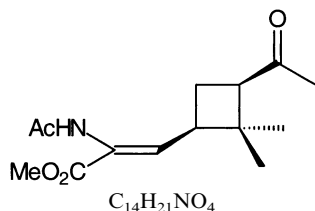


Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*R*,3'*R*)-Methyl 2-acetylamino-3-(3'-acetyl-2',2'-dimethylcyclobutyl)-
(*Z*)-2-propenoate

Ee = 90%

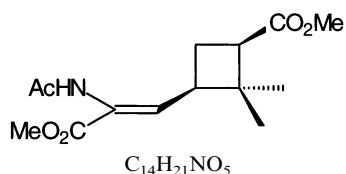
$[\alpha]_D = -9.20$ (*c* 1.09, MeOH)

Source of chirality: (–)-verbenone

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

Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*R*,3'*R*)-Methyl 2-acetylamino-3-(2',2'-dimethyl-3'-methoxycarbonylcyclobutyl)-
(*Z*)-2-propenoate

Ee = 90%

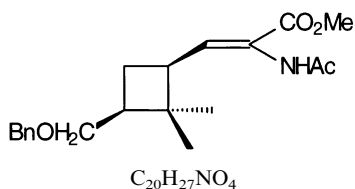
$[\alpha]_D = +2.25$ (*c* 1.80, MeOH)

Source of chirality: (–)-verbenone

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

Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*S*,3'*S*)-Methyl 2-acetylamino-3-(3'-benzyloxymethyl-2',2'-dimethylcyclobutyl)-
(*Z*)-2-propenoate

Ee = 90%

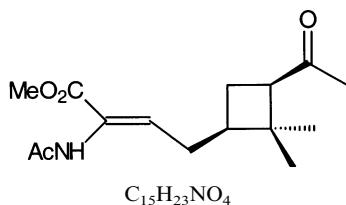
$[\alpha]_D = -7.30$ (*c* 0.82, MeOH)

Source of chirality: (–)-verbenone

Absolute configuration: (1'*S*,3'*S*)

Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*S*,3'*R*)-Methyl 2-acetylamino-4-[2',2'-dimethyl-3'-(2-methyl-1,3-dioxolan-2-yl)-
cyclobutyl]-(*Z*)-2-buteonate

Ee = 97%

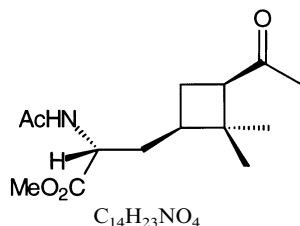
$[\alpha]_D = -25.4$ (*c* 0.8, MeOH)

Source of chirality: (–)- α -pinene

Absolute configuration: (1'*S*,3'*R*)

Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*R*,2*R*,3'*R*)-Methyl 2-acetyl-amino-3-(3'-acetyl-2',2'-dimethylcyclobutyl)-propanoate

Ee = 90%

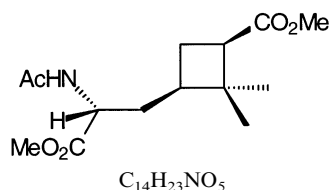
$[\alpha]_D = -8.8$ (*c* 0.68, MeOH)

Source of chirality: (–)-verbenone

Absolute configuration: (1'*R*,2*R*,3'*R*)

Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*R*,2*R*,3'*R*)-Methyl 2-acetyl-amino-3-(2',2'-dimethyl-3'-methoxycarbonylcyclobutyl)propanoate

Ee = 90%

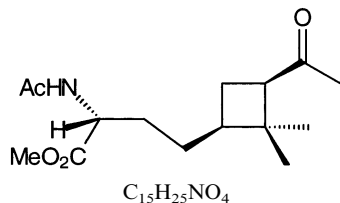
$[\alpha]_D = +13.1$ (*c* 0.76, MeOH)

Source of chirality: (–)-verbenone

Absolute configuration: (1'*R*,2*R*,3'*R*)

Gemma P. Aguado, Angel Alvarez-Larena, Ona Illa,
Albertina G. Moglioni* and Rosa M. Ortuño*

Tetrahedron: Asymmetry 12 (2001) 25



(1'*S*,2*R*,3'*R*)-Methyl 2-acetyl-amino-4-(2',2'-dimethyl-3'-acetylcyclobutyl)butanoate

Ee = 97%

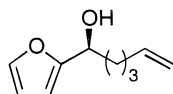
$[\alpha]_D = -18.9$ (*c* 0.79, MeOH)

Source of chirality: (–)- α -pinene

Absolute configuration: (1'*S*,2*R*,3'*R*)

Woo-Wha Lee, Hyun Jung Shin and Sukbok Chang*

Tetrahedron: Asymmetry 12 (2001) 29



$C_{10}H_{14}O_2$

(1*S*)-1-(2-Furyl)-5-hexen-1-ol

E.e. = >95%

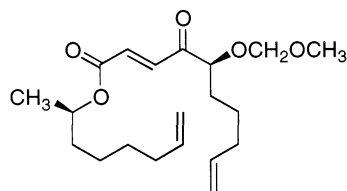
$[\alpha]_D^{25} = +84.0$ (*c* 0.45, CHCl₃)

Source of chirality: kinetic resolution

Absolute configuration: (1*S*)

Woo-Wha Lee, Hyun Jung Shin and Sukbok Chang*

Tetrahedron: Asymmetry 12 (2001) 29



[(2*R*)-7-Octenyl]-(2*E*,5*S*)-5-methoxymethoxy-4-oxo-9-decenoate

E.e. = >99%

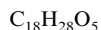
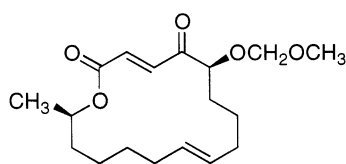
$[\alpha]_D^{25} = -52.9$ (*c* 0.28, $CHCl_3$)

Source of chirality: asymmetric synthesis

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

Woo-Wha Lee, Hyun Jung Shin and Sukbok Chang*

Tetrahedron: Asymmetry 12 (2001) 29



(2*E*,9*E*,5*S*,15*R*)-5-(Methoxymethoxy)hexadeca-2,9-dien-15-olide

E.e. = >99%

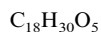
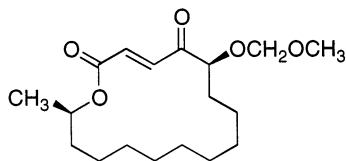
$[\alpha]_D^{25} = -75.8$ (*c* 0.25, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (5*S*,15*R*)

Woo-Wha Lee, Hyun Jung Shin and Sukbok Chang*

Tetrahedron: Asymmetry 12 (2001) 29



(2*E*,5*S*,15*R*)-5-(Methoxymethoxy)hexadec-2-en-15-olide

E.e. = >99%

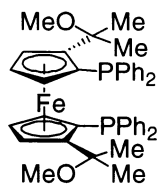
$[\alpha]_D^{25} = -54.4$ (*c* 0.25, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (5*S*,15*R*)

Jahyo Kang,* Jun Hee Lee and Jung Sun Choi

Tetrahedron: Asymmetry 12 (2001) 33

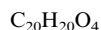
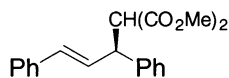


(*pS*,*pS*)-1,1'-Bis(diphenylphosphino)-2,2'-di[(1-methoxy-1-methyl)]ethylferrocene

$[\alpha]_D^{29} = -9.33$ (*c* 0.54, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*pS*,*pS*)



(-)-(S)-Dimethyl (1,3-diphenylprop-2-en-1-yl)malonate

Ee = 96.3%

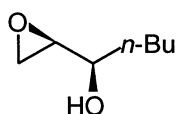
$[\alpha]_D^{27} = -19.6$ (c 1.4, EtOH)

Source of chirality: asymmetric synthesis

Absolute configuration: (S)

Sandra F. Mayer, Andreas Steinreiber, Romano V. A. Orru and Kurt Faber*

Tetrahedron: Asymmetry 12 (2001) 41



(2R,3R)-1,2-Epoxyheptane-3-ol

De >99%

Ee 92%

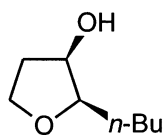
$[\alpha]_D^{20} = -3.1$ (c = 0.25, CH_2Cl_2)

Absolute configuration: 2R,3R

Source of chirality: chemoenzymatic synthesis

Sandra F. Mayer, Andreas Steinreiber, Romano V. A. Orru and Kurt Faber*

Tetrahedron: Asymmetry 12 (2001) 41



(2R,3R)-2-n-Butyl-3-hydroxytetrahydrofuran

De >99%

Ee >99%

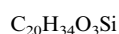
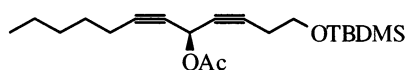
$[\alpha]_D^{20} = -24.4$ (c = 0.51, EtOH)

Absolute configuration: 2R,3R

Source of chirality: chemoenzymatic synthesis

J. S. Yadav,* S. Nanda and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 53



1(S)-1-(4-O-tert-Butyldimethylsilyl-1-butyne)-2-octynyl acetate

$[\alpha]_D^{25} = -16.1$ (c = 0.2, $CHCl_3$)

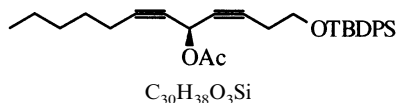
Ee = 95%

Source of chirality: Enzymatic transesterification

Absolute configuration: (S)

J. S. Yadav,* S. Nanda and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 53



1(S)-1-(4-*O-tert*-Butyldiphenylsilyl-1-butynyl)-2-octynyl acetate

$[\alpha]_D^{25} = -7.1$ ($c = 1.1$, $CHCl_3$)

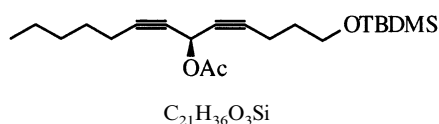
Ee = 96%

Source of chirality: Enzymatic transesterification

Absolute configuration: (*S*)

J. S. Yadav,* S. Nanda and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 53



1(S)-1-(5-*O-tert*-Butyldimethylsilyl-1-pentynyl)-2-octynyl acetate

$[\alpha]_D^{25} = -21.3$ ($c = 0.75$, $CHCl_3$)

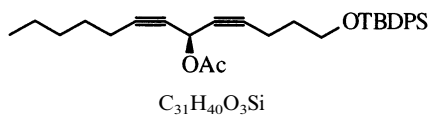
Ee = 96%

Source of chirality: Enzymatic transesterification

Absolute configuration: (*S*)

J. S. Yadav,* S. Nanda and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 53



1(S)-1-(5-*O-tert*-Butyldiphenylsilyl-1-pentynyl)-2-octynyl acetate

$[\alpha]_D^{25} = -17.0$ ($c = 1$, $CHCl_3$)

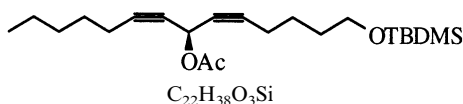
Ee = 94%

Source of chirality: Enzymatic transesterification

Absolute configuration: (*S*)

J. S. Yadav,* S. Nanda and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 53



1(S)-1-(6-*O-tert*-Butyldimethylsilyl-1-hexynyl)-2-octynyl acetate

$[\alpha]_D^{25} = -13.2$ ($c = 0.96$, $CHCl_3$)

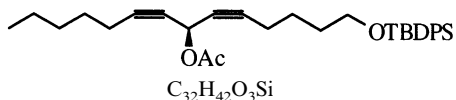
Ee = 95%

Source of chirality: Enzymatic transesterification

Absolute configuration: (*S*)

J. S. Yadav,* S. Nanda and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 53



1(S)-1-(6-O-*tert*-Butyldiphenylsilyl-1-hexynyl)-2-octynyl acetate

$[\alpha]_D^{25} = -11.0$ ($c = 0.8$, $CHCl_3$)

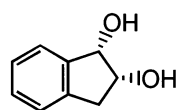
Ee = 96%

Source of chirality: Enzymatic transesterification

Absolute configuration: (S)

Shigeru Nakano,* Yoshio Igarashi and Hiroyuki Nohira

Tetrahedron: Asymmetry 12 (2001) 59



$C_9H_{10}O_2$

(1S,2R)-1,2-Indandiol

Ee 100% (by HPLC, Daicel Chiralcel OK)

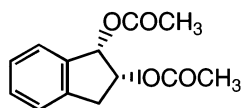
$[\alpha]_D^{25} = -51$ ($c = 1.0$, chloroform)

Source of chirality: enzymatic resolution

Absolute configuration: 1S,2R

Shigeru Nakano,* Yoshio Igarashi and Hiroyuki Nohira

Tetrahedron: Asymmetry 12 (2001) 59



$C_{13}H_{14}O_4$

(1S,2R)-1,2-Diacetoxyindan

Ee 100% (by HPLC, Daicel Chiralcel OK)

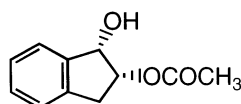
$[\alpha]_D^{25} = +69$ ($c = 1.0$, chloroform)

Source of chirality: enzymatic resolution

Absolute configuration: 1S,2R

Shigeru Nakano,* Yoshio Igarashi and Hiroyuki Nohira

Tetrahedron: Asymmetry 12 (2001) 59



$C_{11}H_{12}O_3$

(1S,2R)-2-Acetoxy-1-indanol

Ee 91% (by HPLC, Daicel Chiralcel OK)

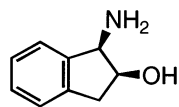
$[\alpha]_D^{25} = -61$ ($c = 1.0$, chloroform)

Source of chirality: enzymatic resolution

Absolute configuration: 1S,2R

Shigeru Nakano,* Yoshio Igarashi and Hiroyuki Nohira

Tetrahedron: Asymmetry 12 (2001) 59



$C_9H_{11}NO$

(1*R*,2*S*)-1-Amino-2-indanol

Ee 100% (by HPLC, Daicel Crownpack CR(-))

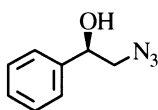
$[\alpha]_D^{25} +62$ (c 1.0, chloroform)

Source of chirality: enzymatic resolution

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

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_8H_9N_3O$

(*R*)-(-)-2-Azido-1-phenylethanol

Ee = 100%

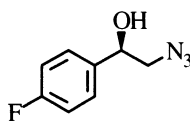
$[\alpha]_D^{25} = -80.1$ (c = 0.78, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_8H_8FN_3O$

(*R*)-(-)-2-Azido-1-(4-fluorophenyl)ethanol

Ee = 98%

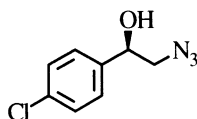
$[\alpha]_D^{25} = -14.7$ (c = 2.0, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_8H_8ClN_3O$

(*R*)-(-)-2-Azido-1-(4-chlorophenyl)ethanol

Ee = 100%

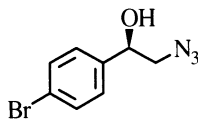
$[\alpha]_D^{25} = -79.1$ (c = 1.25, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_8H_8BrN_3O$

(R)-(-)-2-Azido-1-(4-bromophenyl)ethanol

Ee = 100%

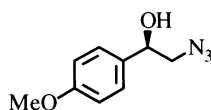
$[\alpha]_D^{25} = -36.4$ ($c = 0.95$, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_9H_{11}N_3O_2$

(R)-(-)-2-Azido-1-(4-methoxyphenyl)ethanol

Ee = 97%

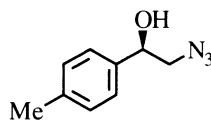
$[\alpha]_D^{25} = -39.0$ ($c = 1.0$, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_9H_{11}N_3O$

(R)-(-)-2-Azido-1-(4-methylphenyl)ethanol

Ee = 96%

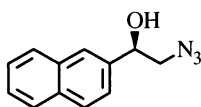
$[\alpha]_D^{25} = -28.2$ ($c = 1.2$, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_{12}H_{11}N_3O$

(R)-(-)-2-Azido-1-(2-naphthyl)ethanol

Ee = 96%

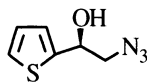
$[\alpha]_D^{25} = -80.1$ ($c = 0.55$, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *R*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



$C_6H_7N_3OS$

(*R*)-(-)-2-Azido-1-(2-thiophenyl)ethanol

Ee = 92%

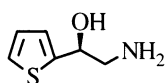
$[\alpha]_D^{25} = -34.2$ ($c = 1.2$, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *S*

J. S. Yadav,* P. Thirupathi Reddy, Samik Nanda
and A. Bhaskar Rao

Tetrahedron: Asymmetry 12 (2001) 63



C_6H_9NOS

(*S*)-(-)-2-Amino-1-(2-thiophenyl)ethanol

Ee = 94%

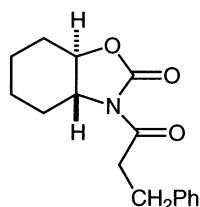
$[\alpha]_D^{25} = -39.1$ ($c = 2.0$, $CHCl_3$)

Source of chirality: yeast mediated reduction

Absolute configuration: *S*

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez,
Leticia Quintero,* Virginia Marañón, Rubén A. Toscano,
Judith A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



$C_{16}H_{19}NO_3$

N-(Hydrocinnamoyl)hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = +78.1$ ($c = 1.0$, $CHCl_3$)

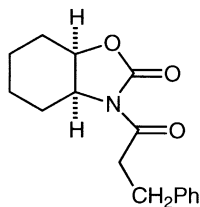
Mp = 134–135°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*R*
(assigned by chemical correlation)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez,
Leticia Quintero,* Virginia Marañón, Rubén A. Toscano,
Judith A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



$C_{16}H_{19}NO_3$

N-(Hydrocinnamoyl)hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = +60.5$ ($c = 1.0$, $CHCl_3$)

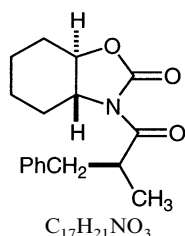
Mp = 60–61°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*S*,5*R*
(assigned by chemical correlation)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



N-(2'-Benzyl-propionyl)hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = +53.9$ ($c = 1.0$, $CHCl_3$)

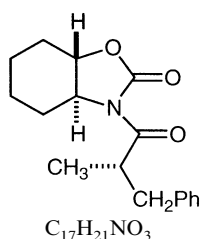
Mp = 59–60°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*R*,2'*S*
(assigned by chemical correlation)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



N-(2'-Benzyl-propionyl)hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = +68.8$ ($c = 1.0$, $CHCl_3$)

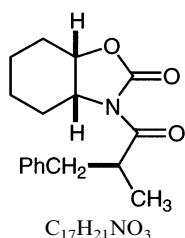
Mp = 60–61°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*S*,5*S*,2'*S*
(assigned by chemical correlation)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



N-(2'-Benzyl-propionyl)hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = +18.4$ ($c = 1.0$, $CHCl_3$)

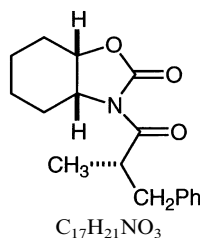
Colorless oil

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*S*,2'*S*
(assigned by chemical correlation)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



N-(2'-Benzyl-propionyl)hexahydrobenzoxazolidin-2-one

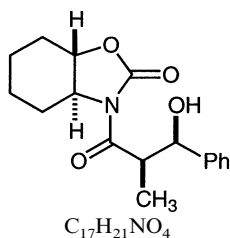
$[\alpha]_D^{25} = -78.2$ ($c = 1.0$, $CHCl_3$)

Mp = 42–43°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*S*,2'*R*
(assigned by chemical correlation)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*



N-(3-Hydroxy-2-methyl-3-phenylpropionyl)hexahydrobenzoxazolidin-2-one

Tetrahedron: Asymmetry 12 (2001) 69

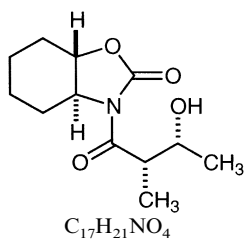
$[\alpha]_D^{25} = -20.1$ ($c = 1.0$, $CHCl_3$)

Mp = 101–102°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*R*,2'*R*,3'*R*
(assigned by X-ray diffraction analysis)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*



N-(3-Hydroxy-2-methylbutanoyl)hexahydrobenzoxazolidin-2-one

Tetrahedron: Asymmetry 12 (2001) 69

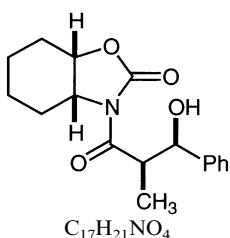
$[\alpha]_D^{25} = +51.0$ ($c = 1.0$, $CHCl_3$)

Mp = 61–62°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*S*,2'*S*,3'*R*
(assigned by NMR)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*



N-(3-Hydroxy-2-methyl-3-phenylpropionyl)hexahydrobenzoxazolidin-2-one

Tetrahedron: Asymmetry 12 (2001) 69

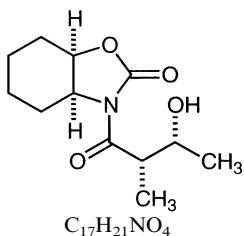
$[\alpha]_D^{25} = -71.2$ ($c = 1.0$, $CHCl_3$)

Mp = 122–123°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*R*,5*S*,2'*R*,3'*R*
(assigned by X-ray of the enantiomer)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*



N-(3-Hydroxy-2-methylbutanoyl)hexahydrobenzoxazolidin-2-one

Tetrahedron: Asymmetry 12 (2001) 69

$[\alpha]_D^{25} = +78.0$ ($c = 1.0$, $CHCl_3$)

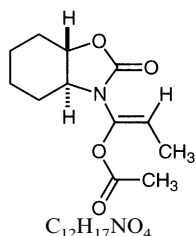
Mp = 82–83°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*S*,5*R*,2'*S*,3'*R*
(assigned by X-ray diffraction analysis)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



N-[1-Acetoxy-(1*Z*)-propenyl]hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = +26.0$ ($c = 1.07$, CHCl_3)

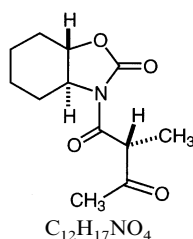
Mp = 91–92°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*S*,5*S*,*Z*
(assigned by X-ray diffraction analysis)

Cecilia Anaya de Parrodi,* Angel Clara-Sosa, Lydia Pérez, Leticia Quintero,* Virginia Marañón, Rubén A. Toscano, Judit A. Aviña, Susana Rojas-Lima and Eusebio Juaristi*

Tetrahedron: Asymmetry 12 (2001) 69



N-(2-Acetyl-1-propionyl)hexahydrobenzoxazolidin-2-one

$[\alpha]_D^{25} = -159.1$ ($c = 1.0$, CHCl_3)

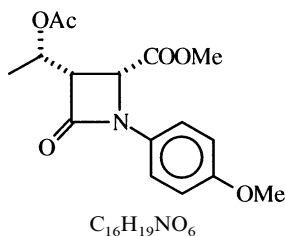
Mp = 144–146°C

Source of chirality: (*S*)- α -phenylethylamine

Absolute configuration: 4*S*,5*S*,2'*R*
(assigned by X-ray diffraction analysis)

Zsuzsanna Sánta, László Párkányi, Ildikó Németh, József Nagy and József Nyitrai*

Tetrahedron: Asymmetry 12 (2001) 89



Methyl [(α *S*,2*R*,3*S*)-3-(1-acetoxyethyl)-1-(4-methoxyphenyl)-4-oxoazetidine-2-carboxylate]

Ee = 100%

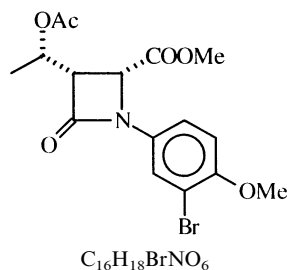
$[\alpha]_D^{22} = +143.1$ ($c = 1.0$, CH_2Cl_2)

Source of chirality: D-threonine

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

Zsuzsanna Sánta, László Párkányi, Ildikó Németh, József Nagy and József Nyitrai*

Tetrahedron: Asymmetry 12 (2001) 89



Methyl [(α *S*,2*R*,3*S*)-3-(1-acetoxyethyl)-1-(3-bromo-4-methoxyphenyl)-4-oxoazetidine-2-carboxylate]

Ee = 100%

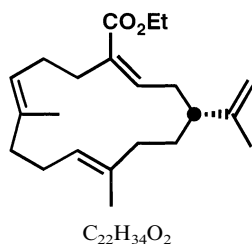
$[\alpha]_D^{24.5} = +127.2$ ($c = 1.0$, CH_2Cl_2)

Source of chirality: D-threonine

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

Zuosheng Liu, Weidong Z. Li* and Yulin Li*

Tetrahedron: Asymmetry 12 (2001) 95



(3Z,7E,11E)-1R-Isopropenyl-8,12-dimethyl-12-ethoxycarbonyl-3,7,11-cyclotetradecatriene

Ee = 100%

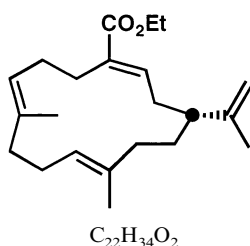
$[\alpha]_D^{25} -20.7$ (c 0.9, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: 1R

Zuosheng Liu, Weidong Z. Li* and Yulin Li*

Tetrahedron: Asymmetry 12 (2001) 95



(3E,7E,11E)-1R-Isopropenyl-8,12-dimethyl-12-ethoxycarbonyl-3,7,11-cyclotetradecatriene

Ee = 100%

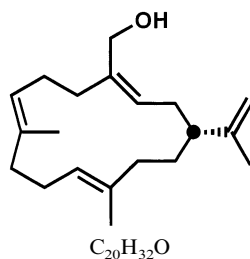
$[\alpha]_D^{25} -6.9$ (c 1.55, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: 1R

Zuosheng Liu, Weidong Z. Li* and Yulin Li*

Tetrahedron: Asymmetry 12 (2001) 95



(3E,7E,11Z)-1R-Isopropenyl-8,12-dimethyl-4-hydroxymethyl-3,7,11-cyclotetradecatriene

Ee = 100%

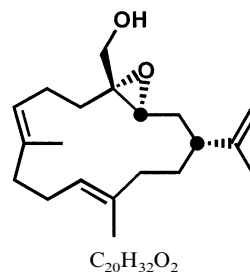
$[\alpha]_D^{28} -76.8$ (c 0.2, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: 1R

Zuosheng Liu, Weidong Z. Li* and Yulin Li*

Tetrahedron: Asymmetry 12 (2001) 95



(7E,11E)-1R-1-Isopropenyl-8,12-dimethyl-4-hydroxymethyl-3S,4S-epoxy-7,11-cyclotetradecadiene

De = 95%

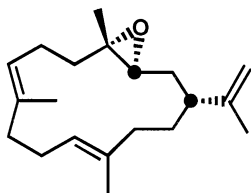
$[\alpha]_D^{28} -40.5$ (c 0.2, $CHCl_3$)

Source of chirality: chiral pool and asymmetric synthesis

Absolute configuration: (1R,3S,4S)

Zuosheng Liu, Weidong Z. Li* and Yulin Li*

Tetrahedron: Asymmetry 12 (2001) 95



(1*R*,3*S*,4*S*)-Epoxycombene-A

De = 95%

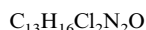
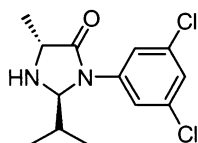
$[\alpha]_D^{22} + 37$ (*c* 0.50, $CHCl_3$)

Source of chirality: chiral pool and asymmetric synthesis

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

Rogelio P. Frutos,* Sandra Stehle, Laurence Nummy and Nathan Yee

Tetrahedron: Asymmetry 12 (2001) 101



(2*S*,5*R*)-3-(3,5-Dichloro-phenyl)-2-isopropyl-5-methyl-imidazolidin-4-one

Ee >99%

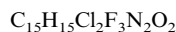
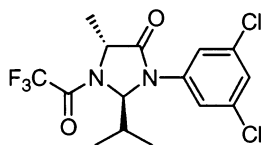
$[\alpha]_D^{20} = +19$ (*c* 5.1, CH_2Cl_2)

Source of chirality: Boc-D-alanine

Absolute configuration: 2*S*,5*R*

Rogelio P. Frutos,* Sandra Stehle, Laurence Nummy and Nathan Yee

Tetrahedron: Asymmetry 12 (2001) 101



(2*R*,5*R*)-3-(3,5-Dichloro-phenyl)-2-isopropyl-5-methyl-1-(2,2,2-trifluoro-acetyl)-imidazolidin-4-one

Ee >99% by HPLC analysis on Chiralcel OD column

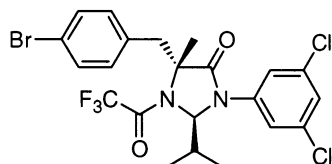
$[\alpha]_D^{20} = +87$ (*c* 7.15, CH_2Cl_2)

Source of chirality: Boc-D-alanine

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

Rogelio P. Frutos,* Sandra Stehle, Laurence Nummy and Nathan Yee

Tetrahedron: Asymmetry 12 (2001) 101



(2*R*,5*R*)-5-(4-Bromo-benzyl)-3-(3,5-dichloro-phenyl)-2-isopropyl-5-methyl-1-(2,2,2-trifluoro-acetyl)-imidazolidin-4-one

Ee >99%

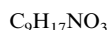
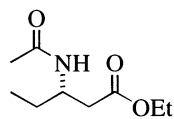
$[\alpha]_D^{20} = +95$ (*c* 9.5, CH_2Cl_2)

Source of chirality: Boc-D-alanine

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

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl *N*-acetyl-(*S*)-3-aminopentanoate

Ee = 97%

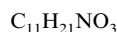
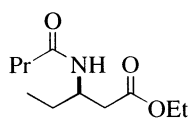
$[\alpha]_{\text{D}}^{20} = -27.5$ ($c = 1.01$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *S*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl (*R*)-3-amino-*N*-butanoylpentanoate

Ee = 97%

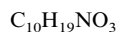
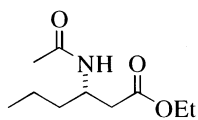
$[\alpha]_{\text{D}}^{20} = +21.4$ ($c = 1.00$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *R*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl *N*-acetyl-(*S*)-3-aminohexanoate

Ee = 96%

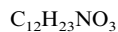
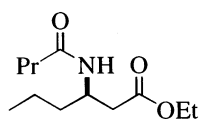
$[\alpha]_{\text{D}}^{20} = -19.8$ ($c = 1.00$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *S*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl (*R*)-3-amino-*N*-butanoylhenoate

Ee = 98%

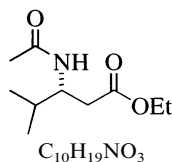
$[\alpha]_{\text{D}}^{20} = +19.5$ ($c = 1.02$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *R*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl *N*-acetyl-(*R*)-3-amino-4-methylpentanoate

Ee = 99%

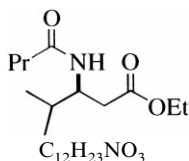
$[\alpha]_D^{25} = -11.0$ ($c = 0.99$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *R*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl (*S*)-3-amino-*N*-butanoyl-4-methylpentanoate

Ee = 87%

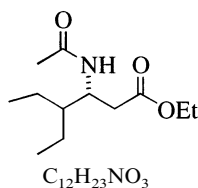
$[\alpha]_D^{25} = +8.0$ ($c = 0.99$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *S*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl *N*-acetyl-(*R*)-3-amino-4-ethylhexanoate

Ee = 98%

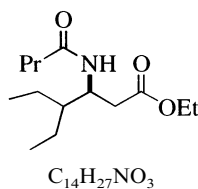
$[\alpha]_D^{25} = -8.7$ ($c = 1.02$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *R*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



Ethyl (*S*)-3-amino-*N*-butanoyl-4-ethylhexanoate

Ee = 79%

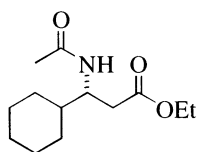
$[\alpha]_D^{25} = +4.3$ ($c = 1.02$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *S*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



$C_{13}H_{23}NO_3$

Ethyl *N*-acetyl-(*R*)-3-amino-3-cyclohexylpropanoate

Ee = 99%

$[\alpha]_D^{25} = +6.3$ ($c = 1.00$, MeOH)

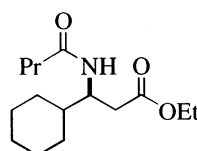
Mp 103–104°C

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *R*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



$C_{15}H_{27}NO_3$

Ethyl (*S*)-3-amino-*N*-butanoyl-3-cyclohexylpropanoate

Ee = 99%

$[\alpha]_D^{25} = -9.8$ ($c = 1.00$, MeOH)

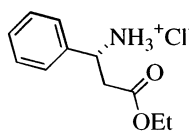
Mp 103–104°C

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *S*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



$C_{11}H_{16}ClNO_2$

Ethyl (*R*)-3-amino-3-phenylpropanoate hydrochloride

Ee = 98%

$[\alpha]_D^{25} = -5.9$ ($c = 1.01$, MeOH)

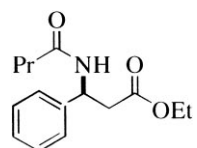
Mp 115–116°C

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *R*

Szilvia Gedey, Arto Liljeblad, László Lázár, Ferenc Fülöp
and Liisa T. Kanerva*

Tetrahedron: Asymmetry 12 (2001) 105



$C_{15}H_{21}NO_3$

Ethyl (*S*)-3-amino-*N*-butanoyl-3-phenylpropanoate

Ee = 90%

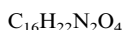
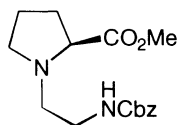
$[\alpha]_D^{25} = -60.6$ ($c = 1.02$, MeOH)

Source of chirality: acyl-transfers by
Candida antarctica lipase A

Absolute configuration: *S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111



(2*S*)-*N*-(*N'*-(Benzyloxycarbonyl)-2'-aminoethyl)proline methyl ester

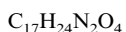
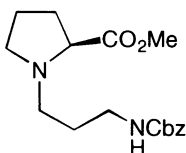
$[\alpha]_{\text{D}}^{20} = -34.1$ (*c* 1.0, CHCl_3)

Source of chirality: L-proline

Absolute configuration: 2*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111



(2*S*)-*N*-(*N'*-(Benzyloxycarbonyl)-3'-aminopropyl)proline methyl ester

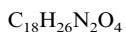
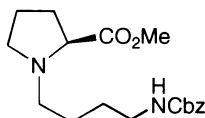
$[\alpha]_{\text{D}}^{20} = -62.3$ (*c* 1.43, CHCl_3)

Source of chirality: L-proline

Absolute configuration: 2*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111



(2*S*)-*N*-(*N'*-(Benzyloxycarbonyl)-4'-aminobutyl)proline methyl ester

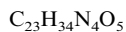
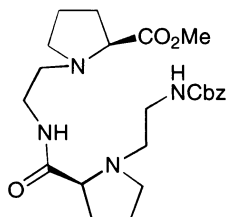
$[\alpha]_{\text{D}}^{20} = -44.3$ (*c* 1.0, CHCl_3)

Source of chirality: L-proline

Absolute configuration: 2*S*

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Tetrahedron: Asymmetry 12 (2001) 111



(2*S*,11*S*)-2,6-Cyclo-11,15-cyclo-17-(benzyloxycarbonylamino)-6,9,15-triaza-10-oxoheptadecanoic acid methyl ester

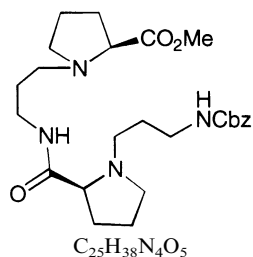
$[\alpha]_{\text{D}}^{20} = -70.6$ (*c* 1.0, CHCl_3)

Source of chirality: L-proline

Absolute configuration: 2*S*,11*S*

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Tetrahedron: Asymmetry 12 (2001) 111

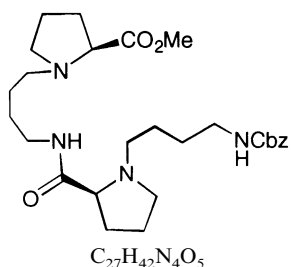


(2*S*,12*S*)-2,6-Cyclo-12,16-cyclo-19-(benzyloxycarbonylamino)-6,10,16-triaza-11-oxononadecanoic acid methyl ester

$[\alpha]_D^{20} = -71.8$ (*c* 1.0, $CHCl_3$)
Source of chirality: L-proline
Absolute configuration: 2*S*,12*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111

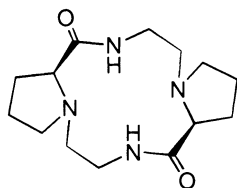


(2*S*,13*S*)-2,6-Cyclo-13,17-cyclo-21-(benzyloxycarbonylamino)-6,11,17-triaza-12-oxoheneicosanoic acid methyl ester

$[\alpha]_D^{20} = -70.5$ (*c* 1.0, $CHCl_3$)
Source of chirality: L-proline
Absolute configuration: 2*S*,13*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111

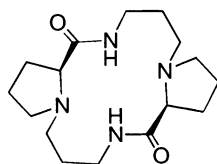


(6*S*,15*S*)-1,4,10,13-Tetraazatricyclo[13.3.0.0^{6,10}]octadecane-5,14-dione

$[\alpha]_D^{20} = -183$ (*c* 1.0, $CHCl_3$)
Mp 153–155°C
Source of chirality: L-proline
Absolute configuration: 6*S*,15*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111

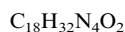
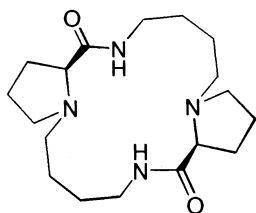


(7*S*,17*S*)-1,5,11,15-Tetraazatricyclo[15.3.0.0^{7,11}]icosane-6,16-dione

$[\alpha]_D^{20} = -182$ (*c* 1.0, $CHCl_3$)
Mp 250°C (decomp.)
Source of chirality: L-proline
Absolute configuration: 7*S*,17*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111



(8*S*,19*S*)-1,6,12,18-Tetraazatricyclo[17.3.0.0^{8,12}]docosane-7,18-dione

$[\alpha]_D^{20} = -165$ (*c* 0.41, CHCl₃)

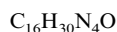
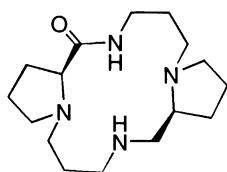
Mp 163–165°C

Source of chirality: L-proline

Absolute configuration: 8*S*,19*S*

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Tetrahedron: Asymmetry 12 (2001) 111



(7*S*,17*S*)-1,5,11,15-Tetraazatricyclo[15.3.0.0^{7,11}]icosane-6-one

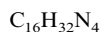
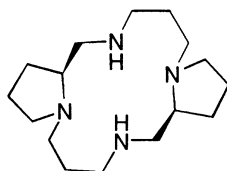
$[\alpha]_D^{20} = -66.5$ (*c* 0.66, CHCl₃)

Source of chirality: L-proline

Absolute configuration: 7*S*,17*S*

Michał Achmatowicz and Janusz Jurczak*

Tetrahedron: Asymmetry 12 (2001) 111



(7*S*,17*S*)-1,5,11,15-Tetraazatricyclo[15.3.0.0^{7,11}]icosane

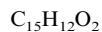
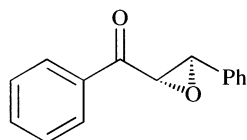
$[\alpha]_D^{20} = -56.5$ (*c* 0.60, CHCl₃)

Source of chirality: L-proline

Absolute configuration: 7*S*,17*S*

Waldemar Adam,* Paraselli Bheema Rao, Hans-Georg Degen
and Chantu R. Saha-Möller

Tetrahedron: Asymmetry 12 (2001) 121



(2*S*,3*R*)-Epoxy-1,3-diphenylpropan-1-one

Ee = 49% (by HPLC analysis on OD column)

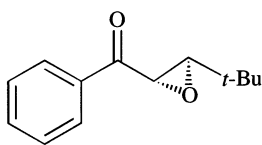
$[\alpha]_D^{20} = +208$ (*c* 1.0, THF, for 100% ee)

Source of chirality: asymmetric synthesis

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

Waldemar Adam,* Paraselli Bheema Rao, Hans-Georg Degen
and Chantu R. Saha-Möller

Tetrahedron: Asymmetry 12 (2001) 121



$C_{13}H_{16}O_2$

(2*S*,3*R*)-Epoxy-3-*t*-butyl-1-phenylpropan-1-one

Ee = 59% (by HPLC analysis on OD column)

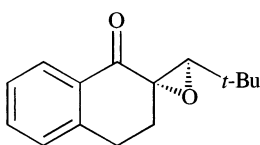
$[\alpha]_D^{20} = -25.4$ (*c* 1.0, $CHCl_3$, for 100% ee)

Source of chirality: asymmetric synthesis

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

Waldemar Adam,* Paraselli Bheema Rao, Hans-Georg Degen
and Chantu R. Saha-Möller

Tetrahedron: Asymmetry 12 (2001) 121



$C_{15}H_{18}O_2$

(2*S*,3'*R*)-1,2,3,4-Tetrahydro-3'-*t*-butylspiro[naphthalene-2,2'-oxirane]-1-one

Ee = 95% (by HPLC analysis on OB-H column)

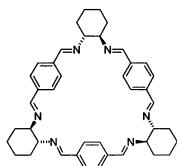
$[\alpha]_D^{20} = +68.4$ (*c* 1.0, $CHCl_3$, for 100% ee)

Source of chirality: asymmetric synthesis

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

Martin Chadim, Miloš Buděšínský, Jana Hodačová,* Jiří Závada
and Peter C. Junk

Tetrahedron: Asymmetry 12 (2001) 127



$C_{42}H_{48}N_6$

(2*R*,3*R*,12*R*,13*R*,22*R*,23*R*)-1,4,11,14,21,24-Hexaaza-(2,3:12,13:22,23)-tributenol-(6,9:16,19:26,29)-trietheno-2*H*,3*H*,12*H*,22*H*,23*H*-(30)-annulene

Ee = 100%

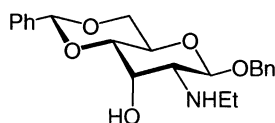
$[\alpha]_D = -304.5$ (*c* 1.0, CH_2Cl_2)

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

Absolute configuration: (2*R*,3*R*,12*R*,13*R*,22*R*,23*R*)

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



$C_{22}H_{27}NO_5$

Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-ethylamino- β -D-allopyranoside

Ee = 100%

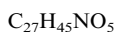
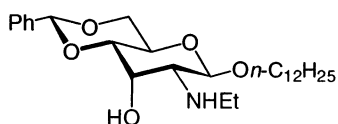
$[\alpha]_D^{25} = -89.8$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



1-Dodecyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-ethylamino- β -D-allopyranoside

Ee = 100%

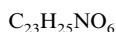
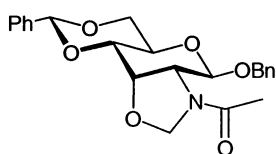
$[\alpha]_{\text{D}}^{25} = -60.6$ (*c* 0.5, CH₂Cl₂)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



Benzyl 2-acetamido-4,6-*O*-(*R*)-benzylidene-2-deoxy-2-*N*-3-*O*-methylidene- β -D-allopyranoside

Ee = 100%

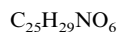
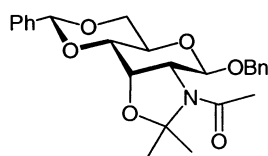
$[\alpha]_{\text{D}}^{25} = -68.0$ (*c* 0.5, CH₂Cl₂)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



Benzyl 2-acetamido-4,6-*O*-(*R*)-benzylidene-2-deoxy-2-*N*-3-*O*-isopropylidene- β -D-allopyranoside

Ee = 100%

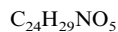
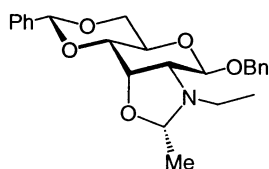
$[\alpha]_{\text{D}}^{25} = -53.9$ (*c* 0.5, CH₂Cl₂)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), β -D-*allo*

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and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-ethylamino-2-*N*-3-*O*-(*S*)-ethylidene- β -D-allopyranoside

Ee = 100%

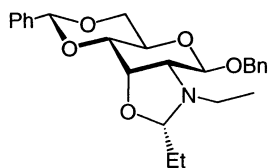
$[\alpha]_{\text{D}}^{25} = -104.6$ (*c* 0.7, CH₂Cl₂)

Source of chirality: asymmetric synthesis

Absolute configuration:
4,6-*O*-(*R*), 2-*N*-3-*O*-(*S*), β -D-*allo*

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and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-ethylamino-2-*N*-3-*O*-(*S*)-
propylidene- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -98.1$ (*c* 1.0, CH_2Cl_2)

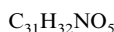
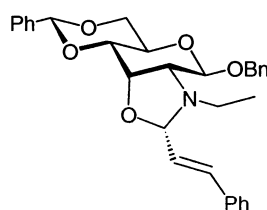
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*S*), β -D-*allo*

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and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-ethylamino-2-*N*-3-*O*-(*S*)-
(*trans*-3-phenyl-2-propenylidene)- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -140.0$ (*c* 0.2, $CHCl_3$)

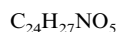
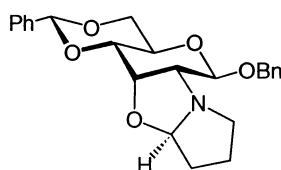
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*S*), β -D-*allo*

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and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



(2*R*)-2,3-Propylen-(benzyl 4,6-*O*-(*R*)-benzylidene-2,3-dideoxy- β -D-
allopyranoside)[2,3-*d*][1,3]oxazolidine

Ee = 100%

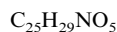
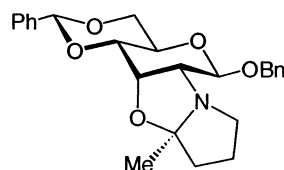
$[\alpha]_D^{25} = -80.0$ (*c* 0.6, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*R*, 4,6-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



(2*R*)-2-Methyl-2,3-propylen-(benzyl 4,6-*O*-(*R*)-benzylidene-2,3-dideoxy- β -D-
allopyranoside)[2,3-*d*][1,3]oxazolidine

Ee = 100%

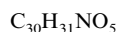
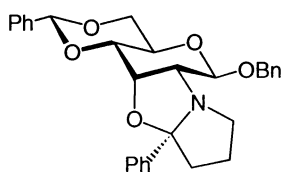
$[\alpha]_D^{25} = -82.8$ (*c* 0.4, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*R*, 4,6-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



(2*S*)-2-Phenyl-2,3-propylen-(benzyl 4,6-*O*-(*R*)-benzylidene-2,3-dideoxy- β -D-allopyranoside)[2,3-*d*][1,3]oxazolidine

Ee = 100%

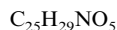
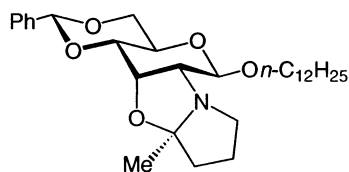
$[\alpha]_D^{25} = -90.9$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*S*, 4,6-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



(2*R*)-2-Methyl-2,3-propylen-(1-dodecyl 4,6-*O*-(*R*)-benzylidene-2,3-dideoxy- β -D-allopyranoside)[2,3-*d*][1,3]oxazolidine

Ee = 100%

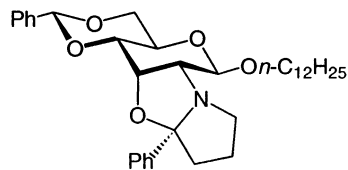
$[\alpha]_D^{25} = -53.3$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*R*, 4,6-*O*-(*R*), β -D-*allo*

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and Fernando Iglesias-Guerra

Tetrahedron: Asymmetry 12 (2001) 135



(2*S*)-2-Phenyl-2,3-propylen-(1-dodecyl 4,6-*O*-(*R*)-benzylidene-2,3-dideoxy- β -D-allopyranoside)[2,3-*d*][1,3]oxazolidine

Ee = 100%

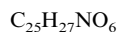
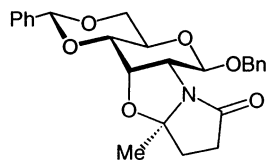
$[\alpha]_D^{25} = +38.5$ (*c* 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 2*S*, 4,6-*O*-(*R*), β -D-*allo*

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γ -Lactam of benzyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*R*)-(3-carboxy-1-methylpropylidene)-2-deoxy- β -D-allopyranoside

Ee = 100%

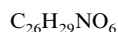
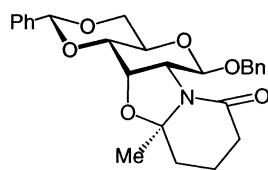
$[\alpha]_D^{25} = -28.8$ (*c* 0.6, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration:
4,6-*O*-(*R*), 2-*N*-3-*O*-(*R*), β -D-*allo*

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and Fernando Iglesias-Guerra

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δ -Lactam of benzyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*R*)-
(4-carboxy-1-methylbutylidene)-2-deoxy- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -57.8$ (c 0.5, CH_2Cl_2)

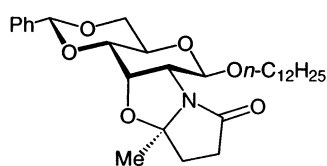
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*R*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

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γ -Lactam of 1-dodecyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*R*)-
(δ -carboxy-1-methylpropylidene)-2-deoxy- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -36.4$ (c 0.4, $CHCl_3$)

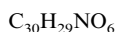
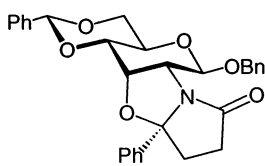
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*R*), β -D-*allo*

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and Fernando Iglesias-Guerra

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γ -Lactam of benzyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*S*)-
(3-carboxy-1-phenylpropylidene)-2-deoxy- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = +54.5$ (c 0.4, CH_2Cl_2)

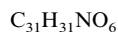
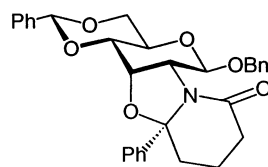
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*S*), β -D-*allo*

José M. Vega-Pérez,* Margarita Vega, Eugenia Blanco
and Fernando Iglesias-Guerra

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δ -Lactam of benzyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*S*)-
(4-carboxy-1-phenylbutylidene)-2-deoxy- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -41.7$ (c 0.2, CH_2Cl_2)

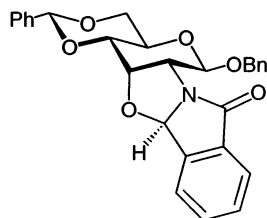
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*S*), β -D-*allo*

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and Fernando Iglesias-Guerra

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$C_{28}H_{25}NO_6$

γ -Lactam of benzyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*R*)-
(2-carboxybenzylidene)-2-deoxy- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -20.0$ (*c* 0.6, $CHCl_3$)

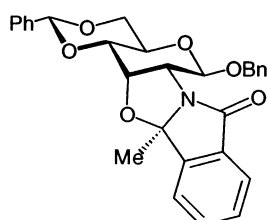
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*R*), β -D-*allo*

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and Fernando Iglesias-Guerra

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$C_{29}H_{27}NO_6$

γ -Lactam of benzyl 2-amino-4,6-*O*-(*R*)-benzylidene-2-*N*-3-*O*-(*R*)-
[1-(2-carboxyphenyl)ethylidene]-2-deoxy- β -D-allopyranoside

Ee = 100%

$[\alpha]_D^{25} = -73.5$ (*c* 0.5, $CHCl_3$)

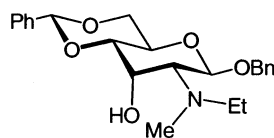
Source of chirality: asymmetric synthesis

Absolute configuration:

4,6-*O*-(*R*), 2-*N*-3-*O*-(*R*), β -D-*allo*

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and Fernando Iglesias-Guerra

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$C_{23}H_{29}NO_5$

Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-ethylmethylamino- β -D-allopyranoside

Ee = 100%

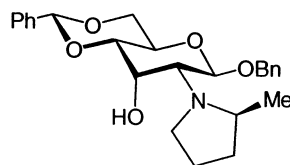
$[\alpha]_D^{25} = -72.2$ (*c* 0.2, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), β -D-*allo*

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$C_{25}H_{31}NO_5$

Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-[2'-(*S*)-methylpyrrolid-1-yl]- β -D-allopyranoside

Ee = 100%

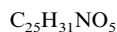
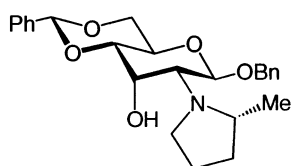
$[\alpha]_D^{25} = -60.0$ (*c* 0.4, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), 2'-(*S*), β -D-*allo*

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and Fernando Iglesias-Guerra

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Benzyl 4,6-*O*-(*R*)-benzylidene-2-deoxy-2-[2'-(*R*)-methylpyrrolid-1-yl]-β-*D*-allopyranoside

Ee = 72%

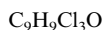
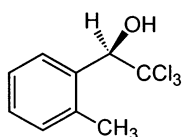
$[\alpha]_D^{25} = -100.0$ (c 0.3, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: 4,6-*O*-(*R*), 2'-(*R*), β-*D*-*allo*

Christelle Mellin-Morlière, David J. Aitken,* Steven D. Bull,
Stephen G. Davies and Henri-Philippe Husson

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(*R*)-2,2,2-Trichloromethyl-1-(2-methylphenyl)ethanol

Ee >98%

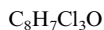
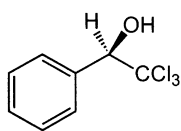
$[\alpha]_D^{23} = -72$ (c 0.25, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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Stephen G. Davies and Henri-Philippe Husson

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(*R*)-2,2,2-Trichloromethyl-1-phenylethanol

Ee >98%

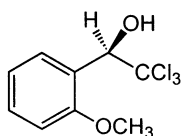
$[\alpha]_D^{23} = -36$ (c 1.00, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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Stephen G. Davies and Henri-Philippe Husson

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(*R*)-2,2,2-Trichloromethyl-1-(2-methoxyphenyl)ethanol

Ee >98%

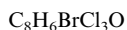
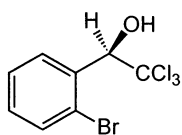
$[\alpha]_D^{23} = -52$ (c 0.26, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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Stephen G. Davies and Henri-Philippe Husson

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(*R*)-2,2,2-Trichloromethyl-1-(2-bromophenyl)ethanol

Ee >98%

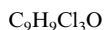
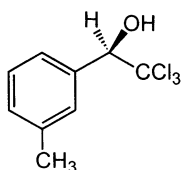
$[\alpha]_D^{23} = -79$ (c 0.26, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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(*R*)-2,2,2-Trichloromethyl-1-(3-methylphenyl)ethanol

Ee >98%

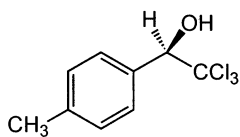
$[\alpha]_D^{23} = -45$ (c 1.00, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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Stephen G. Davies and Henri-Philippe Husson

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(*R*)-2,2,2-Trichloromethyl-1-(4-methylphenyl)ethanol

Ee >98%

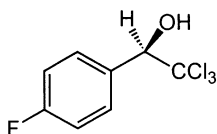
$[\alpha]_D^{23} = -35$ (c 1.00, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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Stephen G. Davies and Henri-Philippe Husson

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(*R*)-2,2,2-Trichloromethyl-1-(4-fluorophenyl)ethanol

Ee >98%

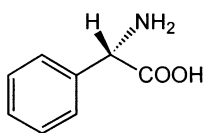
$[\alpha]_D^{23} = -33$ (c 1.00, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (*R*)

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Stephen G. Davies and Henri-Philippe Husson

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$C_8H_9NO_3$

(*S*)-Phenylglycine

Ee >99%

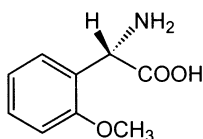
$[\alpha]_D^{23} = +154$ (c 0.50, 5 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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$C_9H_{11}NO_3$

(*S*)-(2-Methoxyphenyl)glycine

Ee >97%

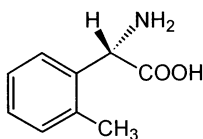
$[\alpha]_D^{23} = +163$ (c 0.10, 5 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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$C_9H_{11}NO_2$

(*S*)-(2-Methylphenyl)glycine

Ee >99%

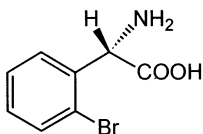
$[\alpha]_D^{23} = +91$ (c 0.10, 5 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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$C_8H_8BrNO_2$

(*S*)-(2-Bromophenyl)glycine

Ee >98%

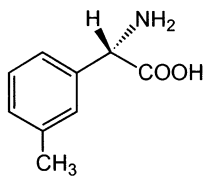
$[\alpha]_D^{23} = +67$ (c 0.25, 5 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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Stephen G. Davies and Henri-Philippe Husson

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$C_9H_{11}NO_2$

(*S*)-(3-Methylphenyl)glycine

Ee >99%

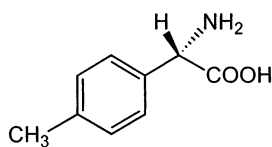
$[\alpha]_D^{23} = +146$ (c 0.20, 5 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

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Stephen G. Davies and Henri-Philippe Husson

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$C_9H_{11}NO_2$

(*S*)-(4-Methylphenyl)glycine

Ee >99%

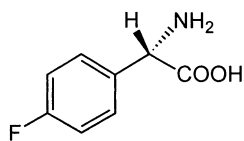
$[\alpha]_D^{23} = +149$ (c 0.50, 1 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Christelle Mellin-Morlière, David J. Aitken,* Steven D. Bull,
Stephen G. Davies and Henri-Philippe Husson

Tetrahedron: Asymmetry 12 (2001) 149



$C_8H_8FNO_2$

(*S*)-(4-Fluorophenyl)glycine

Ee >99%

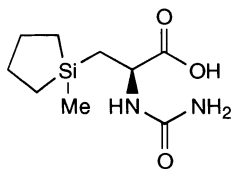
$[\alpha]_D^{23} = +131$ (c 0.50, 1 M HCl)

Source of chirality: asymmetric synthesis

Absolute configuration: (*S*)

Richard J. Smith, Markus Pietzsch, Thomas Waniek,
Christoph Syldatk and Stefan Bienz*

Tetrahedron: Asymmetry 12 (2001) 157



$C_9H_{18}N_2O_3Si$

(*R*)-2-Carbamoylamino-3-(1-methyl-1-silacyclopentyl)propionic acid

(*R*)-Enantiomer:

Ee >99% by HPLC using chiral column

$[\alpha]_D = +5.5$ (c 0.51, MeOH)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

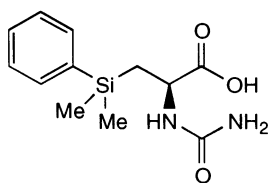
Absolute configuration: 2*R*

(*S*)-Enantiomer:

Source of chirality: enzymatic deracemization with immobilized hydantoinase from *Bacillus thermoglucosidasius* and from *Arthrobacter aureus* DSM 3745

Richard J. Smith, Markus Pietzsch, Thomas Waniek,
Christoph Syldatk and Stefan Bienz*

Tetrahedron: Asymmetry 12 (2001) 157



$C_{12}H_{18}N_2O_3Si$

(*R*)-2-Carbamoylamino-3-[(dimethyl)phenylsilyl]propionic acid

(*R*)-Enantiomer:

Ee >99% by HPLC using chiral column

$[\alpha]_D = +11.2$ (c 0.74, MeOH)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

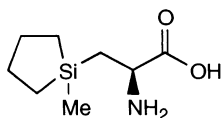
Absolute configuration: 2*R*

(*S*)-Enantiomer:

Source of chirality: enzymatic deracemization with immobilized hydantoinase from *Bacillus thermoglucosidasius* and from *Arthrobacter aurescens* DSM 3745

Richard J. Smith, Markus Pietzsch, Thomas Waniek,
Christoph Syldatk and Stefan Bienz*

Tetrahedron: Asymmetry 12 (2001) 157



$C_8H_7NO_2Si$

(*R*)-2-Amino-3-(1-methyl-1-silacyclopentyl)propionic acid

(*R*)-Enantiomer:

$[\alpha]_D = +26.4$ (c 0.51, 1N aq. HCl solution)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

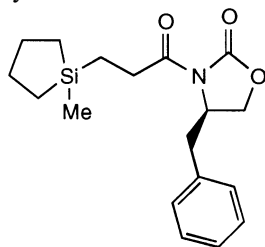
Absolute configuration: 2*R*

(*R*)-Enantiomer:

Source of chirality: enzymatic deaminocarbonylation with immobilized *N*-carbamoylase from *Arthrobacter aurescens* DSM 3747

Richard J. Smith, Markus Pietzsch, Thomas Waniek,
Christoph Syldatk and Stefan Bienz*

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$C_{18}H_{25}NO_3Si$

(*R*)-4-Benzyl-3-[3-(1-methyl-1-silacyclopentyl)propionyl]oxazolidin-2-one

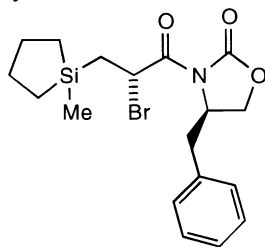
$[\alpha]_D = -42.3$ (c 2.47, $CHCl_3$)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

Absolute configuration: 4*R*

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$C_{18}H_{24}BrNO_3Si$

(4*R*,2'*S*)-4-Benzyl-3-[2-bromo-3-(1-methyl-1-silacyclopentyl)propionyl]oxazolidin-2-one

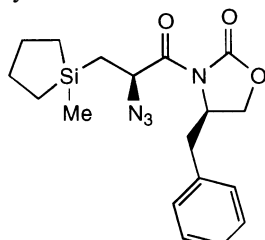
$[\alpha]_D = -37.5$ (c 4.37, $CHCl_3$)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

Absolute configuration: (4*R*,2'*S*)

Richard J. Smith, Markus Pietzsch, Thomas Waniek,
Christoph Syldatk and Stefan Bienz*

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(4*R*,2'*R*)-3-[2-Azido-3-(1-methyl-1-silacyclopentyl)propionyl]-4-benzyloxazolidin-2-one

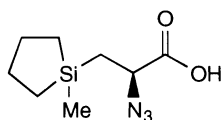
$[\alpha]_D = -8.8$ (*c* 7.75, $CHCl_3$)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

Absolute configuration: (4*R*,2'*R*)

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(*R*)-2-Azido-3-(1-methyl-1-silacyclopentyl)propionic acid

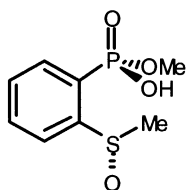
$[\alpha]_D = -7.7$ (*c* 4.05, $CHCl_3$)

Source of chirality: (*R*)-4-benzyloxazolidin-2-one

Absolute configuration: 2*R*

Christelle Mauger, Serge Masson, Michel Vazeux,*
Jean-François Saint-Clair, Wanda H. Midura, Josef Drabowicz
and Marian Mikolajczyk*

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(*S*)-Methyl (2-methylsulfinyl)phenylphosphonic acid

Ee = 100%

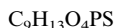
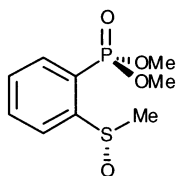
$[\alpha]_D = -97$ (*c* 0.45, $CHCl_3$)

Source of chirality: resolution with cinchonine

Absolute configuration: *S* (assigned
by chemical correlation)

Christelle Mauger, Serge Masson, Michel Vazeux,*
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and Marian Mikolajczyk*

Tetrahedron: Asymmetry 12 (2001) 167



(*S*)-Dimethyl (2-methylsulfinyl)phenylphosphonate

Ee = 100%

$[\alpha]_D = -151$ (*c* 0.95, $CHCl_3$)

Source of chirality: resolution with cinchonine

Absolute configuration: *S* (assigned
by chemical correlation)