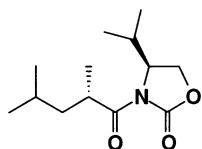


Stereochemistry abstracts

Vincent Guerlavais, Patrick J. Carroll and Madeleine M. Joullié*

Tetrahedron: Asymmetry 13 (2002) 675



$C_{13}H_{23}NO_3$
(4*S*)-4-Isopropyl-3-[(2*S*)-2',4'-dimethylvaleryl]-2-oxazolidinone

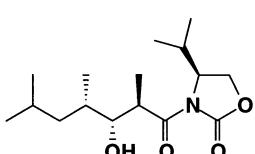
$[\alpha]_D^{20} = +83$ (CHCl_3 , c 1.05)

Source of chirality: (4*S*)-4-isopropyl-2-oxazolidinone

Absolute configuration: 4*S*,2'*S*

Vincent Guerlavais, Patrick J. Carroll and Madeleine M. Joullié*

Tetrahedron: Asymmetry 13 (2002) 675



$C_{16}H_{29}NO_4$
(4*S*)-4-Isopropyl-3-[(2*R*,3*R*,4*S*)-2',4',6'-trimethyl-3'-hydroxyheptyl]-2-oxazolidinone

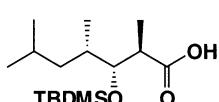
$[\alpha]_D^{20} = +57.5$ (CHCl_3 , c 1.02)

Source of chirality: asymmetric aldol reaction

Absolute configuration: 4*S*,2'*S*,3*R*,4*S*

Vincent Guerlavais, Patrick J. Carroll and Madeleine M. Joullié*

Tetrahedron: Asymmetry 13 (2002) 675



$C_{16}H_{34}O_3Si$
(2*R*,3*R*,4*S*)-2,4,6-Trimethyl-3-*tert*-butyldimethylsilyloxyheptanoic acid

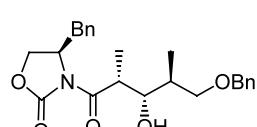
$[\alpha]_D^{20} = -13.55$ (CHCl_3 , c 1.07)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*S*,3*R*,4*S*

Angela Zampella, Maria Sorgente and Maria Valeria D'Auria*

Tetrahedron: Asymmetry 13 (2002) 681



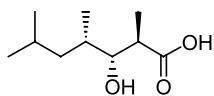
$C_{24}H_{29}NO_5$
[4*R*,3(2*R*,3*S*,4*S*)]-4-Benzyl-3-(5'-benzyloxy-3'-hydroxy-2',4'-dimethylpentanoyl)-2-oxazolidinone

E.e. = 100%

$[\alpha]_D = -21.9$ (c 5.6, CHCl_3)

Source of chirality: asymmetric synthesis

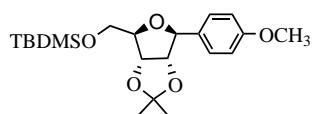
Absolute configuration: 4*R*,2*R*,3*S*,4*S*

 $C_{10}H_{20}O_3$ (2*R*,3*R*,4*S*)-3-Hydroxy-2,4,6-trimethylheptanoic acid

E.e. = 100%

 $[\alpha]_D = -20$ (*c* 0.1, CHCl₃)

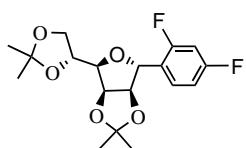
Source of chirality: asymmetric synthesis

Absolute configuration: 2*R*,3*R*,4*S* $C_{21}H_{34}O_5Si$ 1-(4'-Methoxyphenyl)-2,3-*O*-isopropylidene-β-D-ribofuranoside

E.e. = 100%

 $[\alpha]_D = -17.7$ (*c*, 0.9, CHCl₃)

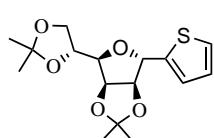
Source of chirality: asymmetric synthesis

Absolute configuration: 1*S*,2*S*,3*S*,4*R* $C_{18}H_{22}F_2O_5$ 1-(2',4'-Difluorophenyl)-2,3:5,6-di-*O*-isopropylidene-α-D-mannofuranoside

E.e. = 100%

 $[\alpha]_D = -10.5$ (*c*, 1.6, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*R*,2*R*,3*R*,4*R*,5*R* $C_{16}H_{22}O_5S$ 1-(2'-Thiophenyl)-2,3:5,6-di-*O*-isopropylidene-α-D-mannofuranoside

E.e. = 100%

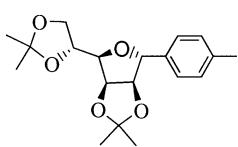
 $[\alpha]_D = 12.4$ (*c*, 1.2, CHCl₃)

Source of chirality: asymmetric synthesis

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

G. V. M. Sharma,* K. Raman Kumar, Punna Sreenivas,
Palakodety Radha Krishna and Mukund S. Chorghade

Tetrahedron: Asymmetry 13 (2002) 687



1-(4'-Methylphenyl)-2,3:5,6-di-O-isopropylidene- α -D-mannofuranoside

E.e. = 100%

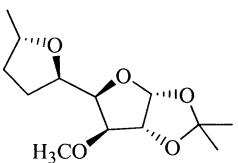
[α]_D = 19.4 (*c*, 1.2, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*R*,2*R*,3*R*,4*R*,5*R*

G. V. M. Sharma,* K. Raman Kumar, Punna Sreenivas,
Palakodety Radha Krishna and Mukund S. Chorghade

Tetrahedron: Asymmetry 13 (2002) 687



(2*R*,3*R*,4*S*,5*R*)-2,3-*O*-Isopropylidene-4-methoxy-5-[(2'*R*,5'*R*)-4-phenyl-tetrahydrofuryl]tetrahydrofuran

E.e. = 100%

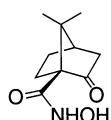
[α]_D = -43.3 (*c*, 1.7, CHCl₃)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*R*,3*R*,4*S*,5*R*,2*'R*,5*'R*

Ying-Chuan Wang, Tzung-Min Lu, Shanmugham Elango,
Chao-Kuo Lin, Chia-Tzung Tsai and Tu-Hsin Yan*

Tetrahedron: Asymmetry 13 (2002) 691



(+)-Ketopinohydroxamic acid

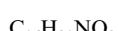
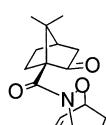
E.e. = 100%

[α]_D = +91.0 (*c* 0.5, CH₂Cl₂)

Source of chirality: ketopinic acid

Ying-Chuan Wang, Tzung-Min Lu, Shanmugham Elango,
Chao-Kuo Lin, Chia-Tzung Tsai and Tu-Hsin Yan*

Tetrahedron: Asymmetry 13 (2002) 691



(1*S*,4*R*)-3-((1*S*,2*R*)-2-Oxo-1-bornylcarbonyl)-3-aza-2-oxabicyclo[2.2.2]-5-octene

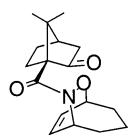
E.e. = 100%

[α]_D = +37.6 (*c* 2.0, CH₂Cl₂)

Source of chirality: asymmetric synthesis

Ying-Chuan Wang, Tzung-Min Lu, Shanmugham Elango,
Chao-Kuo Lin, Chia-Tzung Tsai and Tu-Hsin Yan*

Tetrahedron: Asymmetry 13 (2002) 691



C₁₇H₂₃NO₃
(1*R*,5*S*)-2-((1*S*,2*R*)-2-Oxo-1-bornylcarbonyl)-7-aza-6-oxabicyclo[3.2.2]-8-nonene

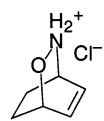
E.e. = 100%

[α]_D = +40.6 (*c* 2.0, CH₂Cl₂)

Source of chirality: asymmetric synthesis

Ying-Chuan Wang, Tzung-Min Lu, Shanmugham Elango,
Chao-Kuo Lin, Chia-Tzung Tsai and Tu-Hsin Yan*

Tetrahedron: Asymmetry 13 (2002) 691



C₆H₁₀ClNO₃
(1*S*,4*R*)-3-Aza-2-oxabicyclo[2.2.2]-5-octene hydrochloride

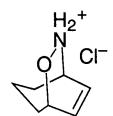
E.e. = 100%

[α]_D = -24.5 (*c* 1.1, MeOH)

Source of chirality: asymmetric synthesis

Ying-Chuan Wang, Tzung-Min Lu, Shanmugham Elango,
Chao-Kuo Lin, Chia-Tzung Tsai and Tu-Hsin Yan*

Tetrahedron: Asymmetry 13 (2002) 691



C₇H₁₂ClNO₃
(1*R*,5*S*)-7-Aza-6-oxabicyclo[3.2.2]-8-nonene hydrochloride

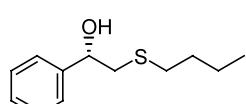
E.e. = 100%

[α]_D = -22.5 (*c* 0.8, H₂O)

Source of chirality: asymmetric synthesis

Byung Tae Cho,* Ok Kyoung Choi and Dong Jun Kim

Tetrahedron: Asymmetry 13 (2002) 697



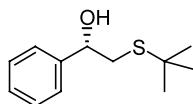
C₁₂H₁₈OS
(*S*)-2-(*n*-Butylsulfanyl)-1-phenylethanol

E.e. = 92% (by HPLC analysis on Whelk-O1 chiral column)

[α]_D²² = +62.6 (*c* 1.33, CHCl₃)

Source of chirality: asymmetric reduction

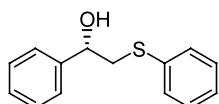
Absolute configuration: *S*

 $C_{12}H_{18}OS$ (S)-2-(*tert*-Butylsulfanyl)-1-phenylethanol

E.e.=78% (by HPLC analysis on Whelk-O1 chiral column)

 $[\alpha]_D^{22}=+53.8$ (*c* 1.08, $CHCl_3$)

Source of chirality: asymmetric reduction

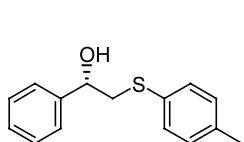
Absolute configuration: *S* $C_{14}H_{14}OS$

(S)-2-(Phenylsulfanyl)-1-phenylethanol

E.e.=97% (by HPLC analysis on Whelk-O1 chiral column)

 $[\alpha]_D^{22}=-11.5$ (*c* 1.00, $CHCl_3$)

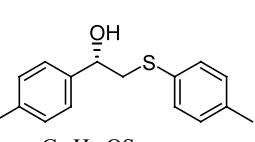
Source of chirality: asymmetric reduction

Absolute configuration: *S* (by comparison with literature data) $C_{15}H_{16}OS$ (S)-2-(*p*-Tolylsulfanyl)-1-phenylethanol

E.e.=99% (by HPLC analysis on Whelk-O1 chiral column)

 $[\alpha]_D^{22}=-17.1$ (*c* 1.16, $CHCl_3$)

Source of chirality: asymmetric reduction

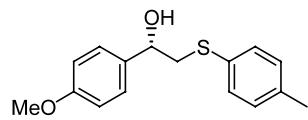
Absolute configuration: *S* (by comparison with literature data) $C_{16}H_{18}OS$ (S)-2-(*p*-Tolylsulfanyl)-1-*p*-tolylethanol

E.e.=99% (by HPLC analysis on Whelk-O1 chiral column)

 $[\alpha]_D^{22}=-30.6$ (*c* 1.2, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



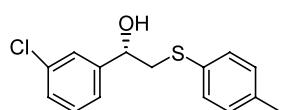
$C_{16}H_{18}O_2S$
(*S*)-2-(*p*-Tolylsulfanyl)-1-(*p*-methoxyphenyl)ethanol

E.e. = 99% (by HPLC analysis on Whelk-O1 chiral column)

$[\alpha]_D^{22} = -40.1$ (*c* 1.0, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



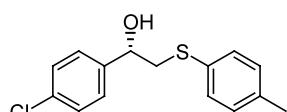
$C_{15}H_{15}ClOS$
(*S*)-2-(*p*-Tolylsulfanyl)-1-(*m*-chlorophenyl)ethanol

E.e. >99% (by HPLC analysis on Whelk-O1 chiral column)

$[\alpha]_D^{22} = -30.3$ (*c* 1.13, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



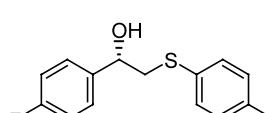
$C_{15}H_{15}ClOS$
(*S*)-2-(*p*-Tolylsulfanyl)-1-(*p*-chlorophenyl)ethanol

E.e. >99% (by HPLC analysis on Whelk-O1 chiral column)

$[\alpha]_D^{22} = -45.1$ (*c* 1.03, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



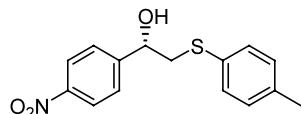
$C_{15}H_{15}FOS$
(*S*)-2-(*p*-Tolylsulfanyl)-1-(*p*-fluorophenyl)ethanol

E.e. >99% (by HPLC analysis on Whelk-O1 chiral column)

$[\alpha]_D^{22} = -13.1$ (*c* 1.15, $CHCl_3$)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



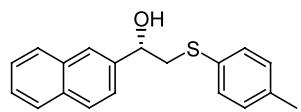
C₁₅H₁₅NO₃S
(S)-2-(*p*-Tolylsulfanyl)-1-(*p*-nitrophenyl)ethanol

E.e. >99% (by HPLC analysis on Whelk-O1 chiral column)

[α]_D²² = -80.9 (*c* 1.12, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



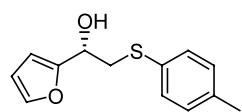
C₁₉H₁₈OS
(S)-2-(*p*-Tolylsulfanyl)-1-(2'-naphthyl)ethanol

E.e. = 99% (by HPLC analysis on Whelk-O1 chiral column)

[α]_D²² = -69.3 (*c* 1.37, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



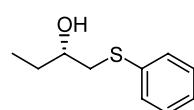
C₁₃H₁₄OS
(S)-2-(*p*-Tolylsulfanyl)-1-(2'-furyl)ethanol

E.e. = 97% (by HPLC analysis on Whelk-O1 chiral column)

[α]_D²² = -30.4 (*c* 2.27, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



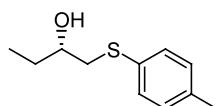
C₁₀H₁₄OS
(S)-1-(Benzenesulfanyl)-2-butanol

E.e. = 73% (by HPLC analysis on Chiralcel OD-H chiral column)

[α]_D²² = +45.8 (*c* 1.60, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S* (by comparison with literature data)



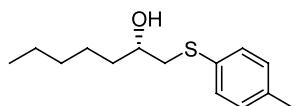
C₁₁H₁₆OS
(S)-1-(*p*-Tolylsulfanyl)-2-butanol

E.e. = 74% (by HPLC analysis on Chiralcel OD-H chiral column)

[α]_D²² = +44.0 (*c* 1.51, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



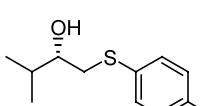
C₁₄H₂₂OS
(S)-1-(*p*-Tolylsulfanyl)-2-heptanol

E.e. = 74% (by HPLC analysis on Whelk-O1 chiral column)

[α]_D²² = +34.8 (*c* 1.02, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



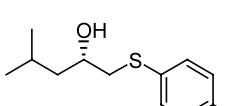
C₁₂H₁₈OS
(S)-1-(*p*-Tolylsulfanyl)-3-methyl-2-butanol

E.e. = 88% (by HPLC analysis of its sulfone on Chiralcel OD chiral column)

[α]_D²² = +80.0 (*c* 1.35, CHCl₃)

Source of chirality: asymmetric reduction

Absolute configuration: *S*



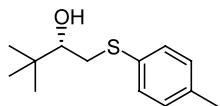
C₁₃H₂₀OS
(S)-1-(*p*-Tolylsulfanyl)-4-methyl-2-pentanol

E.e. = 81% (by HPLC analysis on Chiralcel OD-H chiral column)

[α]_D²² = +34.1 (*c* 1.17, CHCl₃)

Source of chirality: asymmetric reduction

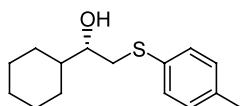
Absolute configuration: *S*

 $C_{13}H_{20}OS$ (S)-1-(*p*-Tolylsulfanyl)-3,3-dimethyl-2-butanol

E.e.=99% (by HPLC analysis on Chiralcel OD-H chiral column)

 $[\alpha]_D^{22}=+117.8$ (*c* 1.34, CHCl₃)

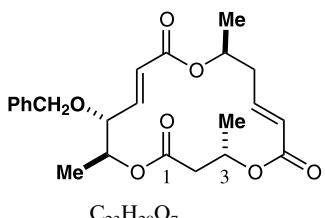
Source of chirality: asymmetric reduction

Absolute configuration: *S* $C_{15}H_{22}OS$ (S)-2-(*p*-Tolylsulfanyl)-1-cyclohexylethanol

E.e.=99% (by HPLC analysis on Whelk-O1 chiral column)

 $[\alpha]_D^{22}=+54.9$ (*c* 1.05, CHCl₃)

Source of chirality: asymmetric reduction

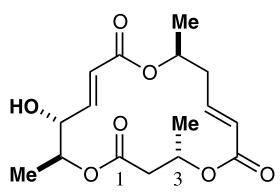
Absolute configuration: *S* $C_{23}H_{28}O_7$

Benzyl macrospheleide C

E.e. >99%

 $[\alpha]_D^{19}=-43.7$ (*c*=0.22, CHCl₃)

Source of chirality: lipase-catalysed enantioselective hydrolysis

Absolute configuration: 3*S*,9*S*,14*R*,15*S* $C_{16}H_{22}O_7$

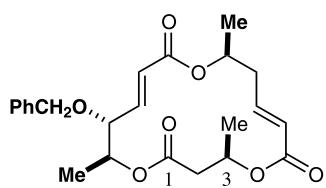
Macrospheleide C

E.e. >99%

 $[\alpha]_D^{26}=+53.3$ (*c*=0.08, EtOH)

Source of chirality: lipase-catalysed enantioselective hydrolysis

Absolute configuration: 3*S*,9*S*,14*R*,15*S*

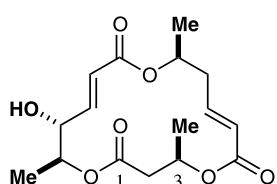
 $C_{23}H_{28}O_7$

Benzyl macrosphelide F

E.e. >99%

 $[\alpha]_D^{24} = -19.7$ ($c = 0.16$, CHCl₃)

Source of chirality: lipase-catalysed enantioselective hydrolysis

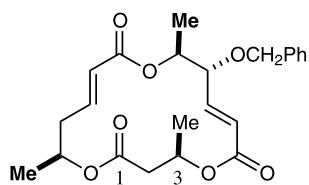
Absolute configuration: 3*R*,9*S*,14*R*,15*S* $C_{16}H_{22}O_7$

Macrosphelide F

E.e. >99%

 $[\alpha]_D^{27} = +42.8$ ($c = 0.50$, EtOH)

Source of chirality: lipase-catalysed enantioselective hydrolysis

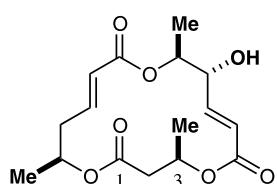
Absolute configuration: 3*R*,9*S*,14*R*,15*S* $C_{23}H_{28}O_7$

Benzyl macrosphelide G

E.e. >99%

 $[\alpha]_D^{29} = -22.1$ ($c = 0.35$, CHCl₃)

Source of chirality: lipase-catalysed enantioselective hydrolysis

Absolute configuration: 3*R*,8*R*,9*S*,15*S* $C_{16}H_{22}O_7$

Macrosphelide G

E.e. >99%

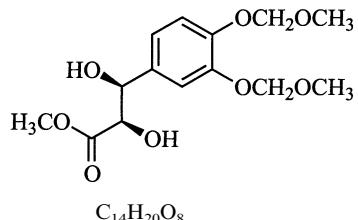
 $[\alpha]_D^{26} = +51.7$ ($c = 0.35$, EtOH)

Source of chirality: lipase-catalysed enantioselective hydrolysis

Absolute configuration: 3*R*,8*R*,9*S*,15*S*

Sang-sup Jew,* Doo-yeon Lim, So-young Bae, Hyun-ah Kim,
Jeong-hoon Kim, Jihye Lee and Hyeung-geun Park*

Tetrahedron: Asymmetry 13 (2002) 715



Methyl (2*R*,3*S*)-2,3-dihydroxy-3-[3',4'-bis(methoxymethoxy)phenyl]propionate

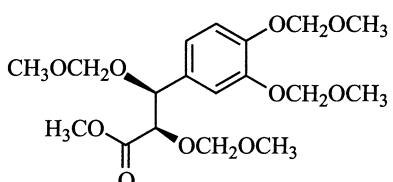
$[\alpha]_D^{20} = +3.9$ (*c* 1.7, CHCl₃)

Source of chirality: asymmetric dihydroxylation

Absolute configuration: 2*R*,3*S*

Sang-sup Jew,* Doo-yeon Lim, So-young Bae, Hyun-ah Kim,
Jeong-hoon Kim, Jihye Lee and Hyeung-geun Park*

Tetrahedron: Asymmetry 13 (2002) 715



Methyl (2*R*,3*S*)-2,3-methoxymethoxy-3-[3',4'-bis(methoxymethoxy)phenyl]propionate

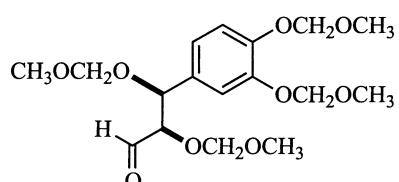
$[\alpha]_D^{20} = +110.0$ (*c* 0.9, CHCl₃)

Source of chirality: asymmetric dihydroxylation

Absolute configuration: 2*R*,3*S*

Sang-sup Jew,* Doo-yeon Lim, So-young Bae, Hyun-ah Kim,
Jeong-hoon Kim, Jihye Lee and Hyeung-geun Park*

Tetrahedron: Asymmetry 13 (2002) 715



(2*R*,3*S*)-2,3-Methoxymethoxy-3-[3',4'-bis(methoxymethoxy)phenyl]propionaldehyde

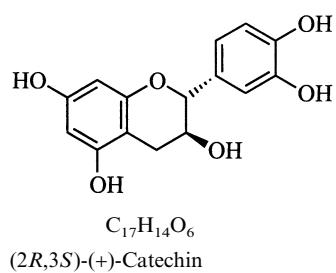
$[\alpha]_D^{20} = +131.6$ (*c* 0.95, CHCl₃)

Source of chirality: asymmetric dihydroxylation

Absolute configuration: 2*R*,3*S*

Sang-sup Jew,* Doo-yeon Lim, So-young Bae, Hyun-ah Kim,
Jeong-hoon Kim, Jihye Lee and Hyeung-geun Park*

Tetrahedron: Asymmetry 13 (2002) 715



(2*R*,3*S*)-(+)-Catechin

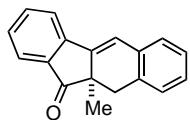
$[\alpha]_D^{20} = +16.0$ (*c* 0.1, CH₃COCH₃)

Source of chirality: asymmetric dihydroxylation

Absolute configuration: 2*R*,3*S*

Ashutosh V. Bedekar, Toshiyuki Watanabe, Kiyoshi Tanaka*
and Kaoru Fuji

Tetrahedron: Asymmetry 13 (2002) 721



(5a*S*)-Methyl-5,5a-dihydrobenzo[*b*]fluoren-6-one

E.e. = 88%

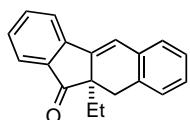
[α]_D¹⁸ = +57.3 (*c* 0.59, CHCl₃, 50% e.e.)

Source of chirality: asymmetric synthesis from
(*S*)-(−)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Ashutosh V. Bedekar, Toshiyuki Watanabe, Kiyoshi Tanaka*
and Kaoru Fuji

Tetrahedron: Asymmetry 13 (2002) 721



(5a*S*)-Ethyl-5,5a-dihydrobenzo[*b*]fluoren-6-one

E.e. = 82%

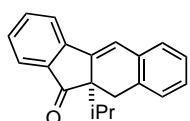
[α]_D²⁰ = +65.0 (*c* 2.30, CHCl₃, 63% e.e.)

Source of chirality: asymmetric synthesis from
(*S*)-(−)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Ashutosh V. Bedekar, Toshiyuki Watanabe, Kiyoshi Tanaka*
and Kaoru Fuji

Tetrahedron: Asymmetry 13 (2002) 721



(5a*S*)-Isopropyl-5,5a-dihydrobenzo[*b*]fluoren-6-one

E.e. = 86%

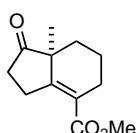
[α]_D¹⁶ = +184.0 (*c* 0.44, CHCl₃, 100% e.e.)

Source of chirality: asymmetric synthesis from
(*S*)-(−)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Jiro Yamazaki, Ashutosh V. Bedekar, Toshiyuki Watanabe,
Kiyoshi Tanaka,* Joshu Watanabe and Kaoru Fuji

Tetrahedron: Asymmetry 13 (2002) 729



(7a*S*)-Methyl-(7a-methyl-1-oxo-2,3,5,6,7,7a-hexahydro-1*H*-indene-4-carboxylate

E.e. = 80%

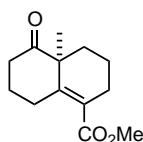
[α]_D¹⁸ = +251 (*c* 0.60, CHCl₃, 60% e.e.)

Source of chirality: asymmetric synthesis from
(*S*)-(−)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Jiro Yamazaki, Ashutosh V. Bedekar, Toshiyuki Watanabe,
Kiyoshi Tanaka,* Joshu Watanabe and Kaoru Fuji

Tetrahedron: Asymmetry 13 (2002) 729



C₁₃H₁₈O₃
(8a*S*)-Methyl-(8a-methyl-1-oxo-1,2,3,4,6,7,8,8a-octahydro)-1*H*-naphthalene-5-carboxylate

E.e. = 81%

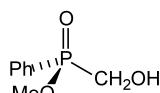
[α]_D¹⁸ = +113 (*c* 0.40, CHCl₃, 80% e.e.)

Source of chirality: asymmetric synthesis from
(*S*)-(−)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Piotr Kiełbasiński,* Małgorzata Albrycht, Jerzy Łuczak and
Marian Mikołajczyk

Tetrahedron: Asymmetry 13 (2002) 735



C₈H₁₁O₃P

Methyl hydroxymethanephенylphosphinate

E.e. = 89%

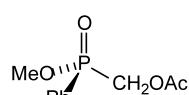
[α]_D²⁰ = −21.5 (*c* = 1.1, CHCl₃)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *R*

Piotr Kiełbasiński,* Małgorzata Albrycht, Jerzy Łuczak and
Marian Mikołajczyk

Tetrahedron: Asymmetry 13 (2002) 735



C₁₀H₁₃O₄P

Methyl acetoxymethanephенylphosphinate

E.e. = 89%

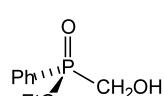
[α]_D²⁰ = +49.8 (*c* = 2.2, CHCl₃)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S*

Piotr Kiełbasiński,* Małgorzata Albrycht, Jerzy Łuczak and
Marian Mikołajczyk

Tetrahedron: Asymmetry 13 (2002) 735



C₉H₁₃O₃P

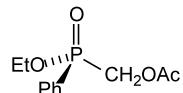
Ethyl hydroxymethanephенylphosphinate

E.e. = 79%

[α]_D²⁰ = −12.1 (*c* = 1.9, CHCl₃)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *R*



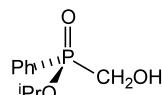
Ethyl acetoxymethanephенylphosphinate

E.e. = 83%

[α]_D²⁰ = +39.6 (*c* = 2.4, CHCl₃)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S*



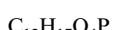
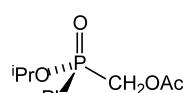
i-Propyl hydroxymethanephенylphosphinate

E.e. = 95%

[α]_D²⁰ = -21.3 (*c* = 1.2, CHCl₃)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *R*



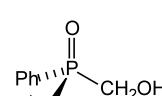
i-Propyl acetoxymethanephенylphosphinate

E.e. = 80%

[α]_D²⁰ = +31.0 (*c* = 2.1, CHCl₃)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S*



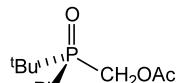
t-Butylhydroxymethylphenylphosphine oxide

E.e. = 43%

[α]_D²⁰ = -18.7 (*c* = 1.6, C₆H₆)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *S*



C₁₃H₁₉O₄P

Acetoxymethyl-*t*-butylphenylphosphine oxide

E.e. = 53%

[α]_D²⁰ = +7.0 (*c* = 2.1, C₆H₆)

Source of chirality: enzymatic kinetic resolution

Absolute configuration: *R*



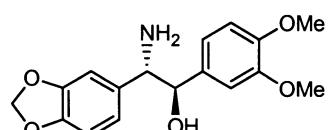
C₁₉H₂₅NO₆

(1*R*,2*S*)-(-)-2-Amino-1-(3,4-dimethoxyphenyl)-2-(3,4,5-trimethoxyphenyl)ethanol

[α]_D²⁰ = -119.3 (*c* = 0.75, EtOH)

Source of chirality: (S,S)-(+)-pseudoephedrine

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



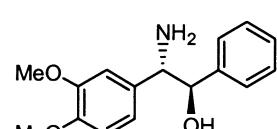
C₁₇H₁₉NO₅

(1*R*,2*S*)-(-)-2-Amino-1-(3,4-dimethoxyphenyl)-2-(3,4-methylenedioxyphenyl)ethanol

[α]_D²⁰ = -118.3 (*c* = 0.72, EtOH)

Source of chirality: (S,S)-(+)-pseudoephedrine

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



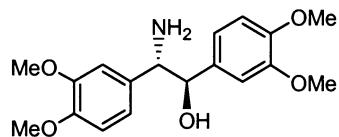
C₁₆H₁₉NO₃

(1*R*,2*S*)-(-)-2-Amino-2-(3,4-dimethoxyphenyl)-1-phenylethanol

[α]_D²⁰ = -110.9 (*c* = 0.70, EtOH)

Source of chirality: (S,S)-(+)-pseudoephedrine

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

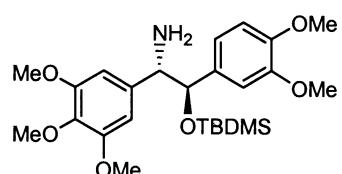


$C_{18}H_{23}NO_5$
(1*R*,*S*)-(-)-2-Amino-1,2-bis(3,4-dimethoxyphenyl)ethanol

$[\alpha]_D^{20} = -122.6$ ($c = 0.70$, EtOH)

Source of chirality: (*S,S*)-(+)pseudoephedrine

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

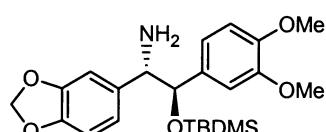


$C_{25}H_{39}NO_5Si$
(1*R*,*S*)-(-)-2-[Dimethyl(2,2-dimethylethyl)silyloxy]-2-(3,4-dimethoxyphenyl)-1-(3,4,5-trimethoxyphenyl)ethylamine

$[\alpha]_D^{20} = -117.3$ ($c = 0.40$, CH_2Cl_2)

Source of chirality: (*S,S*)-(+)pseudoephedrine

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

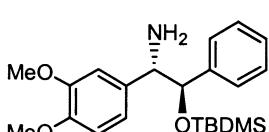


$C_{23}H_{33}NO_5Si$
(1*R*,*S*)-(-)-2-[Dimethyl(2,2-dimethylethyl)silyloxy]-2-(3,4-dimethoxyphenyl)-1-(3,4-methylenedioxyphenyl)ethylamine

$[\alpha]_D^{20} = -133.8$ ($c = 0.50$, CH_2Cl_2)

Source of chirality: (*S,S*)-(+)pseudoephedrine

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

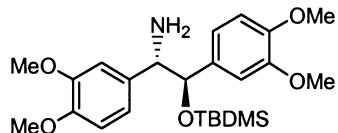


$C_{22}H_{33}NO_3Si$
(1*R*,*S*)-(-)-2-[Dimethyl(2,2-dimethylethyl)silyloxy]-1-(3,4-dimethoxyphenyl)-2-phenylethylamine

$[\alpha]_D^{20} = -137.2$ ($c = 0.50$, CH_2Cl_2)

Source of chirality: (*S,S*)-(+)pseudoephedrine

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

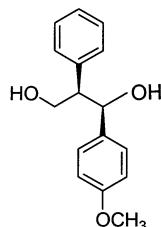


$C_{24}H_{37}NO_5Si$
(*1R,2S*)-(-)-2-[Dimethyl(2,2-dimethylethyl)silyloxy]-1,2-bis(3,4-dimethoxyphenyl)ethylamine

$[\alpha]_D^{20} = -126.9$ ($c = 0.50$, CH_2Cl_2)

Source of chirality: (*S,S*)-(+)pseudoephedrine

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



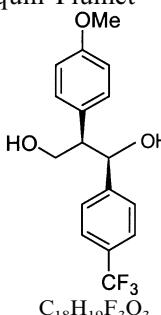
$C_{17}H_{20}O_3$
(*-*)(*2R,3R*)-(4-Methoxyphenyl)-3-phenyl-1,4-butanediol

E.e. >98%

$[\alpha]_D^{25} = -37.2$ ($c 0.8$, $CHCl_3$)

Source of chirality: (*R_a*)-[1,1']binaphthalenyl-2,2'-diol

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



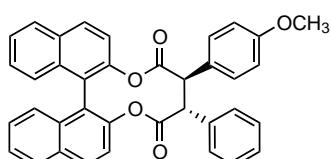
$C_{18}H_{19}F_3O_3$
(*-*)(*2R,3R*)-2-(4-Methoxyphenyl)-3-(4-trifluoromethyl)-1,4-butanediol

E.e. >98%

$[\alpha]_D^{25} = -35.5$ ($c 0.7$, $CHCl_3$)

Source of chirality: (*R_a*)-[1,1']binaphthalenyl-2,2'-diol

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



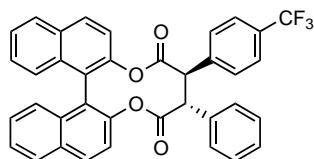
$C_{37}H_{26}F_3O_5$
(*-*)(*R_a*,2*R*,3*R*)-2-(4-Methoxyphenyl)-3-phenylsuccinic acid [1,1']binaphthalenyl-2,2'-diol ester

E.e. >98%

$[\alpha]_D^{25} = -78.9$ ($c 0.5$, $CHCl_3$)

Source of chirality: (*R_a*)-[1,1']binaphthalenyl-2,2'-diol

Absolute configuration: *R_a,2*R*,3*R**



C₃₇H₂₃F₃O₄

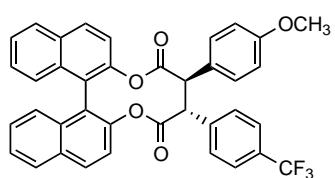
(-)-(R_a,2R,3R)-2-(4-Trifluoromethylphenyl)-3-phenylsuccinic acid [1,1']binaphthalenyl-2,2'-diol ester

E.e. >98%

[α]_D²⁵ = -88.2 (c 0.5, CHCl₃)

Source of chirality: (R_a)-[1,1']binaphthalenyl-2,2'-diol

Absolute configuration: R_a,2R,3R



C₃₈H₂₅F₃O₅

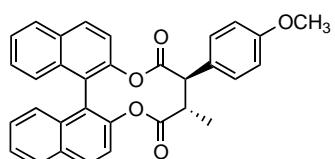
(-)-(R_a,2R,3R)-2-(4-Methoxyphenyl)-3-(4-trifluoromethylphenyl)succinic acid [1,1']binaphthalenyl-2,2'-diol ester

E.e. >98%

[α]_D²⁵ = -78.1 (c 0.5, CHCl₃)

Source of chirality: (R_a)-[1,1']binaphthalenyl-2,2'-diol

Absolute configuration: R_a,2R,3R



C₃₂H₂₄O₅

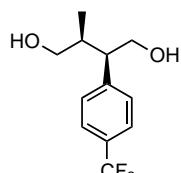
(-)-(R_a,2R,3S)-2-(4-Methoxyphenyl)-3-methylsuccinic acid [1,1']binaphthalenyl-2,2'-diol ester

E.e. >98%

[α]_D²⁵ = -45.7 (c 0.7, CHCl₃)

Source of chirality: (R_a)-[1,1']binaphthalenyl-2,2'-diol

Absolute configuration: R_a,2R,3S



C₁₂H₁₈F₃O₃

(-)-(2R,3R)-2-Phenyl-3-methyl-1,4-butanediol

E.e. >98%

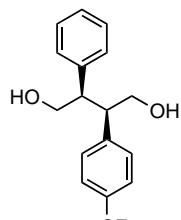
[α]_D²⁵ = -28.5 (c 0.7, CHCl₃)

Source of chirality: (R_a)-[1,1']binaphthalenyl-2,2'-diol

Absolute configuration: 2R,3R

Aurelio G. Csáký,* M. Belén Mula, Myriam Mba and Joaquín Plumet

Tetrahedron: Asymmetry 13 (2002) 753



(-)-(2*R*,3*R*)-2-Phenyl-3-(4-trifluoromethyl)-1,4-butanediol

E.e. >98%

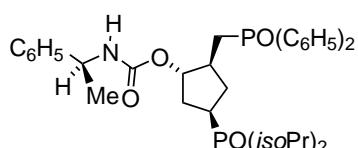
[α]_D²⁵ = -38.0 (*c* 0.8, CHCl₃)

Source of chirality: (R_a)-[1,1']binaphthalenyl-2,2'-diol

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

Pelayo Camps,* Gisela Colet, Mercè Font-Bardia,
Victoria Muñoz-Torrero, Xavier Solans and Santiago Vázquez

Tetrahedron: Asymmetry 13 (2002) 759



(1*S*,2*S*,4*R*)-4-(Diisopropylphosphinoyl)-2-[(diphenylphosphinoyl)methyl]cyclopentyl *N*-[(*S*)- α -methylbenzyl]carbamate

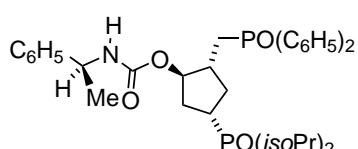
[α]_D²⁵ = +4.5 (*c* = 1.1, CHCl₃)

Source of chirality: (S)-(-)- α -phenylethylisocyanate

Absolute configuration: 1*S*,2*S*,4*R*, α *S*

Pelayo Camps,* Gisela Colet, Mercè Font-Bardia,
Victoria Muñoz-Torrero, Xavier Solans and Santiago Vázquez

Tetrahedron: Asymmetry 13 (2002) 759



(1*R*,2*R*,4*S*)-4-(Diisopropylphosphinoyl)-2-[(diphenylphosphinoyl)methyl]cyclopentyl *N*-[(*S*)- α -phenylethyl]carbamate

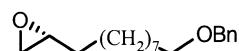
[α]_D²⁵ = -52.0 (*c* = 0.9, CHCl₃)

Source of chirality: (S)-(-)- α -phenylethylisocyanate

Absolute configuration: 1*R*,2*R*,4*S*, α *S*

Sharon Chow and William Kitching*

Tetrahedron: Asymmetry 13 (2002) 779



(+)-(R)-2-(9-Benzylxy-nonyl)-oxirane

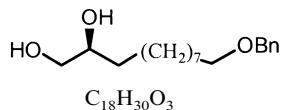
[α]_D²³ = +3.9 (*c* 1.02, CHCl₃)

Source of chirality: kinetic resolution reaction

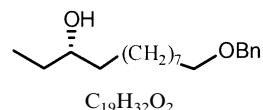
Absolute configuration: 2*R*

$[\alpha]_D^{23} = +0.7$ (*c* 1.10, CHCl₃)

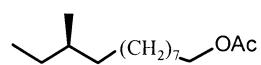
Source of chirality: kinetic resolution reaction

Absolute configuration: 2*R*(+)-(*R*)-11-Benzylxy-undecane-1,2-diol
 $[\alpha]_D^{23} = +6.0$ (*c* 1.18, CHCl₃)

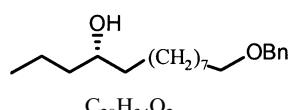
Source of chirality: kinetic resolution reaction

Absolute configuration: 3*S*(+)-(*S*)-12-Benzylxy-dodecan-3-ol
 $[\alpha]_D^{23} = -5.4$ (*c* 0.97, CHCl₃)

Source of chirality: kinetic resolution reaction

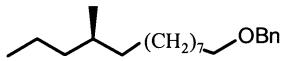
Absolute configuration: 3*R*(-)-(*R*)-10-Methyldodecyl acetate
 $[\alpha]_D^{23} = +1.0$ (*c* 0.97, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 4*S*(+)-(*S*)-13-Benzylxy-tridecan-4-ol

$[\alpha]_D^{23} = -2.4$ (*c* 0.90, CHCl₃)

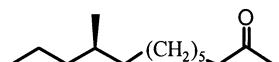
Source of chirality: kinetic resolution reaction

Absolute configuration: 4*R*C₂₁H₃₆O

(-)-(R)-1-Benzyl-10-methyltridecane

 $[\alpha]_D^{23} = -1.6$ (*c* 0.70, CHCl₃)

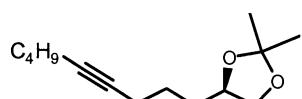
Source of chirality: kinetic resolution reaction

Absolute configuration: 4*R*C₁₄H₂₈O

(-)-(R)-10-Methyltridecan-2-one

 $[\alpha]_D^{23} = -12.7$ (*c* 1.42, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 4*R*C₁₄H₂₄O₂

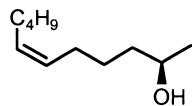
(-)-(R)-2,2-Dimethyl-4-non-4-ynyl-[1,3]dioxolane

 $[\alpha]_D^{23} = -8.0$ (*c* 0.84, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2*R*C₁₁H₂₀O

(-)-(R)-Undec-6-yn-2-ol

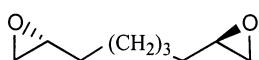


C₁₁H₂₂O
(-)-(R)-(Z)-Undec-6-en-2-ol

[α]_D²³ = -5.5 (*c* 0.78, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2*R*

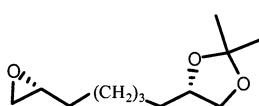


C₉H₁₆O₂
(+)-(1*R*,5*R*)-1,5-Bisoxiranyl-pentane

[α]_D²³ = +20.7 (*c* 1.03, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 1*R*,5*R*

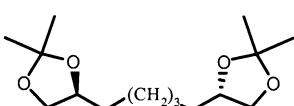


C₁₂H₂₂O₃
(+)-(4*S*,5*R*)-2,2-Dimethyl-4-(5-oxiranyl-pentyl)-1,3-dioxolane

[α]_D²³ = +21.9 (*c* 1.15, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 4*S*,5*R*

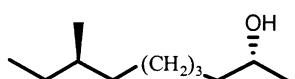


C₁₅H₂₈O₄
(+)-(1*S*,5*S*)-Bis(2,2-dimethyl-1,3-dioxolan-4-yl)-pentane

[α]_D²³ = +25.1 (*c* 1.88, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 1*S*,5*S*

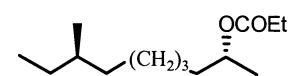


C₁₁H₂₄O
(-)-(2*R*,8*R*)-8-Methyl-decan-2-ol

[α]_D²³ = -13.3 (*c* 1.00, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2*R*,8*R*

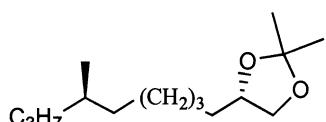


C₁₄H₂₈O₂
(-)-(1*R*,7*R*)-1,7-Dimethylnonyl propanoate

[α]_D²³ = -7.2 (*c* 0.70, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 1*R*,7*R*

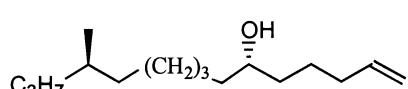


C₁₅H₃₁O₂
(-)-(4*S*,6*R*)-2,2-Dimethyl-4-(6-methyl-nonyl)-[1,3]dioxolane

[α]_D²³ = -15.2 (*c* 1.20, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 4*S*,6*R*

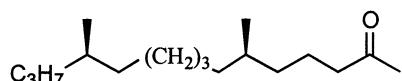


C₁₆H₃₃O
(-)-(6*S*,12*R*)-12-Methylpentadec-1-en-6-ol

[α]_D²³ = -0.1 (*c* 1.30, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 6*S*,12*R*

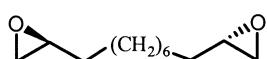


C₁₇H₃₅O
(-)-(6*R*,12*R*)-6,12-Dimethylpentadecan-2-one

[α]_D²³ = -0.4 (*c* 0.40, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 6*R*,12*R*

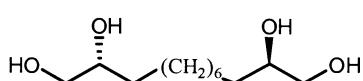


C₁₂H₂₂O₂
(-)-(1*S*,8*S*)-1,8-Bisoxiranyl-octane

[α]_D²³ = -16.4 (*c* 0.30, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 1*S*,8*S*

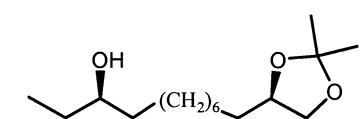


C₁₂H₂₆O₄
(+)-(2*R*,11*R*)-Dodecane-1,2,11,12-tetrol

[α]_D²³ = +31.9 (*c* 0.51, MeOH)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2*R*,11*R*

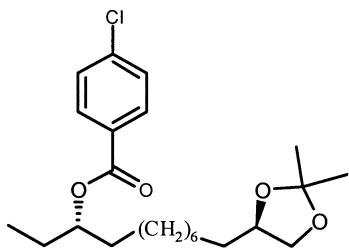


C₁₆H₃₂O₃
(-)-(3*R*,11*R*)-11-(2,2-Dimethyl-[1,3]dioxolan-4-yl)-undecan-3-ol

[α]_D²³ = -17.1 (*c* 1.59, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 3*R*,11*R*

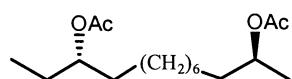
 $C_{23}H_{35}O_4$

(+-)(1S,9R)-4-Chloro-benzoic acid 9-(2,2-dimethyl-[1,3]dioxolan-4-yl)-1-ethyl-nonyl ester

 $[\alpha]_D^{23} = +9.2$ (*c* 0.20, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 1S,9R

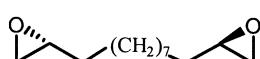
 $C_{17}H_{32}O_4$

(-)-(2S,11S)-2,11-Diacetoxytridecane

 $[\alpha]_D^{23} = -4.0$ (*c* 0.70, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2S,11S

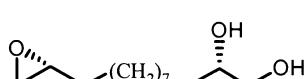
 $C_{13}H_{24}O_2$

(+)-(1R,9R)-1,9-Bisoxiranyl-nonane

 $[\alpha]_D^{23} = +11.1$ (*c* 1.16, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 1R,9R

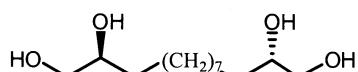
 $C_{13}H_{26}O_3$

(-)-(2S,12R)-12-Oxiranyl-dodecane-1,2-diol

 $[\alpha]_D^{23} = -11.5$ (*c* 0.40, MeOH)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2S,12R

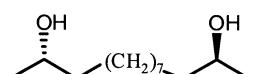


$C_{13}H_{28}O_4$
(-)-(2S,12S)-Tridecane-1,2,12,13-tetrol

$[\alpha]_D^{23} = -26.1$ (*c* 0.70, MeOH)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2S,12S

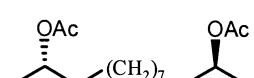


$C_{13}H_{28}O_2$
(+)-(2S,12S)-Tridecane-2,12-diol

$[\alpha]_D^{23} = +11.1$ (*c* 0.76, MeOH)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2S,12S



$C_{17}H_{32}O_4$
(+)-(2S,12S)-2,12-Diacetoxytridecane

$[\alpha]_D^{23} = +1.8$ (*c* 1.21, CHCl₃)

Source of chirality: kinetic resolution reaction

Absolute configuration: 2S,12S