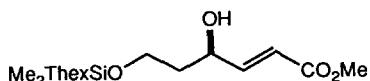


Tetrahedron: Asymmetry 1990, 1, 57

K. Burgess and I. Henderson



E.e = 92 % [by ^1H NMR with $\text{Eu}(\text{hfc})_3$]

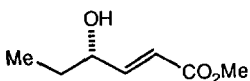
$[\alpha]_{\text{D}}^{25} = +5.2^\circ$ ($c = 13$, CHCl_3)

R configuration inferred from correlations of shift experiments with similar compounds and the sequence used to obtain this material.

E-methyl 6-(dimethylthexylsiloxy)-4-hydroxyhex-2-enoate

Tetrahedron: Asymmetry 1990, 1, 57

K. Burgess and I. Henderson



E.e = >98 % [by ^1H NMR with $\text{Eu}(\text{hfc})_3$]

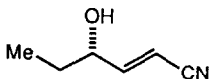
$[\alpha]_{\text{D}}^{25} = +23.5^\circ$ ($c = 3$, CHCl_3)

S configuration inferred from correlations of shift experiments with similar compounds and the sequence used to obtain this material.

E-methyl 4-hydroxyhex-2-enoate

Tetrahedron: Asymmetry 1990, 1, 57

K. Burgess and I. Henderson



E.e = >98 % [by NMR of MPTA ester]

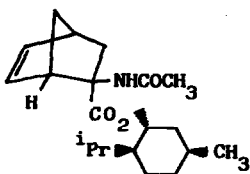
$[\alpha]_{\text{D}}^{25} = +47^\circ$ ($c = 1.5$, CHCl_3)

S configuration inferred from correlations of shift experiments with similar compounds and the sequence used to obtain this material.

E-4-hydroxyhex-2-enenitrile

Tetrahedron: Asymmetry 1990, 1, 61

C. Cativiela, P. López, J. A. Mayoral.



$^1\text{H-NMR}$: $\delta = 2.38(\text{m}, 1\text{H}, \text{H}_1)$, $1.98(\text{s}, 3\text{H}, \text{COCH}_3)$, $0.75(\text{d}, 3\text{H}, \text{CH}_3)$

Absolute configuration: 1S,2R,4S

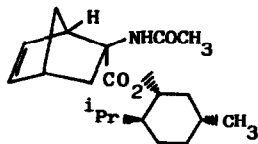
(assigned by comparing with the corresponding hydrogenated amino acid)

$\text{C}_{20}\text{H}_{31}\text{NO}_3$

(-)-menthyl (1S,2R,4S)-2-acetamidobicyclo[2.2.1]hept-5-ene-2-carboxylate

C. Cativiela, P. López, J. A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$^1\text{H-NMR}:\delta = 2.32(\text{m}, 1\text{H}, \text{H}_1), 1.96(\text{s}, 3\text{H}, \text{COCH}_3), 0.70(\text{d}, 3\text{H}, \text{CH}_3)$

Absolute configuration: 1R,2S,4R

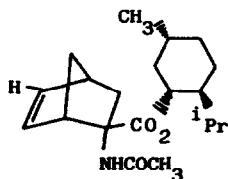
(assigned by comparing with the corresponding hydrogenated amino acid)

$\text{C}_{20}\text{H}_{31}\text{NO}_3$

(-)-menthyl (1R,2S,4R)-2-acetamidobicyclo[2.2.1]hept-5-ene-2-carboxylate

C. Cativiela, P. López, J. A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$^1\text{H-NMR}:\delta = 6.04(\text{m}, 1\text{H}, \text{H}_5), 2.03(\text{s}, 3\text{H}, \text{COCH}_3)$

Absolute configuration: 1S,2S,4S

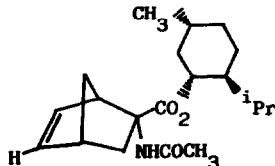
(assigned by comparing with the corresponding hydrogenated amino acid)

$\text{C}_{20}\text{H}_{31}\text{NO}_3$

(-)-menthyl (1S,2S,4S)-2-acetamidobicyclo[2.2.1]hept-5-ene-2-carboxylate

C. Cativiela, P. López, J. A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$^1\text{H-NMR}:\delta = 6.10(\text{m}, 1\text{H}, \text{H}_5), 1.89(\text{s}, 3\text{H}, \text{COCH}_3)$

Absolute configuration: 1R,2R,4R

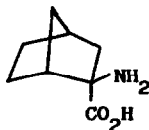
(assigned by comparing with the corresponding hydrogenated amino acid)

$\text{C}_{20}\text{H}_{31}\text{NO}_3$

(-)-menthyl (1R,2R,4R)-2-acetamidobicyclo[2.2.1]hept-5-ene-2-carboxylate

C. Cativiela, P. López, J. A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$[\alpha]_D^{25}$ (1% in water) = -61.4°

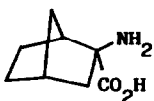
Absolute configuration: 1R,2R,4S

$\text{C}_8\text{H}_{13}\text{NO}_2$

(1R,2R,4S)-2-aminobicyclo[2.2.1]heptane-2-carboxylic acid

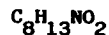
C. Cativiela, P. López, J. A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$$[\alpha]_D^{25} (1\% \text{ in water}) = +61.2^\circ$$

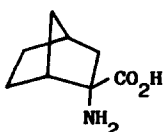
Absolute configuration: 1S,2S,4R



(1S,2S,4R)-2-aminobicyclo[2.2.1]heptane-2-carboxylic acid

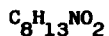
C. Cativiela, P. López, J.A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$$[\alpha]_D^{25} (1\% \text{ in water}) = -24.7^\circ$$

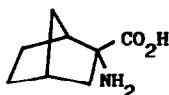
Absolute configuration: 1R,2S,4S



(1R,2S,4S)-2-aminobicyclo[2.2.1]heptane-2-carboxylic acid

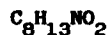
C. Cativiela, P. López, J.A. Mayoral.

Tetrahedron: Asymmetry 1990, 1, 61



$$[\alpha]_D^{25} (1\% \text{ in water}) = +24.4^\circ$$

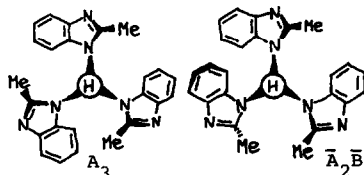
Absolute configuration: 1S,2R,4R



(1S,2R,4R)-2-aminobicyclo[2.2.1]heptane-2-carboxylic acid

Foces-Foces, C.; Hernández Cano, F.; Faure, R.; Roussel, C.; Claramunt, R.M.; López, C.; Sanz, D.; Elguero, J. and Martínez-Ripoll, M.

Tetrahedron: Asymmetry 1990, 1, 65



Tris-(2'-methylbenzimidazol-1'-yl)methane (TMBM)

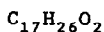
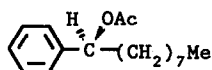
Separation by chromatography on MCT affords enantiomers of TMBM as mixtures of rapid interconverting isomers ($A_3 \cdot \bar{A}_2\bar{B}$ and $\bar{A}_3 \cdot A_2B$).

Racemization barrier ($28.5 \text{ kcal} \cdot \text{mol}^{-1}$) as well as isomerization barrier ($9.8 \text{ kcal} \cdot \text{mol}^{-1}$) were measured.

The X-Ray structures of the racemic and the (+)enantiomer were determined.

K. Mori and R. Bernotas.

Tetrahedron: Asymmetry 1990, 1, 87



1-Phenynonyl acetate

E.e. = 100% (by HPLC on a Chiralcel[®] OB column)

$[\alpha]_D^{25} = -63.57$ (c 1.565, 99.5% EtOH)

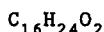
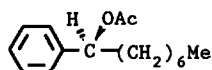
Source of chirality: resolution by lipase P

Absolute configuration: *S*

[assigned by chemical correlation with (*S*)-1,2-decanediol]

K. Mori and R. Bernotas.

Tetrahedron: Asymmetry 1990, 1, 87



1-Phenylloctyl acetate

E.e. = 99.6% (by HPLC on a Chiralcel[®] OB column)

$[\alpha]_D^{25} = -66.51$ (c 3.95, 99.5% EtOH)

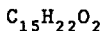
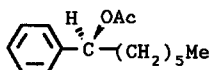
Source of chirality: resolution by lipase P

Absolute configuration: *S*

(assigned by the comparison of the sign of the specific rotation and the stereospecificity of the enzyme.)

K. Mori and R. Bernotas.

Tetrahedron: Asymmetry 1990, 1, 97



1-Phenylheptyl acetate

E.e. = 100% (by HPLC on a Chiralcel[®] OB column)

$[\alpha]_D^{25} = -72.29$ (c 1.32, 99.5% EtOH)

Source of chirality: resolution by lipase P

Absolute configuration: *S*

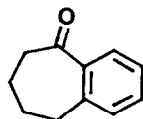
(assigned by the comparison of the sign of the specific rotation and the stereospecificity of the enzyme.)

Tetrahedron: Asymmetry 1990, 1, 97

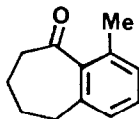
An Analogue of the Antioestrogen Tamoxifen of Sufficient Rigidity to Exist as Distinct Enantiomers: Synthesis and Conformational Dynamics Studies

Raymond McCague

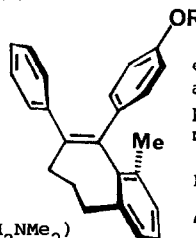
Institute of Cancer Research, Sutton, Surrey, U.K.



54%



48% (R = Me)
34% (R = CH₂CH₂NMe₂)

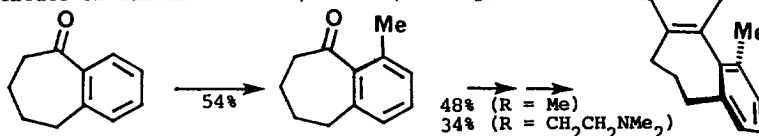


When R = Me enantiomeric atropisomers are separable on (+)-poly(triphenylmethyl)-methacrylate.

Racemisation has $\Delta G^\ddagger = 20.9$ kcal mol⁻¹

An Analogue of the Antioestrogen Tamoxifen of Sufficient Rigidity to Exist as Distinct Enantiomers: Synthesis and Conformational Dynamics Studies

Raymond McCague
Institute of Cancer Research, Sutton, Surrey, U.K.

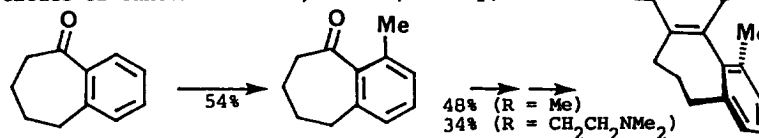


When R = Me
enantiomeric atropisomers
are separable on (+)-
poly(triphenylmethyl)-
methacrylate.

Racemisation has
 $\Delta G^\ddagger = 20.9 \text{ kcal mol}^{-1}$

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Raymond McCague
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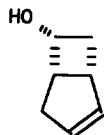
N. Klempier, P. Geymayer, P. Stadler,
K. Faber, H. Griengl



E.e. = 99.3% [by (-)-menthylchloroformate]
 $[\alpha]_D^{20} = -36.3$ (c 2.27, CHCl₃)
Source of chirality: enzymatic resolution
Absolute configuration 1*S*, 5*R*, 6*S* by $[\alpha]_D^{20}$
of lit.

C₉H₁₂O₂
Bicyclo[3.2.0]hept-2-en-6-yl acetate

N. Klempier, P. Geymayer, P. Stadler,
K. Faber, H. Griengl

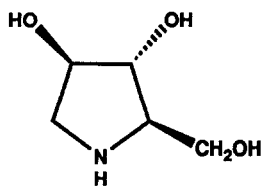


E.e. = 98.4% [by (-)-menthylchloroformate]
 $[\alpha]_D^{20} = -75.8$ (c 2.46, CHCl₃)
Source of chirality: enzymatic resolution
Absolute configuration 1*R*, 5*S*, 6*R* by $[\alpha]_D^{20}$
of lit.

C₇H₁₀O
Bicyclo[3.2.0]hept-2-en-6-ol

G. W. J. Fleet and D. R. Witty

Tetrahedron: Asymmetry 1990, 1, 119



E.e. = 100%

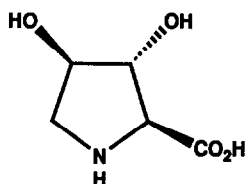
$[\alpha]_D^{20} = +36.7^\circ$ (c, 1.25 in water)

Source of chirality: D-glucose as starting material

$C_5H_{11}NO_3 \cdot HCl$
1,4-Dideoxy-1,4-imino-D-
arabinitol hydrochloride

G. W. J. Fleet and D. R. Witty

Tetrahedron: Asymmetry 1990, 1, 119



E.e. = 100%

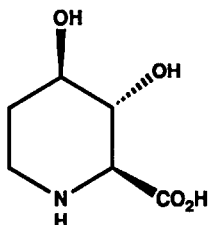
$[\alpha]_D^{20} = -12.2^\circ$ (c, 0.83 in water)

Source of chirality: D-glucose as starting material

$C_5H_9NO_4$
(2S,3R,4R)-3,4-
Dihydroxyproline

G. W. J. Fleet and D. R. Witty

Tetrahedron: Asymmetry 1990, 1, 119



E.e. = 100%

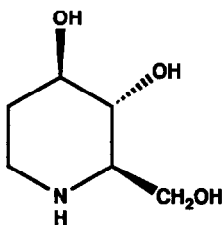
$[\alpha]_D^{20} = -1.3^\circ$ (c, 0.54 in water)

Source of chirality: D-glucose as starting material

$C_6H_{11}NO_4 \cdot H_2O$ (2S,3R,4R)-3,4-Dihydroxypipercolic Acid

G. W. J. Fleet and D. R. Witty

Tetrahedron: Asymmetry 1990, 1, 119



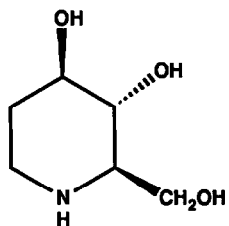
E.e. = 100%

$[\alpha]_D^{20} = +21.0^\circ$ (c, 0.3 in water)

Source of chirality: D-glucose as starting material

$C_6H_{13}NO_3$ Fagomine 1,5,-Imino-1,2,5-trideoxy-D-arabino-hexitol

G. W. J. Fleet and D. R. Witty



E.e. = 100%

$[\alpha]_D^{20} = +17.9^\circ$ (c, 0.78 in water)

Source of chirality: D-glucose as starting material

$C_6H_{13}NO_3 \cdot HCl$ Fagomine Hydrochloride, 1,5,-Imino-1,2,5-trideoxy-D-arabino-hexitol hydrochloride