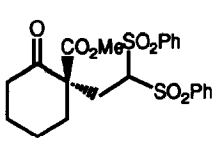
Pinheiro, S.; Guingant, A.; Desmaële, D. and d'Angelo, J.

Tetrahedron: Asymmetry **1992**, *3*, 1003

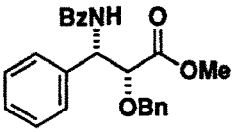


ee 50% (by ^{1}H NMR with $Eu(hfc)_3$)
$[\alpha]_D^{25}$ +27.8 (c=5.7, acetone)
Source of chirality : asymm. Michael addition
Absolute configuration : R (assigned by chemical correlation)

2-oxo-1-(2,2-bis(phenylsulfonyl)ethyl)-cyclohexane carboxylic acid, methyl ester

C. Mukai, I. J. Kim, and M. Hanaoka

Tetrahedron: Asymmetry **1992,** *3*, 1007



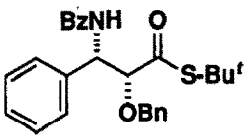
E.e = >98% [by ^{1}H NMR analysis]
$[\alpha]^{22}_D$ -5.3 (*c*, 0.41, $CHCl_3$)
mp 103 - 105°C ($CHCl_3$ - isopropyl ether)
Source of Chirality : asymm. synth. (aldol) of optically active chromium(0)-complexed aldehyde
Absolute configuration : 2R, 3S (assigned by conversion into known compound)

$C_{24}H_{23}NO_4$

Methyl 3-*N*-Benzoyl-2-benzyloxy-3-phenylpropanoate

C. Mukai, I. J. Kim, and M. Hanaoka

Tetrahedron: Asymmetry **1992,** *3*, 1007



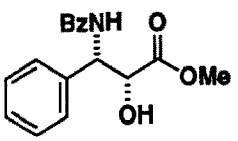
E.e. = >98% [by ^{1}H NMR analysis]
$[\alpha]^{23}_D$ + 58.5 (*c*, 0.41, $CHCl_3$)
mp 138 - 139°C (hexane - acetone)
Source of Chirality : asymm. synth. (aldol) of optically active chromium(0)-complexed aldehyde
Absolute configuration : 2R, 3S (assigned by conversion into known compound)

$C_{27}H_{29}NO_3S$

S-*t*-Butyl 3-*N*-Benzoyl-2-benzyloxy-3-phenylpropanethioate

C. Mukai, I. J. Kim, and M. Hanaoka

Tetrahedron: Asymmetry **1992,** *3*, 1007



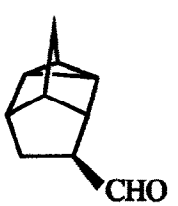
E.e. = >98% [by ^{1}H NMR analysis]
$[\alpha]^{20}_D$ - 48.1 (*c*, 0.28, MeOH)
mp 180 - 182°C ($CHCl_3$-isopropyl ether)
Source of Chirality : asymm. synth. (aldol) of optically active chromium(0)-complexed aldehyde
Absolute configuration : 2R, 3S (known compound)

$C_{17}H_{17}NO_4$

Methyl 3-*N*-Benzoyl-2-hydroxy-3-phenylpropanoate

L.Kollár, T.Wada and M.Lautens

Tetrahedron: Asymmetry **1992,** *3*, 1011



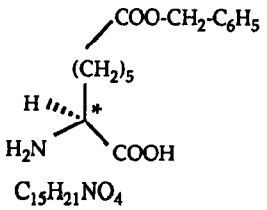
e.e.= 22% (determined by ^{1}HNMR using chiral shift reagents /$Eu(tfc)_3$ and $Eu(dcm)_3$/)
$[\alpha]_{546}^{20}$ = - 8.7 (c 8.3, toluene)
Source of chirality: asymmetric synthesis (enantioselective hydroformylation)

$C_{10}H_{12}O$

(S)-4-*exo*-formyl-tetracyclo[4,3,0,$0^{2,9}$$0^{3,7}$]nonane

M. Pugnière, B.Castro, N.Domergue & A. Previero

Tetrahedron: Asymmetry **1992**, *3*, 1015



$C_{15}H_{21}NO_4$

L-α-amino suberic acid-ω-benzyl ester

E.e. = >99% (det. by chiral tlc)

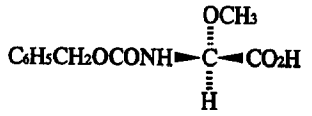
$[\alpha]_D^{25}$ = + 18.5 (c=0.5 g/100ml in HCOOH)

Source of chirality: enzymatic resolution

Absolute configuration: S

Masao Kawai, Yoshimasa Omori, Hatsuo Yamamura, Yasuo Butsugan

Tetrahedron: Asymmetry **1992**, *3*, 1019



$C_{11}H_{13}NO_5$

N–Carbobenzoxy–L–α–methoxyglycine

[Cbz–L–Gly(OMe)–OH]

$[\alpha]_D^{20}$ -20.1 (c=0.5, MeOH); e.e.>99.5%. Mp. 91–92°C.

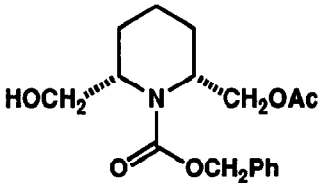
Source of chirality:

Resolution with (+)–(1*S*,2*S*)–2–amino–1–phenyl–1,3–propanediol or (*S*)–2–amino–1–phenylpropanol.

[(+)–D–Enantiomer, $[\alpha]_D^{20}$ +20.0 , e.e.>99.5%, was also obtained using (*R*)–2–amino–3–phenyl–1–propanol.]

R. Chênevert and M. Dickman

Tetrahedron: Asymmetry **1992**, *3*, 1021



$C_{17}H_{23}O_5N$

N-benzyloxycarbonyl-cis-2-acetoxymethyl-6-hydroxymethyl piperidine

ee ≥ 98% (^{19}F NMR and HPLC (Mosher's derivative))

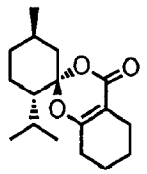
$[\alpha]_D^{22}$ = + 5.6 (c = 6.9, $CHCl_3$)

Source of chirality : enzymatic hydrolysis

Absolute configuration : 2R, 6S

T. Iwaoka, T. Murohashi, M. Sato and C. Kaneko

Tetrahedron: Asymmetry **1992**, *3*, 1025



$C_{17}H_{26}O_3$

(2*S*,2'*S*,5'*R*)-5,6,7,8-Tetrahydro-4-oxo-1,3-benzodioxane-2-spiro(2'-isopropyl-5'-methyl)cyclohexane

D.e.= 100% (by NMR analysis)

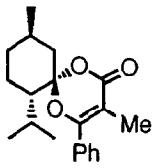
$[\alpha]_D^{24}$= +32.8 (*c* 1.20, $CHCl_3$)

Source of chirality: chromatographic separation of the (*S*)- and (*R*)-isomers

Absolute configuration: 2*S*,2'*S*,5'*R* (^{1}H-NMR analysis)

T. Iwaoka, T. Murohashi, M. Sato and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 1025



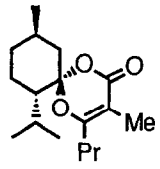
$C_{20}H_{26}O_3$

D.e.= 100% (by NMR analysis)
$[\alpha]_D^{20}$= +124.0 (*c* 1.06, $CHCl_3$)
Source of chirality: chromatographic separation of the (*S*)- and (*R*)-isomers
Absolute configuration: 6*S*,7*S*,10*R* (^{1}H-NMR analysis)

(6*S*,7*S*,10*R*)-7-Isopropyl-3,10-dimethyl-4-oxo-2-phenyl-1,5-dioxa-spiro[5.5]undec-2-ene

T. Iwaoka, T. Murohashi, M. Sato and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 1025



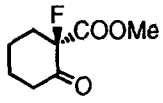
$C_{17}H_{28}O_3$

D.e.= 100% (by NMR analysis)
$[\alpha]_D^{24}$= +10.2 (*c* 1.00, $CHCl_3$)
Source of chirality: chromatographic separation of the (*S*)- and (*R*)-isomers
Absolute configuration: 6*S*,7*S*,10*R* (^{1}H-NMR analysis)

(6*S*,7*S*,10*R*)-7-Isopropyl-3,10-dimethyl-4-oxo-2-propyl-1,5-dioxa-spiro[5.5]undec-2-ene

T. Iwaoka, T. Murohashi, M. Sato and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 1025



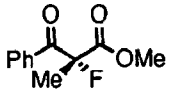
$C_8H_{11}FO_3$

E.e.=>98% (by NMR analysis of MTPA ester of the corresponding hydroxy-methyl derivative)
$[\alpha]_D^{21}$= +107.8 (*c* 1.00, $CHCl_3$)
Source of chirality: resolution of synth. intermed.
Absolute configuration: *R* (assigned from convex F_2 addition to the (*S*)-spirocyclic dioxinone derived from 2-oxocyclohexanecarboxylic acid and *l*-menthone)

Methyl (*R*)-1-Fluoro-2-oxocyclohexanecarboxylate

T. Iwaoka, T. Murohashi, M. Sato and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 1025



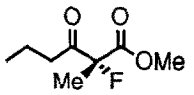
$C_{11}H_{12}FO_3$

E.e.=>98% (by comparison of specific rotation)
$[\alpha]_D^{22}$= -85.0 (*c* 1.00, MeOH)
Source of chirality: resolution of synth. intermed.
Absolute configuration: *R* (assigned by conversion to the known ethyl ester)

Methyl (*R*)-2-Benzoyl-2-fluoropropionate

T. Iwaoka, T. Murohashi, M. Sato and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 1025



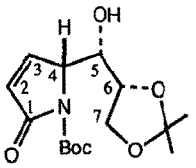
$C_8H_{13}FO_3$

E.e.= 73% (by comparison of specific rotation)
$[\alpha]_D^{23}$= -28.8 (*c* 2.39, MeOH)
Source of chirality: resolution of synth. intermed.
Absolute configuration: *R* (assigned by conversion to the known ethyl ester)

Methyl (*R*)-2-Fluoro-2-methyl-3-oxohexanoate

Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



E.e. = ca. 100%
$[\alpha]_D^{25}$ = +197.6 (*c* 0.83, $CHCl_3$); m.p. 138-140 °C
Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis
Absolute configuration: 4R, 5S, 6R; by X-ray analysis

$C_{15}H_{23}NO_6$

N-tert-Butoxycarbonyl-6,7-*O*-isopropylidene-2,3-dideoxy-hept-2-enono-1,4-lactam

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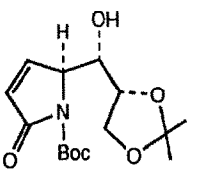
Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



E.e. = ca. 100%
$[\alpha]_D^{25}$ = -120.0 (*c* 0.8, $CHCl_3$); m.p. 118-120 °C
Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis
Absolute configuration: 4S, 5S, 6R; by X-ray analysis

$C_{15}H_{23}NO_6$

N-tert-Butoxycarbonyl-6,7-*O*-isopropylidene-2,3-dideoxy-hept-2-enono-1,4-lactam

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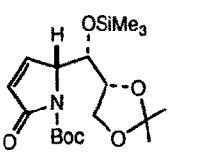
Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



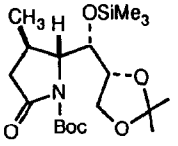
E.e. = ca. 100%
$[\alpha]_D^{25}$ = +156.7(*c* 1.24, $CHCl_3$); colorless oil
Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis
Absolute configuration: 4R, 5S, 6R

$C_{18}H_{31}NO_6Si$

N-tert-Butoxycarbonyl-5-O-trimethylsilyl-6,7-*O*-isopropylidene-2,3-dideoxy-hept-2-enono-1,4-lactam

Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



E.e. = ca. 100%

$[\alpha]_D^{25}$ = + 33.6 (*c* 1.28, $CHCl_3$); colorless oil

Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis

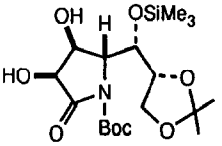
Absolute configuration: 3R, 4R, 5S, 6R

$C_{19}H_{35}NO_6Si$

N-tert-Butoxycarbonyl-3-methyl-5-*O*-trimethylsilyl-6,7-*O*-isopropylidene-2,3-dideoxy-heptono-1,4-lactam

Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



E.e. = ca. 100%

$[\alpha]_D^{25}$ = + 3.1 (*c* 1.9, $CHCl_3$); colorless oil

Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis

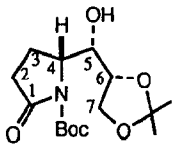
Absolute configuration: 2S, 3S, 4S, 5S, 6R

$C_{18}H_{33}NO_8Si$

N-tert-Butoxycarbonyl-5-*O*-trimethylsilyl-6,7-*O*-isopropylidene-heptono-1,4-lactam

Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



E.e. = ca. 100%

$[\alpha]_D^{25}$ = +59.24 (*c* 1.26, $CHCl_3$); m.p. 99-103 °C

Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis

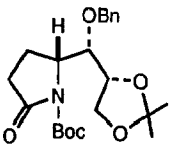
Absolute configuration: 4R, 5S, 6R

$C_{15}H_{25}NO_6$

N-tert-Butoxycarbonyl-6,7-*O*-isopropylidene-2,3-dideoxy-heptono-1,4-lactam

Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992,** *3*, 1035



E.e. = ca. 100%

$[\alpha]_D^{25}$ = -18.6 (*c* 0.7, $CHCl_3$); colorless oil

Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis

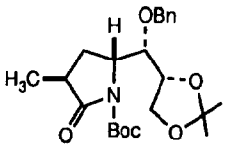
Absolute configuration: 4R, 5S, 6R

$C_{22}H_{31}NO_6$

N-tert-Butoxycarbonyl-5-*O*-benzyl-6,7-*O*-isopropylidene-2,3-dideoxy-heptono-1,4-lactam

Gloria Rassu,* Giovanni Casiraghi, Pietro Spanu, Luigi Pinna, Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi

Tetrahedron: Asymmetry **1992**, *3*, 1035



E.e. = ca. 100%

$[\alpha]_D^{25}$ = -75.4 (*c* 0.35, $CHCl_3$); colorless oil

Source of chirality: 2,3-*O*-isopropylidene-D-glyceraldehyde and asymmetric synthesis

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

$C_{23}H_{33}NO_6$

N-*tert*-Butoxycarbonyl-2-methyl-5-*O*-benzyl-6,7-*O*-isopropylidene-2,3-dideoxy-heptono-1,4-lactam

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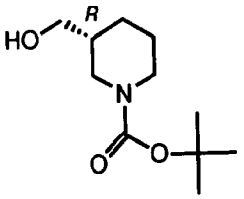
B. Wirz & W. Walther

Tetrahedron: Asymmetry **1992**, *3*, 1049



$C_{11}H_{21}NO_3$

tert-Butyl (R)-3-(hydroxymethyl)-1-piperidinecarboxylate

ee > 98 % (GLC of trifluoroacetate on chiral phase)

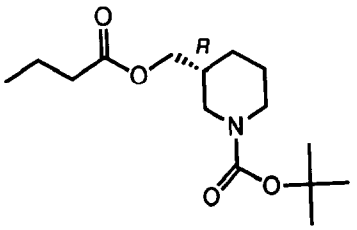
$[\alpha]_{365}^{20}$ = - 60.7 (c = 1.0, EtOH)

Source of chirality: enantoselective enzymatic hydrolysis of butyryl ester

Absolute configuration: R

B. Wirz & W. Walther

Tetrahedron: Asymmetry **1992**, *3*, 1049



$C_{15}H_{27}NO_4$

tert-Butyl (R)-3-[(butyryloxy)-methyl]-1-piperidinecarboxylate

ee = 94 % (GLC of corresponding alcohol derivative on chiral phase)

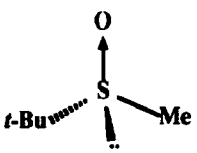
$[\alpha]_{365}^{20}$ = - 57.5 (c = 1.0, $CHCl_3$) (96 % GLC)

Source of chirality: enantioselective enzymatic hydrolysis of racemic butyryl ester

Absolute configuration: R

Tetrahedron: Asymmetry **1992**, *3*, 1063

G. Carrea, B. Redigolo, S. Riva, S. Colonna, N. Gaggero, E. Battistel, D. Bianchi



E.e. = 99 % by chiral GC with CP-Cyclodextrin-β-2,3,6-M19 column

Source of chirality : Cyclohexanone monooxygenase

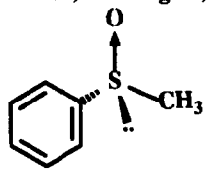
Absolute configuration : R

$C_5H_{12}OS$

***t*-butyl methyl sulfoxide**

Tetrahedron: Asymmetry **1992**, *3*, 1063

G. Carrea, B. Redigolo, S. Riva, S. Colonna, N. Gaggero, E. Battistel, D. Bianchi



E.e. = 99 % by chiral HPLC with a Chiralcel OB column

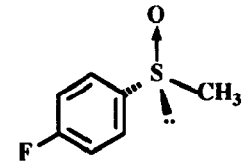
Source of chirality : Cyclohexanone monooxygenase
Absolute configuration : R

C_7H_8OS

methyl phenyl sulfoxide

Tetrahedron: Asymmetry **1992**, *3*, 1063

G. Carrea, B. Redigolo, S. Riva, S. Colonna, N. Gaggero, E. Battistel, D. Bianchi



E.e. = 92 % by chiral HPLC with a Chiralcel OB column

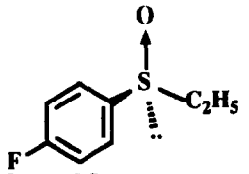
Source of chirality : Cyclohexanone monooxygenase
Absolute configuration : R

C_7H_7FOS

methyl-*p*-fluorophenyl sulfoxide

Tetrahedron: Asymmetry **1992**, *3*, 1063

G. Carrea, B. Redigolo, S. Riva, S. Colonna, N. Gaggero, E. Battistel, D. Bianchi



E.e. = 93 % by chiral HPLC with a Chiralcel OB column

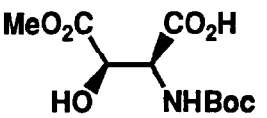
Source of chirality : Cyclohexanone monooxygenase
Absolute configuration : S

C_8H_9FOS

ethyl-*p*-fluorophenyl sulfoxide

Tetrahedron: Asymmetry **1992**, *3*, 1069

F. Matsuura, Y. Hamada, and T. Shioiri



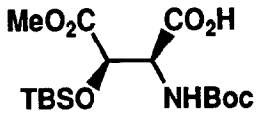
$[\alpha]^{22}_D$ +18.6 (c 0.90, $CHCl_3$)
source of chirality : (2R,3R)-epoxysuccinic acid
absolute configuration : 2S, 3R

$C_{10}H_{17}NO_7$

N-tert-Butoxycarbonyl-(2S,3R)-3-hydroxyaspartic acid β-methyl ester

F. Matsuura, Y. Hamada, and T. Shioiri

Tetrahedron: Asymmetry **1992,** *3*, 1069



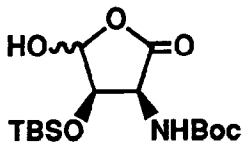
$C_{16}H_{31}NO_7Si$

$[\alpha]^{22}_D$ +68.5 (c 1.04, $CHCl_3$)
source of chirality : (2R,3R)-epoxysuccinic acid
absolute configuration : 2S, 3R

N-tert-Butoxycarbonyl-(2S,3R)-3-tert-butyldimethylsiloxy-
aspartic acid β-methyl ester

F. Matsuura, Y. Hamada, and T. Shioiri

Tetrahedron: Asymmetry **1992,** *3*, 1069



$C_{15}H_{29}NO_6Si$

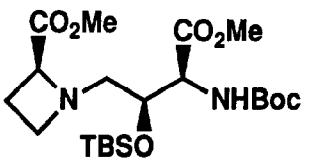
source of chirality : (2R,3R)-epoxysuccinic acid

absolute configuration : 3S, 4R

2-tert-Butoxycarbonylamino-3-tert-butyldimethylsiloxy-
4-hydroxy-D-lyxo-1,4-lactone

F. Matsuura, Y. Hamada, and T. Shioiri

Tetrahedron: Asymmetry **1992,** *3*, 1069



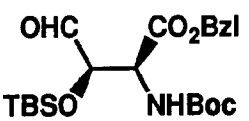
$C_{20}H_{40}N_2O_7Si$

$[\alpha]^{23}_D$ -19.3 (c 0.42, $CHCl_3$)
source of chirality : (2R,3R)-epoxysuccinic acid and
(S)-azetidine carboxylic acid
absolute configuration : 2S, 2'S, 3'S

Methyl N-[(2S,2'S,3'S)-3'-tert-butoxycarbonylamino-3'-methoxycarbonyl-
2'-tert-butyldimethylsiloxypropyl]-2-azetidinecarboxylate

F. Matsuura, Y. Hamada, and T. Shioiri

Tetrahedron: Asymmetry **1992,** *3*, 1069



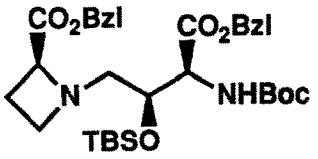
$C_{22}H_{35}NO_6Si$

$[\alpha]^{22}_D$ +26.5 (c 0.76, $CHCl_3$)
source of chirality : (2R,3R)-epoxysuccinic acid
absolute configuration : 2R, 3R

Benzyl (2R,3R)-2-tert-butoxycarbonylamino-3-tert-butyldimethylsiloxy-
4-oxobutylate

F. Matsuura, Y. Hamada, and T. Shioiri

Tetrahedron: Asymmetry **1992**, *3*, 1069



$C_{32}H_{48}N_2O_7Si$

$[\alpha]^{23}_D$ -11.9 (c 1, CH_2Cl_2)
source of chirality : (2R,3R)-epoxysuccinic acid and S-azetidine carboxylic acid
absolute configuration : 2S, 2'S, 3'S

Benzyl N-[(2S,2'S,3'S)-3'-tert-butoxycarbonylamino-3'-benzyloxycarbonyl-2'-tert-butyldimethylsiloxypropyl]-2-azetidinecarboxylate

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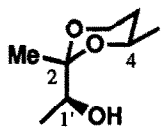
N. Tanaka, H. Suemune, and K. Sakai

Tetrahedron: Asymmetry **1992**, *3*, 1075



$C_8H_{16}O_3$

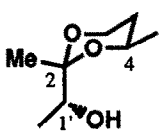
(2*R*,4*R*,1'*S*)-2-(1-Hydroxyethyl)-2,4-dimethyl-1,3-dioxane

D.e.= >99% (determined by ^{1}H-NMR)
$[\alpha]_D^{24}$ -11.7 (c=0.24, $CHCl_3$)

Source of chirality: (*R*)-1,3-butanediol
Absolute configuration: 1'*S*
(assigned by chemical correlation)

N. Tanaka, H. Suemune, and K. Sakai

Tetrahedron: Asymmetry **1992**, *3*, 1075



$C_8H_{16}O_3$

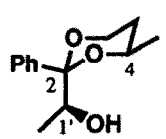
(2*R*,4*R*,1'*R*)-2-(1-Hydroxyethyl)-2,4-dimethyl-1,3-dioxane

D.e.= >99% (determined by ^{1}H-NMR)
$[\alpha]_D^{24}$ +13.8 (c=0.10, $CHCl_3$)

Source of chirality: (*R*)-1,3-butanediol
Absolute configuration: 1'*R*
(assigned by chemical correlation)

N. Tanaka, H. Suemune, and K. Sakai

Tetrahedron: Asymmetry **1992**, *3*, 1075



$C_{13}H_{18}O_3$

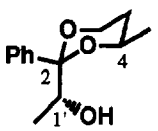
(2*R*,4*R*,1'*S*)-2-(1-Hydroxyethyl)-2-methyl-4-phenyl-1,3-dioxane

D.e.= >99% (determined by ^{1}H-NMR)
$[\alpha]_D^{22}$ +21.6 (c=0.11, $CHCl_3$)

Source of chirality: (*R*)-1,3-butanediol
Absolute configuration: 1'*S*
(assigned by Mosher's method)

N. Tanaka, H. Suemune, and K. Sakai

Tetrahedron: Asymmetry **1992,** *3*, 1075



$C_{13}H_{18}O_3$

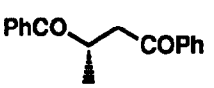
(2*R*,4*R*,1'*R*)-2-(1-Hydroxyethyl)-2-methyl-4-phenyl-1,3-dioxane

D.e.= >99% (determined by ^{1}H-NMR)
$[\alpha]_D^{22}$ +73.7 (c=0.10, $CHCl_3$)

Source of chirality: (*R*)-1,3-butanediol
Absolute configuration: 1'*R*
(assigned by Mosher's method)

N. Tanaka, H. Suemune, and K. Sakai

Tetrahedron: Asymmetry **1992,** *3*, 1075



$C_{17}H_{16}O_2$

(*S*)-2-Methyl-1,4-diphenylbutane-1,4-dione

E.e.= 48% (derived from precursor **14** of 48% d.e.)
$[\alpha]_D^{20}$ -42.7 (c=2.29, $CHCl_3$)

Source of chirality: (*R*,*R*)-2,4-pentanediol
Absolute configuration: *S*
(assigned by specific rotation of the authentic sample)