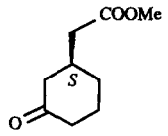
Françoise Dumas and Jean d'Angelo

Tetrahedron: Asymmetry **1990**, *1*, 167



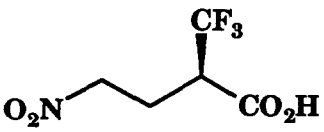
$C_9H_{14}O_3$

Methyl 3-oxocyclohexylacetate

E.e = 48 % [by NMR with tris[3-heptafluoropropyl-hydroxymethylene)-(+)-camphorato], europium(III) derivative]
$[\alpha]^{20}_D$ = -5,1 % (c = 21.4 $CHCl_3$)
Source of chirality : asymm. synth. (Michael)
Absolute configuration *S*
(assigned by chemical correlation and CD)

T. Yamazaki, T. Ohnogi and T. Kitazume

Tetrahedron: Asymmetry **1990**, *1*, 215



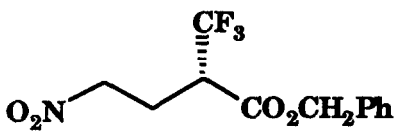
$C_5H_6F_3NO_4$

2-Trifluoromethyl-4-nitrobutyric acid

E.e = >98% [by GLC with (-)-methylbenzylamine]
$[\alpha]_D^{21}$ = -5.58 (c = 1.14 , MeOH)
Source of chirality: enzymatic kinetic resolution
Absolute configuration 2R
[assigned by chem correlation with (S)-(-)-3-(trifluoromethyl)butyl benzoate]

T. Yamazaki, T. Ohnogi and T. Kitazume

Tetrahedron: Asymmetry **1990**, *1*, 215



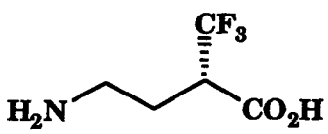
$C_{12}H_{12}F_3NO_4$

Benzyl 2-trifluoromethyl-4-nitrobutyrate

E.e = >98% [by GLC with (-)-methylbenzylamine]
$[\alpha]_D^{21}$ = +13.32 (c = 1.05 , MeOH)
Source of chirality: enzymatic kinetic resolution
Absolute configuration 2S (assigned by comparison with 2R enantiomer)

T. Yamazaki, T. Ohnogi and T. Kitazume

Tetrahedron: Asymmetry **1990**, *1*, 215



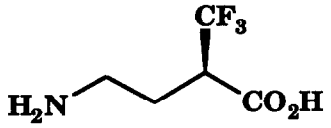
$C_5H_8F_3NO_2$

2-Trifluoromethyl-4-aminobutyric acid

E.e = >98% [by GLC with (-)-methylbenzylamine]
$[\alpha]_D^{21}$ = +3.34 (c = 0.42 , MeOH)
Source of chirality: (2S)-Benzyl 2-trifluoromethyl-4-nitrobutyrate
Absolute configuration 2S

T. Yamazaki, T. Ohnogi and T. Kitazume

Tetrahedron: Asymmetry **1990**, *1*, 215



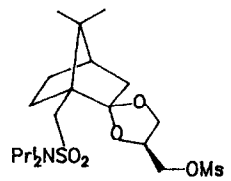
$C_5H_8F_3NO_2$

2-Trifluoromethyl-4-aminobutyric acid

E.e = >98% [by GLC with (-)-methylbenzylamine]
$[\alpha]_D^{21}$ = -3.32 (c = 0.83 , MeOH)
Source of chirality: (2R)-2-Trifluoromethyl-4-aminobutyric acid
Absolute configuration 2R

C.-Y. Hsu, Y.-S. Lin and B.-J. Uang

Tetrahedron: Asymmetry **1990**, *1*, 219

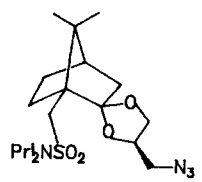


chiral molecule derived from 10-camphorsulfonic acid
$[\alpha]_D^{20}$ -13.87° (c 2, $CHCl_3$)
source of chircality : (+)-(1R)-10camphorsulfonic acid
absolute configuration : 1R,2S,4'S

1-(7,7-dimethyl-10-(N,N-diisopropyl-sulfonamide)-bicyclo[2.2.1] heptane)
spiro-2'-(4'-methanesulfonyloxy methyl-1',3'-dioxolane)

C.-Y. Hsu, Y.-S. Lin and B.-J. Uang

Tetrahedron: Asymmetry **1990**, *1*, 219

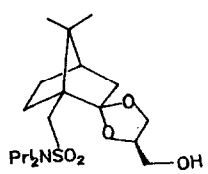


chiral molecule derived from 10-camphorsulfonic acid
$[\alpha]_D^{20}$ -19.07° (c 0.5, $CHCl_3$)
source of chirality : (+)-(1R)-10-camphorsulfonic acid
absolute configuration : 1R,2S,4'R

2-(7,7-dimethyl-10-(N,N-diisopropyl-sulfonamide)-bicyclo[2.2.1] heptane)-
spiro-2'-(4'-azidomethyl-1',3'-dioxolane)

C.-Y. Hsu, Y.-S. Lin and B.-J. Uang

Tetrahedron: Asymmetry **1990**, *1*, 219

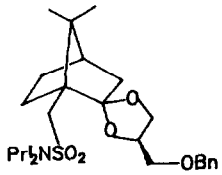


chiral molecule derived from 10-camphorsulfonic acid
$[\alpha]_D^{20}$ -11.84° (c 1, $CHCl_3$)
source of chirality : (+)-(1R)-10-camphorsulfonic acid
absolute configuration : 1R,2S,4'R

2-(7,7-dimethyl-10-(N,N-diisopropyl-sulfonamide)-bicyclo[2.2.1] heptane)-
spiro-2'-(4'-hydroxymethyl-1'-,3'-dioxolane)

C.-Y. Hsu, Y.-S. Lin and B.-J. Uang

Tetrahedron: Asymmetry **1990**, *1*, 219

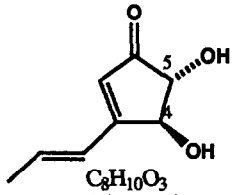


chiral molecule derived from 10-camphorsulfonic acid
$[\alpha]_D^{20}$ -12.79° (c 2, $CHCl_3$)
source of chirality : (+)-(1R)-10-camphorsulfonic acid
absolute configuration : 1R,2S,4'R

2-(7,7-dimethyl-10-(N,N-diisopropyl-sulfonamide)-bicyclo[2.2.1] heptane)-spiro-2'-(4'-benzyloxymethyl-1',3'-dioxolane)

H.C. Kolb and H.M.R. Hoffmann

Tetrahedron: Asymmetry **1990**, *1*, 237



$C_8H_{10}O_3$
(+)-terrein

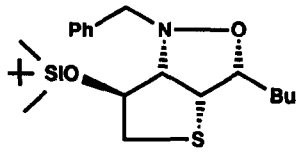
E.e. = > 96% (based on d.e. of intermediate camphanic ester)
$[\alpha]_D^{22} = +161.8° \pm 5.5°$ (c 0.62, H_2O)
Source of chirality: resolution of synthetic intermediates

Absolute configuration 4S,5R
(assigned by comparison to natural 4S,5R-terrein)

(4S,5R)-3-(prop-1-enyl)-4,5-dihydroxycyclopent-2-enone

R. Annunziata, M. Cinquini, F. Cozzi, P. Giaroni and L. Raimondi

Tetrahedron: Asymmetry **1990**, *1*, 251



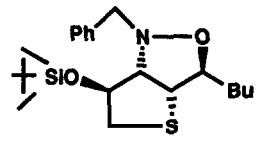
$C_{22}H_{37}NO_2SSi$

1-Phenylmethyl-3-butyl-6-t-butyldimethyl-silyloxyhexahydrothieno [2,3-c]-isoxazole

e.e. > 94% by nmr
$[\alpha]_D^{22}$ -22.9 (c 1.3 chloroform)
Source of chirality: asymmetric synthesis
Absolute configuration: 3R,3aR,6aS,6S
(assigned by synthesis and nmr)

R. Annunziata, M. Cinquini, F. Cozzi, P. Giaroni and L. Raimondi

Tetrahedron: Asymmetry **1990**, *1*, 251



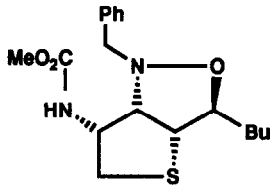
$C_{22}H_{37}NO_2SSi$

1-Phenylmethyl-3-butyl-6-t-butyldimethyl-silyloxyhexahydrothieno [2,3-c]-isoxazole

e.e > 94% by nmr
$[\alpha]_D^{22}$ -11.4 (c 0.6 chloroform)
Source of chirality: asymmetric synthesis
Absolute configuration: 3S,3aR,6aS,6S
(assigned by synthesis and nmr)

R. Annunziata, M. Cinquini, F. Cozzi, P. Giaroni and L. Raimondi

Tetrahedron: Asymmetry **1990**, *1*, 251



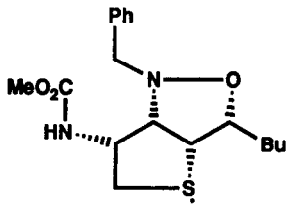
$C_{18}H_{26}N_2O_3S$

1-Phenylmethyl-3-butylhexahydrothieno-
[2,3-c]-isoxazol-6-yl carbamic acid methyl ester

e.e. > 94% by nmr
$[\alpha]_D^{22}$ +30.8 (c 0.4, chloroform)
Source of chirality: asymmetric synthesis
Absolute configuration: 3S,3aR,6aS,6R
(assigned by synthesis and nmr)

R. Annunziata, M. Cinquini, F. Cozzi, P. Giaroni and L. Raimondi

Tetrahedron: Asymmetry **1990**, *1*, 251



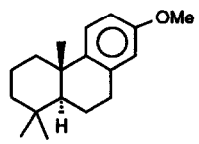
$C_{18}H_{26}N_2O_3S$

1-Phenylmethyl-3-butylhexahydrothieno
[2,3-c]-isoxazol-6-yl carbamic acid methyl ester

e.e. > 94% by nmr
$[\alpha]_D^{22}$ -4.2 (c 0.5 chloroform)
Source of chirality: asymmetric synthesis
Absolute configuration: 3R,3aR,6aS,6R
(assigned by synthesis and nmr)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



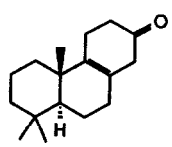
$C_{18}H_{26}O$

13-methoxy-podocarpa- 8,11,13-triene

E.e. = 98 % [by comparison with reported value]
$[\alpha]_D^{21}$ = + 52.6 (c 2.00, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : 5 S, 10 S
(lit. $[\alpha]_D^{rt}$ = + 53.9 : Matsumoto, T.; Usui, S.; Bull. Chem. Soc. Jpn. **1979**, *52*, 212)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



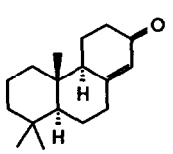
$C_{17}H_{26}O$

podocarp- 8-en-13-one

E.e. = 98 % [by comparison with reported value]
$[\alpha]_D^{30}$ = + 173 (c 2.3, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : 5 S, 10 S
(lit. $[\alpha]_D^{30}$ = + 176 (c 2.28, $CHCl_3$) : Abad, A.; Arno, M.; Domingo, L. R.; Zaragoza, R. J.; Tetrahedron **1985**, *41*, 4937)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



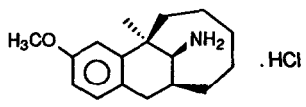
$C_{17}H_{26}O$

podocarp- 8(14)- en-13-one

E.e. = 98 % [by comparison with reported value]
$[\alpha]_D^{26}$ = + 38.6(c 1.10, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : 5 S, 9 S, 10 R
(lit. $[\alpha]_D^{26}$ = + 39 (c 1.1, $CHCl_3$) : Abad, A.; Arno, M.; Domingo, L. R.; Zaragoza, R. J.; Tetrahedron **1985**, *41*, 4937)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



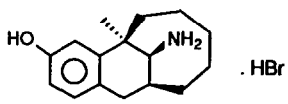
$C_{17}H_{26}ClNO$

5,6,7,8,9,10,11,12-octahydro-3-methoxy-5α-methyl,-5, 11-methanobenzocyclodecen-13β-amine-hydrochloride

E.e. = 98 % [measured by Mosher's method]
$[\alpha]_D^{rt}$ = - 50.5(c 2.8, MeOH)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : 5 R, 11 S, 13 S
(lit. $[\alpha]_D^{rt}$ = -46 (c 3, MeOH) :Freed, M. E.; Potoski, J. R.; Conklin, G. L.; Bell, S. C.; J. Med. Chem. **1976**, *19*, 560)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



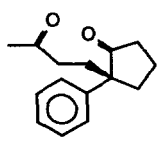
$C_{16}H_{24}BrNO$

5,6,7,8,9,10,11,12-octahydro-3-hydroxy-5α-methyl-5, 11-methanobenzocyclodecen-13β-amine-hydrobromide (Wy-16.225)

E.e. = 98 % [conversion of compound chequed by Mosher's method]
$[\alpha]_D^{rt}$ = - 56(c 0.91, MeOH)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : 5 R, 11 S, 13 S
(lit. $[\alpha]_D^{rt}$ = - 41.7 (c 3, MeOH) :Freed, M. E.; Potoski, J. R.; Conklin, G. L.; Bell, S. C.; J. Med. Chem. **1976**, *19*, 560)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



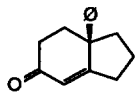
$C_{15}H_{18}O_2$

2-(3'-oxobutyl)-2-phenyl-cyclopentanone

E.e. = 84 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{20}$ = +57 (c 1.95, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : S
(assigned by conversion to CD-analized compound)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265

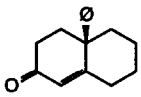


$C_{15}H_{16}0$
5,6,7,7a-tetrahydro-7a-phenyl-5-oxoindane

E.e. = 84 % [conversion of compound chequed by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{21}$ = +162 (c 1.3, $CHCl_3$)
CD : $[\Delta\varepsilon]_{220}$ = +11.28, $[\Delta\varepsilon]_{200}$ = +20.06
(c 0.872 mmol/l, MeCN)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : R
(assigned by CD-analysis)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265

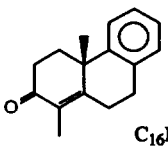


$C_{16}H_{18}0$
2,3,4,4a,5,6,7,8-octahydro-4a-phenyl-2-oxonaphthalene

E.e. = 87 % [conversion of compound chequed by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{20}$ = +214 (c 1.9, $CHCl_3$)
CD : $[\Delta\varepsilon]_{232}$ = +24.32, $[\Delta\varepsilon]_{203}$ = +7.26
(c 0.960 mmol/l, MeCN)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : R
(assigned by CD-analysis)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265

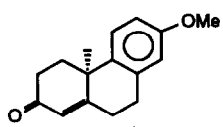


$C_{16}H_{18}0_2$
2,3,4,4a,9,10-hexahydro-1,4a-dimethyl-2-oxophenanthrene

E.e. = 77 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{23}$ = +167 (c 1.52, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : S
(in analogy with general method)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265

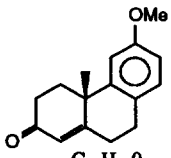


$C_{16}H_{18}0_2$
2,3,4,4a,9,10-hexahydro-7-methoxy-4a-methyl-2-oxophenanthrene

E.e. = 63 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{23}$ = -157 (c 2.20, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : R
(in analogy with general method)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



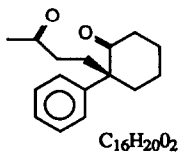
$C_{16}H_{18}O_2$

2,3,4,4a,9,10-hexahydro-6-methoxy-4a-methyl-2-oxophenanthrene

E.e. = 61 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{23}$ = +205 (c 0.98, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : S
(in analogy with general method)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



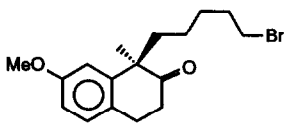
$C_{16}H_{20}O_2$

2-(3'-oxobutyl)-2-phenyl-cyclohexanone

E.e. = 87 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{19}$ = +157 (c 2.64, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : S
(assigned by conversion to CD-analized compound)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



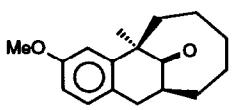
$C_{17}H_{23}O_2Br$

7-methoxy-1-(5'-bromopentyl)-1-methyl-2-tetralone

E.e. = 60 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{20}$ = +37 (c 2.0, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : R
(assigned by conversion to known compound)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



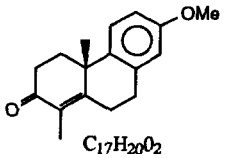
$C_{17}H_{22}O_2$

5,6,7,8,9,10,11,12-octahydro-3-methoxy-5-methyl-5,11-methanobenzocyclodecen-13-one

E.e. = 98 % [by conversion to compound applicable for Mosher's method]
$[\alpha]_D^{20}$ = -28.5 (c 1.05, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : 5R,11S
(assigned by conversion to known compound)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265

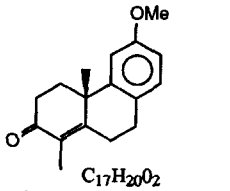


$C_{17}H_{20}O_2$
2,3,4,4a,9,10-hexahydro-7-methoxy-1,4a-dimethyl-2-oxophenanthrene

E.e. = 92 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{23}$ = +163 (c 2.95, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : S
(assigned by conversion to known compound)

W. Nerinckx and M. Vandewalle

Tetrahedron: Asymmetry **1990**, *1*, 265



$C_{17}H_{20}O_2$
2,3,4,4a,9,10-hexahydro-6-methoxy-1,4a-dimethyl-2-oxophenanthrene

E.e. = 70 % [by nmr with $Eu(hfc)_3$]
$[\alpha]_D^{22}$ = +181 (c 2.09, $CHCl_3$)
Source of chirality : asymm. synth.
(chiral phase transfer catalysis)
Absolute configuration : S
(in analogy with general method)