Dictionary of Natural Products

VOLUME FIVE

R–Z

Dictionary of Natural Products

VOLUME FIVE

R–Z

CHAPMAN & HALL
Scientific Data Division
London · Glasgow · New York · Tokyo · Melbourne · Madras

Published by Chapman & Hall, 2–6 Boundary Row, London SE1 8HN

Chapman & Hall, 2–6 Boundary Row, London SE1 8HN, UK

Blackie Academic & Professional, Wester Cleddens Road, Bishopbriggs, Glasgow G64 2NZ, UK

Chapman & Hall Inc., One Penn Plaza, 41st Floor, New York NY10119, USA

Chapman & Hall Japan, Thomson Publishing Japan, Hirakawacho Nemoto Building, 6F, 1-7-11 Hirakawa-cho, Chiyoda-ku, Tokyo 102, Japan

Chapman & Hall Australia, Thomas Nelson Australia, 102 Dodds Street, South Melbourne, Victoria 3205, Australia

Chapman & Hall India, R. Seshadri, 32 Second Main Road, CIT East, Madras 600 035, India

First edition 1994

Typeset and printed in Great Britain at the University Press, Cambridge

ISBN 0 412 46620 1 (Seven-volume set)

A catalogue record for this book is available from the British Library

Library of Congress Cataloguing-in-Publication Data available

♾ Printed on acid-free text paper, manufactured in accordance with ANSI/NISO Z39.48 1992 (Permanence of Paper)

Dictionary of Natural Products

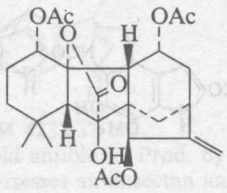
VOLUME FIVE

R–Z

R

Rabdoepigibberellolide **R-00001**

[81398-21-2]



$C_{26}H_{34}O_9$ M 490.549

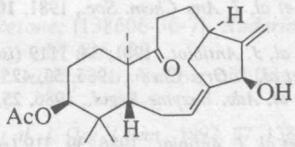
Constit. of *Rabdosia shikokiana*. Cryst. Mp 255.5-256.5°. $[\alpha]_D$ −89° (c, 0.28 in $CHCl_3$).

Ochi, M. *et al*, *J. Chem. Soc., Chem. Commun.*, 1982, 810.

Rabdohakusin **R-00002**

ent-*8,9-Seco-3α-acetoxy-15α-hydroxy-7,16-kauradien-9-one*

[93740-31-9]



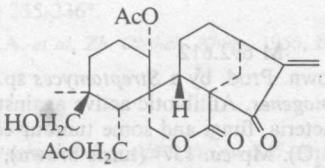
$C_{22}H_{32}O_4$ M 360.492

Stereochem. wrongly given in the lit. Constit. of *Rabdosia umbrosa* var. *hakusanensis*. Cryst. Mp 97-98°. $[\alpha]_D^{25}$ +78.7° (c, 0.127 in $CHCl_3$).

Kubo, I. *et al*, *Chem. Lett.*, 1984, 1613.

Rabdokaurin B **R-00003**

[142465-71-2]



$C_{24}H_{32}O_8$ M 448.512

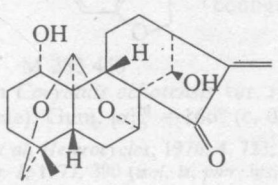
Constit. of *Rabdosia longituba*. Amorph. powder. $[\alpha]_D^{26}$ +57.6° (c, 0.81 in MeOH).

Takeda, Y. *et al*, *Phytochemistry*, 1992, **31**, 1687 (*isol*, *pmr*, *cmr*)

Rabdoserrin A **R-00004**

ent-*7,20:18,20-Diepoxy-1β,14α-dihydroxy-16-kauren-15-one*

[96685-01-7]

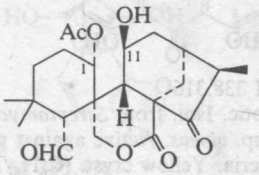


$C_{20}H_{26}O_5$ M 346.422

Isol. from *Rabdosia serra*. Shows antitumour props.

Jin, R. *et al*, *CA*, 1985, **103**, 175377a.

Rabdosichuanin A **R-00005**



$C_{22}H_{30}O_7$ M 406.475

Constit. of *Rabdosia setschwanensis*. Cryst. Mp 225-227°. $[\alpha]_D^{25}$ +107.3° (c, 0.55 in MeOH).

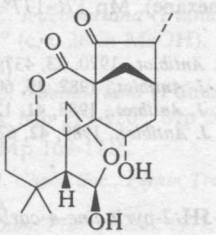
1-Deacetoxy, 11-epimer: ***Rabdosichuanin B***

$C_{20}H_{28}O_5$ M 348.438

Constit. of *R. setschwanensis*. Cryst. Mp 241-243°. $[\alpha]_D^{24}$ −58.16° (c, 0.576 in MeOH).

Hao, H. *et al*, *Phytochemistry*, 1990, **29**, 2591 (*isol*, *pmr*, *cmr*)

Rabdosichuanin C **R-00006**



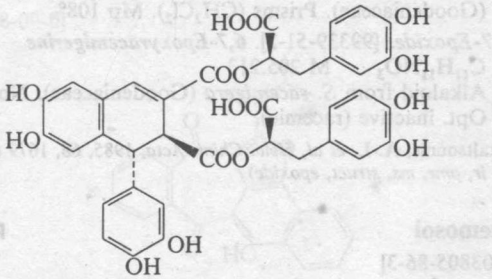
$C_{20}H_{28}O_6$ M 364.438

Constit. of *Rabdosia setschwanensis*. Cryst. Mp 231-233°. $[\alpha]_D^{25}$ −120.94° (c, 0.55 in MeOH).

Hao, H. *et al*, *Phytochemistry*, 1990, **29**, 2591 (*isol*, *pmr*, *cmr*)

Rabdosiin **R-00007**

[119152-54-4]



$C_{36}H_{30}O_{16}$ M 718.623

Constit. of *Rabdosia japonica*. Used for treatment of gastrointestinal disorders. Tanning agent. Light brown amorph. powder. $[\alpha]_D^{25}$ −78° (c, 3.5 in MeoH).

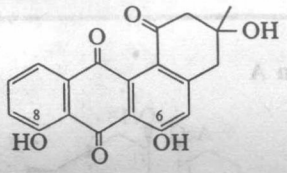
Agata, I. *et al*, *Chem. Pharm. Bull.*, 1988, **36**, 3223 (*isol*, *struct*)

Agata, I. *et al*, *Phytochemistry*, 1989, **28**, 2447 (*isol*, *pmr*, *cmr*)

Rabelomycin R-00008

3,4-Dihydro-3,6,8-trihydroxy-3-methylbenz[a]*anthracene-1,7,12(2H)trione, 9CI*

[28399-50-0]



$C_{19}H_{14}O_6$ M 338.316

Quinone antibiotic. Isol. from *Streptomyces olivaceus* and *S. matensis* ssp. *vineus*. Active against gram-positive and negative bacteria. Yellow cryst. (C_6H_6/EtOH). Mp 193° dec. $[\alpha]_D$ −102° (c, 1 in $CHCl_3$).

8-Me ether: [117620-88-9]. ***8-O-Methylrabelomycin***

$C_{20}H_{16}O_6$ M 352.343

From *S. tsusimaensis*. Active against gram-positive bacteria. Yellow needles. Mp 191-193°. $[\alpha]_D^{28}$ −118° (c, 0.5 in MeOH).

6-Deoxy, 8-Me ether: [117620-87-8]. ***6-Deoxy-8-O-methylrabelomycin. MM 47755. Antibiotic MM 47755***

$C_{20}H_{16}O_5$ M 336.343

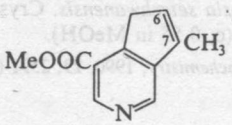
From *S. tsusimaensis* and another *S.* sp. Weakly active against gram-positive bacteria. Yellow prisms ($CHCl_3$/cyclohexane). Mp 176-177°. $[\alpha]_D^{20}$ −136° (c, 0.04 in MeOH).

Liu, W.-C. *et al*, *J. Antibiot.*, 1970, **23**, 437 (*isol*)
Imamura, N. *et al*, *J. Antibiot.*, 1982, **35**, 602 (*isol*)
Shigihara, Y. *et al*, *J. Antibiot.*, 1988, **41**, 1260 (*deriv*)
Gilpin, M.L. *et al*, *J. Antibiot.*, 1989, **42**, 627 (*deriv*)

Racemigerine R-00009

Methyl 7-methyl-5H-2-pyrindine-4-carboxylate, 9CI

[76655-39-5]



$C_{11}H_{11}NO_2$ M 189.213

Alkaloid from the aerial parts of *Scaevola racemigera* (Goodeniaceae). Prisms (CH_2Cl_2). Mp 108°.

6,7-Epoxide: [99339-51-2]. ***6,7-Epoxyracemigerine***

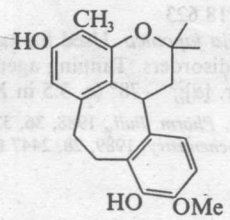
$C_{11}H_{11}NO_3$ M 205.213

Alkaloid from *S. racemigera* (Goodeniaceae). Noncryst. Opt. inactive (racemic).

Skaltsounis, A.-L. *et al*, *Helv. Chim. Acta*, 1985, **68**, 1679 (*isol, uv, ir, pmr, ms, struct, epoxide*)

Racemosol R-00010

[103805-86-3]



$C_{21}H_{24}O_4$ M 340.418

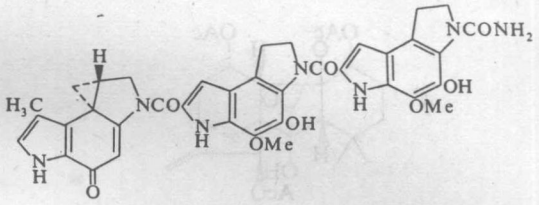
Constit. of *Bauhinia racemosa*. Deep-red prisms ($CHCl_3$). Mp 202°. $[\alpha]_D$ +64.45° (c, 1.0 in $CHCl_3$).

Anjaneyulu, A.S.R. *et al*, *Tetrahedron*, 1986, **42**, 2417 (*cryst struct*)

Rachelmycin R-00011

CC 1065. ML 1065. NSC 298223. 106/78. Antibiotic CC 1065

[69866-21-3]



$C_{37}H_{33}N_7O_8$ M 703.710

Obt. from *Streptomyces zelensis* and *S. canulus*. Antitumour agent, active against gram-positive and -negative bacteria and yeasts. Clustered needles or amorph. amber-coloured foam. λ_{max} 236 (sh), 258 (sh) and 364 (end absorption) nm.

▷ Toxic. DF4936780.

Hanka, L.J. *et al*, *J. Antibiot.*, 1978, **31**, 1211 (*isol*)
Martin, D.G. *et al*, *J. Antibiot.*, 1980, **33**, 902 (*struct*)
Chidester, C.G. *et al*, *J. Am. Chem. Soc.*, 1981, **103**, 7629 (*cryst struct*)
Martin, D.G. *et al*, *J. Antibiot.*, 1981, **34**, 1119 (*isol*)
Sundberg, R.I. *et al*, *J. Org. Chem.*, 1985, **50**, 425 (*bibl*)
Wierenga, W. *et al*, *Adv. Enzyme Regul.*, 1986, **25**, 141 (*rev, pharmacol*)
Reynolds, V.L. *et al*, *J. Antibiot.*, 1986, **39**, 319 (*rev, pharmacol*)
Rawal, V.H. *et al*, *Heterocycles*, 1987, **25**, 701 (*rev, synth*)
Kelly, R.C. *et al*, *J. Am. Chem. Soc.*, 1987, **109**, 6837 (*synth*)
Watt, W. *et al*, *Acta Crystallogr., Sect. C*, 1988, **44**, 1675 (*cryst struct*)
Bolton, R.E. *et al*, *J. Chem. Soc., Perkin Trans. 1*, 1988, 2491 (*synth, bibl*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th Ed., Van Nostrand-Reinhold, 1992, APT375.

Ractinomycin A R-00012

[1401-11-2]

$C_{33}H_{30}N_3O_{14}$ M 692.612

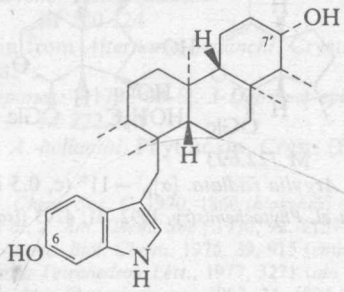
Struct. unknown. Prod. by a *Streptomyces* sp. related to *S. phaeochromogenes*. Antibiotic active against gram-positive bacteria, fungi and some tumour cells. Orange needles (Et_2O). Mp *ca.* 157° (turns brown), blackens at 208°. The same organism also produces Ractinomycin B.

▷ VE2800000.

Utahara, R. *et al*, *J. Antibiot., Ser. A*, 1955, **8**, 132; 1957, **10**, 115 (*isol, uv*)
Wakiki, H. *et al*, *Antibiot. Chemother.* (*Washington, D.C.*), 1958, **8**, 228 (*isol*)

Radarin B R-00013

[138629-07-9]



$C_{28}H_{41}NO_2$ M 423.637

Indole diterpenoid antibiotic. Prod. by *Aspergillus sulphureus*. Possesses antiinsectan and cytotoxic props. Yellow solid. Mp 115-118° dec. $[\alpha]_D$ +39.4° (c, 0.003 in $CHCl_3$).

6-Deoxy: [138606-37-8]. ***Radarin D***
$C_{28}H_{41}NO$ M 407.638
Prod. by *A. sulphureus*. Yellow oil. $[\alpha]_D$ +31.8° (c, 0.003 in $CHCl_3$).

7'-Ketone: [138606-35-6]. ***Radarin A***
$C_{28}H_{39}NO_2$ M 421.622
Prod. by *A. sulphureus*. Pink oil. $[\alpha]_D$ +11.1° (c, 0.005 in $CHCl_3$).

6-Deoxy, 7'-ketone: [138606-36-7]. ***Radarin C***
$C_{28}H_{39}NO$ M 405.622
Prod. by *A. sulphureus*. Yellow oil. $[\alpha]_D$ +6.7° (c, 0.002 in $CHCl_3$).

Laakso, J.A. *et al*, *J. Org. Chem.*, 1992, **57**, 138 (*isol, pmr, cmr, struct*)

Raddeamine R-00014

Struct. unknown

$C_{23}H_{37}NO_2$ M 359.551

Prob. a steroidal alkaloid. Alkaloid from *Fritillaria raddeana* (Liliaceae). Mp 271-272°. Occurs with Alvanidine, A-01152 and Alvanine, A-01153.

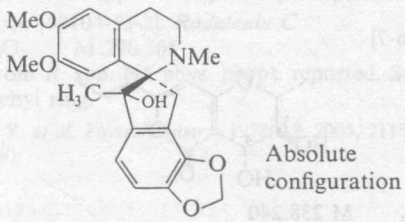
B,HCl: Mp 235-236°.

Aslanov, Kh.A. *et al*, *Zh. Obshch. Khim.*, 1956, **20**, 579; *CA*, **50**, 13971.

Raddeanamine R-00015

3',4',6,8-Tetrahydro-6',7'-dimethoxy-2',6-dimethylspiro[7H-indeno[4,5-d]-1,3-dioxole-7,1'(2'H)-isoquinolin]-6-ol, 9CI

[59614-35-6]



Absolute configuration

$C_{22}H_{25}NO_5$ M 383.443

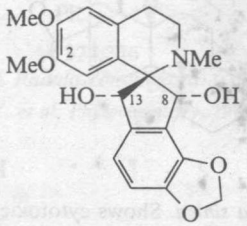
Alkaloid from *Corydalis ochotensis* var. *raddeana* (Fumariaceae). Gum. $[\alpha]_D^{20}$ +166° (c, 0.68 in MeOH).

Kametani, T. *et al*, *Heterocycles*, 1976, **4**, 723; *J. Chem. Soc., Perkin Trans. 1*, 1977, 390 (*isol, ir, pmr, ms, struct*)

Raddeanine† R-00016

3',4',6,8-Tetrahydro-6',7'-dimethoxy-2'-methylspiro[7H-indeno[4,5-d]-1,3-dioxole-7,1'(2'H)-isoquinoline]-6,8-diol, 9CI. 13-epi-Yenhusomine

[59654-07-8]



(+)-*form*

$C_{21}H_{23}NO_6$ M 385.416

Diastereoisomeric with Yenhusomine, Y-00020.

(+)-***form***

Alkaloid from *Corydalis ochotensis* var. *raddeana* and *C. govaniana* (Fumariaceae). Prisms (Me_2CO). Mp 208-209° (200-202°). $[\alpha]_D$ +79.4° (c, 0.11 in MeOH).

O^8-*Ac:* [59614-36-7]. ***Raddeanidine***
$C_{23}H_{25}NO_7$ M 427.453
Alkaloid from *C. ochotensis* var. *raddeana* (Fumariaceae). Gum. $[\alpha]_D^{20}$ +82.7° (c, 0.52 in MeOH).

O^2-*De-Me:* [64191-01-1]. ***Ledeboridine.*** *Ledebouridine*
$C_{20}H_{21}NO_6$ M 371.389
Alkaloid from *C. ledebouriana* (Fumariaceae). Mp 140-141°. $[\alpha]_D$ +114° (c, 0.28 in MeOH).

(±)-***form*** [64234-40-8]
Alkaloid from *C. ledebouriana* (Fumariaceae). Cryst. ($MeOH/CHCl_3$). Mp 219-220°, Mp 201-202° (synthetic).

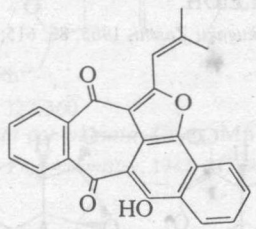
O^8-*Ac:* Synthetic. Mp 169-171°.

Kametani, T. *et al*, *J. Chem. Soc., Perkin Trans. 1*, 1977, 390 (*isol, ir, pmr, ms, struct*)
Israilov, I.A. *et al*, *Khim. Prir. Soedin.*, 1977, 428; *CA*, **87**, 148667q (*isol, ir, pmr, ms, struct*)
Mukhopadhyay, S. *et al*, *J. Nat. Prod.* (*Lloydia*), 1987, **50**, 270 (*isol, uv, ir, pmr, cmr, ms*)
Hanaoka, M. *et al*, *Chem. Pharm. Bull.*, 1988, **36**, 4248 (*synth, ir, pmr, Raddeanine, Raddeanidine*)

Radermachol R-00017

9-Hydroxy-2-(2-methyl-1-propenyl)benzo[g]benzo[5,6]cyclohepta[1,2,3-cd]benzofuran-3,8-dione, 9CI

[95378-00-0]



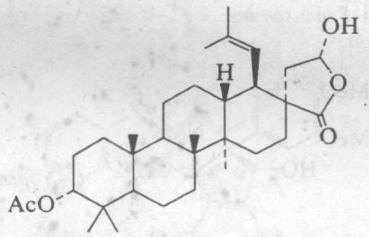
$C_{24}H_{16}O_4$ M 368.388

Red pigment from roots of *Radermachera xylocarpa*. Cryst. (MeOH/hexane). Mp 217-218°.

Joshi, B.S. *et al*, *Tetrahedron Lett.*, 1984, **25**, 5847 (*cryst struct*)
Jiang, Q. *et al*, *Tetrahedron Lett.*, 1991, **32**, 5283 (*synth*)

Radermasinin R-00018

[105531-92-8]



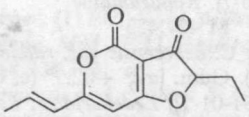
$C_{32}H_{50}O_5$ M 514.744

Constit. of *Radermachia sinica*. Shows cytotoxic activity. Cryst. Mp 239-242°. $[\alpha]_D^{20}$ −27.0° (c, 0.58 in $CHCl_3$).

Rice, G.K. *et al*, *J. Chem. Soc., Chem. Commun.*, 1986, 1397 (*cryst struct*)

Radianthin R-00019

[97399-68-3]

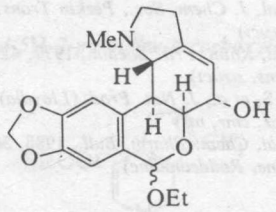


$C_{12}H_{12}O_4$ M 220.224

Phytotoxin from *Alternaria helianthi*. Low melting solid. Mp 5°. $[\alpha]_D^{20}$ 0° (c, 0.15 in $CHCl_3$).

Tal, B. *et al*, *Phytochemistry*, 1985, **24**, 729.

Radiatine† R-00020

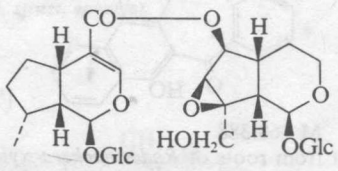


$C_{19}H_{23}NO_5$ M 345.394

Alkaloid from the rhizomes of *Lycoris radiata* (Amaryllidaceae). Cryst. (Me_2CO). Mp 171-172.5°. Assumed to be an artifact arising from the processing of the plant with EtOH.

Uyeo, S. *et al*, *Yakugaku Zasshi*, 1965, **85**, 615; *CA*, **63**, 11632e.

Radiatoside E R-00021

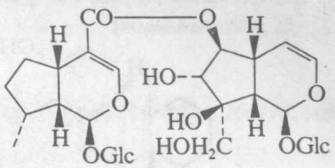


$C_{31}H_{46}O_{18}$ M 706.694

Constit. of *Argylia radiata*. $[\alpha]_D$ −113° (c, 1.5 in MeOH).

Bianco, A. *et al*, *Phytochemistry*, 1992, **31**, 4203 (*isol, pmr, cmr*)

Radiatoside F R-00022



$C_{31}H_{46}O_{19}$ M 722.693

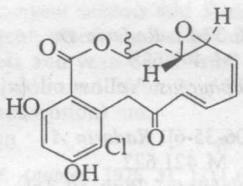
Constit. of *Argylia radiata*. $[\alpha]_D$ −11° (c, 0.5 in MeOH).

Bianco, A. *et al*, *Phytochemistry*, 1992, **31**, 4203 (*isol, pmr, cmr*)

Radicicol R-00023

8-Chloro-1a,14,15,15a-tetrahydro-9,11-dihydroxy-14-methyl-6H-oxireno[e][2]benzoxacyclotetradecin-6,12(7H)-dione, 9CI. Monorden

[12772-57-5]



$C_{18}H_{17}ClO_6$ M 364.781

Macrolide antibiotic. Metab. of *Nectria radicicola, Monosporium* spp., *Penicillium luteoorantium* and *Monocillium nordinii*. Active against gram-positive and gram-negative bacteria, fungi and tumours. Potent tranquilliser of low toxicity. Prisms (Et_2O). Mp 195°. $[\alpha]_D^{20}$ +216° (c, 1 in $CHCl_3$).

▷ RR1105000.

Di-Ac: Cryst. Mp 189-190°.

Di-Me ether: [75207-16-8].

Shows antitumour and nematocidal props. Mp 186-187°. $[\alpha]_D$ −58° (c, 1 in $CHCl_3$). Other Dialkyl ethers show similar props.

[11021-61-7]

McCapra, F. *et al*, *Tetrahedron Lett.*, 1964, 869 (*struct, nmr, ir, ms*)

Mirrington, R.N. *et al*, *Aust. J. Chem.*, 1966, **19**, 1265 (*struct, ir, uv, nmr*)

Betina, V. *et al*, *Z. Allg. Mikrobiol.*, 1972, **12**, 355; 1973, **13**, 287 (*props*)

Nozawa, K. *et al*, *J. Nat. Prod.* (*Lloydia*), 1979, **42**, 374.

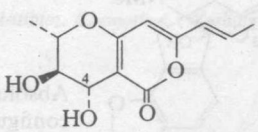
Ayer, W.A. *et al*, *Can. J. Microbiol.*, 1980, **26**, 766 (*isol, derivs*)

U.S. Pat., 4 228 079, (1980); *CA*, **94**, 121499 (*derivs*)

Lampilas, M. *et al*, *Tetrahedron Lett.*, 1992, **33**, 773, 777 (*synth*)

Radicinol R-00024

[65647-66-7]



$C_{12}H_{14}O_5$ M 238.240

Metab. of *Cochliobolus lunata*. Oil. $[\alpha]_D^{31}$ −175° (c, 1 in $CHCl_3$).

4-Ketone: [10088-95-6]. ***Radicinin.*** *Stemphylone*

$C_{12}H_{12}O_5$ M 236.224

Metab. of *Stemphylium radicinum, Alternaria chrysanthemi* and *Curvularia lunata*. Active against gram-positive bacteria and fungi. Phytotoxin. Needles (EtOH). Mp 220° dec., 236-240° dec. $[\alpha]_D^{27}$ −208° (c, 1.25 in EtOH).

▷ UQ1360000.

4-Ketone, Ac: Cryst. Mp 197°. $[\alpha]_D^{27}$ −267° (c, 0.7 in Py).

3-Deoxy, 4-ketone: ***Deoxyradicinin***
$C_{12}H_{12}O_4$ M 220.224
Phytoalexin from *Alternaria helianchi*. Cryst. (Me_2CO). Mp 183-185°.

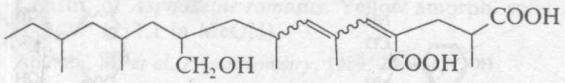
3-Deoxy, 4-epimer: [91793-98-5]. ***3-Deoxy-4-epiradicinol***
$C_{12}H_{14}O_4$ M 222.240
Isol. from *A. helianthi*. Phytotoxin. Cryst. (EtOH). Dec. <100°.

Grove, J.F., *J. Chem. Soc. C*, 1970, 1860 (*biosynth*)
Tanabe, M. *et al*, *J. Am. Chem. Soc.*, 1970, **92**, 2157 (*biosynth*)
Seto, H. *et al*, *Agric. Biol. Chem.*, 1975, **39**, 915 (*cmr*)
Nukina, M. *et al*, *Tetrahedron Lett.*, 1977, 3271 (*abs config*)
Robeson, D.J. *et al*, *Phytochemistry*, 1982, **21**, 1821, 2359; 1984, **23**, 767 (*isol, cryst struct, abs config, derivs*)
Strijewski, A. *et al*, *Biotechnol. Lett.*, 1982, **4**, 495 (*biosynth*)
Tal, B. *et al*, *J. Chem. Soc., Perkin Trans. 1*, 1988, 1283 (*biosynth*)

Radicionic acid R-00025

4-Carboxy-10-hydroxymethyl-2,6,8,12,14-pentamethyl-4,6-hexadecadienoic acid. 2-(6-Hydroxymethyl-2,4,8,10-tetramethyl-2-dodecenylidene)-4-methylpentanedioic acid

[49620-14-6]



$C_{23}H_{40}O_5$ M 396.566
Produced by an unidentified fungus. Isol. from a *Penicillium* sp. Plant growth regulator. Oil.

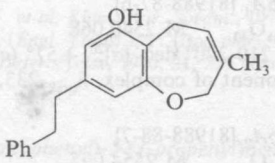
Di-Me ester: [42998-57-2].
$[\alpha]_D^{24}$ +15° (c, 0.92 in $CHCl_3$).

Sassa, T. *et al*, *Agric. Biol. Chem.*, 1973, **37**, 1221 (*isol*)
Sassa, T. *et al*, *Tetrahedron Lett.*, 1973, 2333 (*isol, struct*)
Japan. Pat., 75 81 863, (1975); *CA*, **83**, 159157 (*props*)
Seto, H. *et al*, *Tetrahedron Lett.*, 1977, 4083 (*biosynth, cmr*)

Radulanin A R-00026

2,5-Dihydro-3-methyl-8-(2-phenylethyl)-1-benzoxepin-6-ol, 9CI

[68104-12-1]



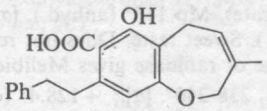
$C_{19}H_{20}O_2$ M 280.366
Isol. from *Radula* spp. No phys. props. reported.

4'-Hydroxy: [68104-13-2]. ***Radulanin C***
$C_{19}H_{20}O_3$ M 296.365
Isol. from *R.* spp. No phys. props. reported. Substd. in the phenyl ring.

Asakawa, Y. *et al*, *Phytochemistry*, 1978, **17**, 2005, 2115; 1981, **20**, 858 (*isol*)

Radulanin H R-00027

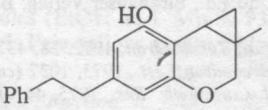
[85526-70-1]



$C_{20}H_{20}O_4$ M 324.376
Constit. of *Radula complanata*. Cryst. Mp 122-123°.
Asakawa, Y. *et al*, *Phytochemistry*, 1982, **21**, 2481.

Radulanin I R-00028

[132839-41-9]



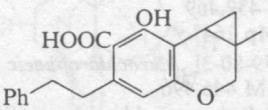
$C_{19}H_{20}O_2$ M 280.366
Constit. of the liverwort, *Radula javanica*. Oil. $[\alpha]_D$ −12.8° (c, 0.56 in MeOH).

Me ether: [132839-42-0]. ***Radulanin J***
$C_{20}H_{22}O_2$ M 294.393
Constit. of *R. javanica*. Oil. $[\alpha]_D$ +47.1° (c, 0.15 in MeOH).

Asakawa, Y. *et al*, *Phytochemistry*, 1991, **30**, 325 (*isol, pmr, cmr*)

Radulanin K R-00029

[132839-43-1]

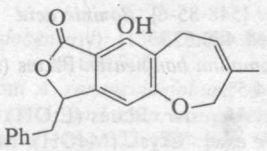


$C_{20}H_{20}O_4$ M 324.376
Constit. of the liverwort, *Radula javanica*. Cryst. (hexane). Mp 147-149°. $[\alpha]_D$ +7.6° (c, 0.26 in MeOH).

Asakawa, Y. *et al*, *Phytochemistry*, 1991, **30**, 325 (*isol, pmr, cmr*)

Radulanolide R-00030

[85526-71-2]

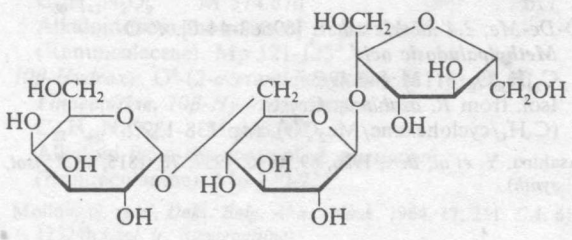


$C_{20}H_{18}O_4$ M 322.360
Constit. of *Radula complanata*. Cryst. Mp 103-104°.
Asakawa, Y. *et al*, *Phytochemistry*, 1982, **21**, 2481.

Raffinose, 8CI R-00031

β-D-Fructofuranosyl O-α-D-galactopyranosyl-(1→6)-α-D-glucopyranoside, 9CI. Melitriose. Gossypose. Melitose

[512-69-6]



$C_{18}H_{32}O_{16}$ M 504.441

Occurs in sugar beet, cotton seeds, manna. Widely distributed in plants, esp. in the seeds. Prisms + $5H_2O$. Mp 78° (hydrate), Mp 118° (anhyd.). $[\alpha]_D$ +123° (c, 2 in H_2O) (anhyd.). Sweet taste. Does not reduce Fehling's soln. Invertase or raffinase gives Melibiose and Fructose.

Undeca-Me: Bp_2 238-240°. $[\alpha]_D^{17}$ +128.4° (c, 1 in H_2O).

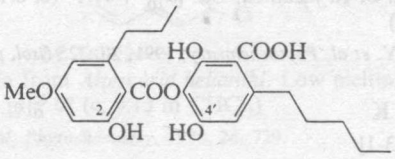
Undeca-Ac: Mp 101°. $[\alpha]_D$ +100° (c, 8 in EtOH).

Tanret, G., *Bull. Soc. Chim. Fr.*, 1895, 261.
Haworth, N.W., *J. Chem. Soc.*, 1923, 3125.
French, D., *Adv. Carbohydr. Chem. Biochem.*, 1954, **9**, 149 (*rev*)
Duperon, R., *C. R. Hebd. Seances Acad. Sci.*, 1955, **241**, 1817 (*occur*)
Bourne, E.J. *et al*, *Biochem. J.*, 1965, **97**, 802 (*biosynth*)
Karrer, W. *et al*, *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd Ed., Birkhäuser Verlag, Basel, 1972-1985, no. 671 (*occur*)
Kamerling, J.P. *et al*, *Tetrahedron*, 1972, **28**, 4375 (*ms*)
Bock, K. *et al*, *Tetrahedron Lett.*, 1973, 1037 (*cmr*)
Anteunis, M. *et al*, *Carbohydr. Res.*, 1975, **44**, 101 (*pmr*)

Ramalinolic acid R-00032

2,4-Dihydroxy-3-[(2-hydroxy-4-methoxy-6-propylbenzoyl) oxy]-6-pentylbenzoic acid, 9CI

[552-56-7]



$C_{23}H_{28}O_8$ M 432.469

Cryst. (C_6H_6). Mp 164°.

2-Me ether: [2879-80-3]. ***Merochlorophaeic acid***

$C_{24}H_{30}O_8$ M 446.496

Isol. from *Cladonia merochlorophaeia*. Strong inhibitor of prostaglandin biosynth. Plates (MeOH aq.), needles (C_6H_6/cyclohexane). Mp 164-166°.

4'-Me ether: [486-36-2]. ***Homosekikaic acid.*** *Nemoxynic acid*

$C_{24}H_{30}O_8$ M 446.496

Constit. of *Cladonia subpityrea* and *Cenomyce fimbriata*. Plates (pet. ether). Mp 133-134°.

4'-Me ether, Me ester: Mp 106°.

2,4'-Di-Me ether: [548-85-6]. ***Boninic acid***

$C_{25}H_{32}O_8$ M 460.523

Constit. of *Ramalina boninensis*. Plates (C_6H_6/pet. ether). Mp 134.5°.

2,4'-Di-Me ether, Me ester: Plates (EtOH). Mp 86°.

Tri-Me ether, Me ester: Cryst. (MeOH). Mp 75°.

O-*De-Me, 2-Me ether:* [19833-81-9]. ***Paludosic acid***

$C_{23}H_{28}O_8$ M 432.469

Isol. from *R. paludosa*. Needles (cyclohexane/C_6H_6/EtOAc). Mp 170-171° (158.5-159.5°). Mp. depends on solv. of recryst.

O-*De-Me, 4'-Me ether:* [103538-13-2]. ***4'-O-Methylnorhomosekikaic acid***

$C_{23}H_{28}O_8$ M 432.469

Trace metab. of *R. luciae*. Cryst. ($CHCl_3$/CCl_4). Mp 176°.

O-*De-Me, 2,4'-di-Me ether:* [69563-44-6]: ***4'-O-Methylpaludosic acid***

$C_{24}H_{30}O_8$ M 446.496

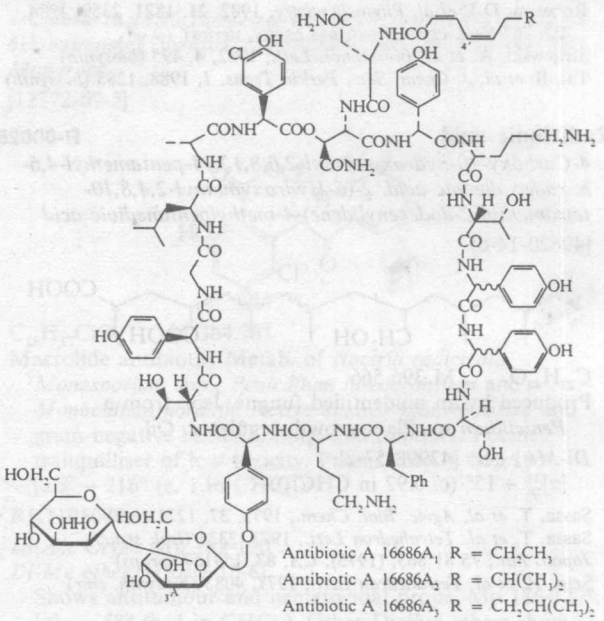
Isol. from *R. asahinae*. Cryst. (C_6H_6/cyclohexane/Me_2CO). Mp 138-139°.

Asahina, Y. *et al*, *Ber.*, 1936, **69**, 1896; 1937, **70**, 1815, 1821 (*isol, synth*)
Shibata, S. *et al*, *Phytochemistry*, 1965, **4**, 133 (*Merochlorophaeic acid*)
Culberson, C.F., *Bryologist*, 1967, **70**, 397 (*isol, Paludosic acid*)
Huneck, S. *et al*, *Z. Naturforsch., B*, 1968, **23**, 717 (*pmr, Merochlorophaeic acid*)
Elix, J.A. *et al*, *Aust. J. Chem.*, 1975, **28**, 399 (*synth, pmr, ms*)
Chester, D.O. *et al*, *Aust. J. Chem.*, 1978, **31**, 2745 (*4'-O-Methylpaludosic acid, 4'-O-Methylnorhomosekikaic acid*)
Shibuya, M. *et al*, *Chem. Pharm. Bull.*, 1983, **31**, 407 (*pharmacol, Merochlorophaeic acid*)

Ramoplanin, INN R-00033

A 16686. Antibiotic A 16686

[76168-82-6]



Antibiotic A 16686A$_1$ R = CH_2CH_3
Antibiotic A 16686A$_2$ R = $CH(CH_3)_2$
Antibiotic A 16686A$_3$ R = $CH_2CH(CH_3)_2$

Glycolipodepsipeptide antibiotic complex. Prod. by *Actinoplanes* sp. ATCC 33076. Active against gram-positive bacteria. Shows antiplaque activity. Inhibits cell wall biosynthesis.

Antibiotic A 16686A$_1$ [81988-87-6]

$C_{118}H_{152}ClN_{21}O_{40}$ M 2540.068

Powder. Mp 210-220° dec. $[\alpha]_D^{20}$ +57° (c, 0.51 in H_2O). Minor component of complex. λ_{max} 233, 266 nm (MeOH).

Antibiotic A 16686A$_2$ [81988-88-7]

$C_{119}H_{154}ClN_{21}O_{40}$ M 2554.095

Powder. Mp 210-220° dec. $[\alpha]_D^{20}$ +73° (c, 0.49 in H_2O). Major component of complex.

B,HCl: Mp 250°.

4'E-Isomer, 3^A-O-α-D-mannopyranoside: [135789-09-2]. ***Ramoplanose. UK 71903. Antibiotic UK 71903***

$C_{125}H_{164}ClN_{21}O_{45}$ M 2716.237

Prod. by *A.* sp.

Antibiotic A 16686A$_3$ [81988-89-8]

$C_{120}H_{156}ClN_{21}O_{40}$ M 2568.122

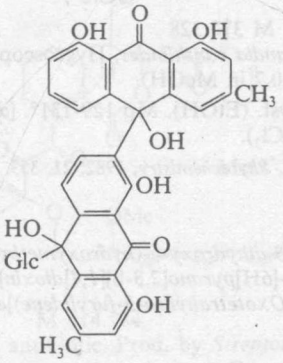
Powder. Mp 220°. $[\alpha]_D^{20}$ +50° (c, 0.48 in 0.1*M* HCl). Minor component of complex. λ_{max} 234, 267 nm (MeOH).

Ger. Pat., 3 013 246, (1980); *CA*, **94**, 63774 (*isol, props*)
Eur. Pat., 46 201, (1982); *CA*, **97**, 4672 (*isol, props, nmr*)
Pallanza, R. *et al*, *Antimicrob. Agents Chemother.*, 1984, **26**, 462 (*props*)
Cavalleri, B. *et al*, *J. Antibiot.*, 1984, **37**, 309 (*isol*)
Pallanza, R. *et al*, *J. Antibiot.*, 1984, **37**, 318 (*isol, props*)

Ciabatti, R. *et al*, *J. Antibiot.*, 1989, **42**, 254, 268 (*pmr, cmr, ms, struct*)
Skelton, N.J. *et al*, *J. Am. Chem. Soc.*, 1991, **113**, 7522 (*Ramoplanose*)

Ramosin† R-00034

[120163-26-0]

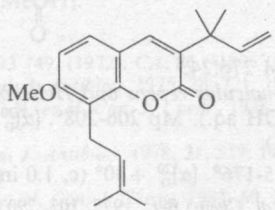


$C_{36}H_{32}O_{13}$ M 672.641
Constit. of *Asphodelus ramosus*. Yellow amorph. solid. $[\alpha]_D$ −74° (c, 1.1 in MeOH).

Adinolfi, M. *et al*, *Phytochemistry*, 1989, **28**, 284.

Ramosinin R-00035

[70894-25-6]



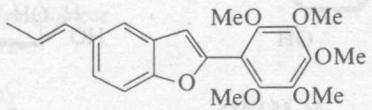
$C_{20}H_{24}O_3$ M 312.408
Constit. of *Haplophyllum ramosissimum*. Cryst. (EtOAc). Mp 85-86°.

Gashimov, N.F. *et al*, *Khim. Prir. Soedin.*, 1979, **15**, 15; *Chem. Nat. Compd.* (*Engl. Transl.*), 11 (*isol, pmr*)
Salvá, J. *et al*, *Heterocycles*, 1990, **31**, 255 (*synth*)

Ramosissin R-00036

2-(Pentamethoxyphenyl)-5-(1-propenyl)benzofuran, 9CI

[110784-16-2]



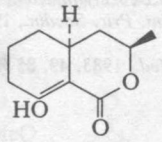
$C_{22}H_{24}O_6$ M 384.428
Constit. of *Krameria ramosissima*. Cryst. Mp 92-94°.

Achenbach, H. *et al*, *Phytochemistry*, 1987, **26**, 2041.

Ramulosin R-00037

3,4,4a,5,6,7-Hexahydro-8-hydroxy-3-methyl-1H-2-benzopyran-1-one, 9CI

[29914-01-0]



$C_{10}H_{14}O_3$ M 182.219
Metab. of *Pestalotia ramulosa*. Plates (Me_2CO aq.). Mp 120-121°. $[\alpha]_D^{28}$ +18° (c, 2.8 in EtOH).

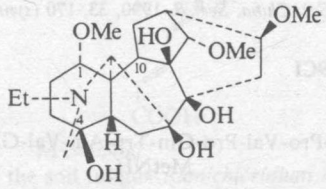
Benzoyl: Needles (EtOH aq.). Mp 82-83°.
4-Nitrobenzoyl: Pale-yellow needles (Me_2CO aq.). Mp 135-136°.

Stodola, F.H. *et al*, *Biochem. J.*, 1964, **93**, 92 (*isol, struct*)
Tanenbaum, S.W. *et al*, *Tetrahedron Lett.*, 1970, 2377 (*pmr*)
Findlay, J.A. *et al*, *Can. J. Chem.*, 1976, **54**, 3419 (*abs config*)
Mori, K. *et al*, *Tetrahedron*, 1985, **41**, 5295 (*synth*)
Takano, S. *et al*, *Heterocycles*, 1989, **29**, 2101 (*synth, bibl*)
Asaoka, M. *et al*, *Tetrahedron*, 1990, **46**, 1541 (*synth*)

Ranaconine R-00038

Hydroxylappaconine

[70474-32-7]



$C_{23}H_{37}NO_7$ M 439.548
Alkaloid detected by glc-ms in *Aconitum leucostomum*. Alkaline hydrol. product of Ranaconitine (Ranunculaceae). Mp 107-109°.

O^4-(*2-Aminobenzoyl*): [82872-80-8]. **N-*Deacetylranaconitine***
$C_{30}H_{42}N_2O_8$ M 558.670
Alkaloid from the roots of *A. finetianum* (Ranunculaceae). Shows good analgesic activity. Mp 125-127°.

O^4-(*2-Acetamidobenzoyl*): [1360-76-5]. ***Ranaconitine***
$C_{32}H_{44}N_2O_9$ M 600.708
Alkaloid from *A. ranunculaefolium*, *A. sinomontanum*, *A. finetianum* and *A. barbatum* var. *puberulum* (Ranunculaceae). Mp 132-134°. $[\alpha]_D^{27}$ +33.2° (c, 0.5 in $CHCl_3$).

O^4-(*2-Acetamidobenzoyl*), *1-epimer:* [83685-20-5]. ***Puberanine***
$C_{32}H_{44}N_2O_9$ M 600.708
Alkaloid from the roots of *A. barbatum* var. *puberulum* (Ranunculaceae). Amorph. $[\alpha]_D^{20}$ +16.6° (c, 0.6 in $CHCl_3$).

10β-Hydroxy, O^4-(*2-aminobenzoyl*): [82872-81-9]. **N-*Deacetylfinaconitine***
$C_{30}H_{42}N_2O_9$ M 574.670
Alkaloid from the roots of *A. finetianum* (Ranunculaceae). Mp 121-123°.

10β-Hydroxy, O^4-(*2-acetamidobenzoyl*): [81161-27-5]. ***Finaconitine. 10β-Hydroxyranaconitine***
$C_{32}H_{44}N_2O_{10}$ M 616.707
Alkaloid from the roots of *A. finetianum* (Ranunculaceae). Mp 220-221°.

Mollov, N. *et al*, *Dokl. Bolg. Akad. Nauk*, 1964, **17**, 251; *CA*, **61**, 12324h (*isol, ir, Ranaconitine*)

Pelletier, S.W. *et al*, *Tetrahedron Lett.*, 1978, 5045 (*ir, pmr, cmr, struct, Ranaconitine*)
Pelletier, S.W. *et al*, *Can. J. Chem.*, 1979, **57**, 1652 (*cmr*)
Jiang, S. *et al*, *Yaoxue Xuebao*, 1982, **17**, 283; 1983, **18**, 440; *CA*, **97**, 20736a; **100**, 20505e (*Finaconitine, Deacetylranaconitine,Deacetylfinaconitine*)
Plugar, V.N. *et al*, *Khim. Prir. Soedin.*, 1982, **80**; *CA*, **97**, 39185s (*glc, ms*)
Yu, D. *et al*, *Planta Med.*, 1983, **49**, 85 (*Puberanine*)

Ranakinin R R-00039

[60972-29-4]

H-Arg-Pro-Pro-Gly-Phe-Thr-Pro-Phe-Arg-Ile-Ala-Pro-Glu-Ile-Val-OH

Bradykinin analogue. Isol. from *Rana rugosa* skin.

Yanaihara, C. *et al*, *Adv. Exp. Med. Biol., Sect. A*, 1978, **120**, 185 (*synth*)
Yasuhara, T. *et al*, *Chem. Pharm. Bull.*, 1979, **27**, 486 (*isol, struct*)

Ranamargarin R-00040

[132151-82-7]

H-Asp-Asp-Ala-Ser-Asp-Arg-Ala-Lys-Lys-Phe-Tyr-Gly-Leu-Met-NH_2

Isol. from frog skin.

Tong, Y. *et al*, *Regul. Pept.*, 1988, **22**, 182 (*isol*)
Lu, Y. *et al*, *Sci. China, Ser. B*, 1990, **33**, 170 (*synth*)

Ranatensin, 9CI R-00041

[29451-71-6]

H-5-OxoPro-Val-Pro-Gln-Trp-Ala-Val-Gly-His-Phe-MetNH_2

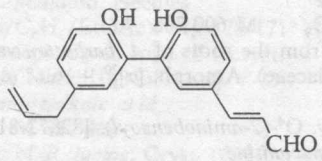
$C_{61}H_{84}N_{16}O_{13}S$ M 1281.500
Isol. from frog skin (*Rana pipiens*). Vasoactive peptide related to Bombesin.

Nakajima, T. *et al*, *Fed. Proc.*, 1970, **23**, 282 (*isol*)
Rivier, J.E. *et al*, *Biochemistry*, 1978, **17**, 1766 (*synth, props*)
Hernandez, O. *et al*, *J. Labelled Compd.*, 1984, **7**, 893 (*hplc*)
Howard, J.M. *et al*, *Aust. J. Pharm.*, 1985, **248**, G196 (*biol activity*)
Krane, I.M. *et al*, *J. Biol. Chem.*, 1988, **263**, 13317; 1990, **265**, 7091 (*cloning*)
Ersparmer, G.F. *et al*, *Regul. Pept.*, 1988, **21**, 1 (*biol activity*)

Randainal R-00042

3-[2',6'-Dihydroxy-5'-(2-propenyl)[1,1'-biphenyl-3-yl]]-2-propenal, 9CI

[87562-13-8]



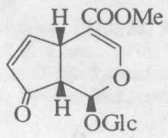
$C_{18}H_{16}O_3$ M 280.323
Constit. of *Sassafras randaiense*. Cryst. (EtOAc/hexane). Mp 137-139°.

Alcohol: [93753-25-4]. ***Randaianol***
$C_{18}H_{18}O_3$ M 282.338
Isol. from *S. randaiense*. Oil.

Chen, F.-C. *et al*, *Phytochemistry*, 1983, **22**, 616.
El-Feraly, F.S., *Phytochemistry*, 1984, **23**, 2329 (*Randainol*)

Randioside R-00043

[82345-53-7]



$C_{16}H_{20}O_{10}$ M 372.328
Constit. of *Randia canthioides*. Hygroscopic powder. $[\alpha]_D^{17}$ −29.4° (c, 0.2 in MeOH).

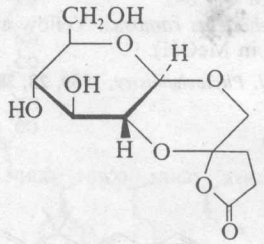
Tetra-Ac: Cryst. (EtOH). Mp 129-131°. $[\alpha]_D^{30}$ −56.8° (c, 0.56 in $CHCl_3$).

Uesato, S. *et al*, *Phytochemistry*, 1982, **21**, 353.

Ranuncoside R-00044

Hexahydro-7,8-dihydroxy-6-(hydroxymethyl)spiro[furan-2(5H),2'(3'H)-[6H]pyrano[2,3-b][1,4]dioxin]-5-one, 9CI. 1,2-O-[2-(S)-2-(2-Oxotetrahydro-5-furylidene)]ethylene-α-D-glucopyranose

[35879-55-1]



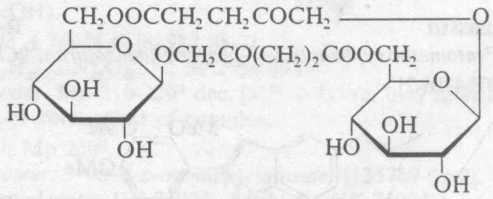
$C_{11}H_{16}O_8$ M 276.243
Constit. of *Ranunculus repens* and *Helleborus foetidus*. Needles (EtOH aq.). Mp 206-208°. $[\alpha]_D^{20}$ +40.2° (c, 0.5 in EtOH aq.).

Tri-Ac: Mp 175-176°. $[\alpha]_D^{20}$ +30° (c, 1.0 in $CHCl_3$).

Tschesche, R. *et al*, *Chem. Ber.*, 1972, **105**, 290 (*isol, struct, pmr, ms*)
Mariezcurrena, R.A. *et al*, *Acta Crystallogr., Sect. B*, 1973, **29**, 1030.

Ranunculoside, 9CI R-00045

[35879-56-2]



$C_{22}H_{32}O_{16}$ M 552.485
Extracted from *Ranunculus repens* and *Helleborus foetidus*. Mp 153-154°. $[\alpha]_D^{20}$ −4° (c, 1.0 in MeOH).

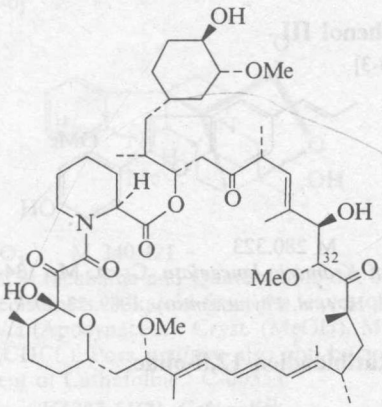
Hexa-Ac: Mp 233-234°. $[\alpha]_D^{20}$ −3.0° (c, 0.94 in $CHCl_3$).

Tschesche, R. *et al*, *Chem. Ber.*, 1972, **105**, 290 (*synth, pmr*)

Rapamycin R-00046

AY 22989. Antibiotic AY 22989

[53123-88-9]



$C_{51}H_{79}NO_{13}$ M 914.184

Polyene-type antibiotic. Prod. by *Streptomyces hygroscopicus*. Antifungal agent. Cryst. (Et_2O). Mp 183-185°. $[\alpha]_D^{25}$ −58.2° (MeOH).

▷ VE6250000.

32-Demethoxy: [83482-58-0]. ***Demethoxyrapamycin.*** *AY 24668. Antibiotic AY 24668*

$C_{50}H_{77}NO_{12}$ M 884.158

From *S. hygroscopicus*. Antifungal agent with v. slight antitumour activity. Cryst. (Et_2O). Mp 122-124°. $[\alpha]_D^{25}$ −124.4° (MeOH).

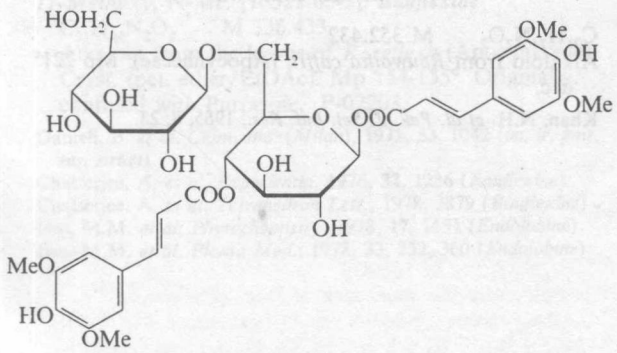
[85537-35-5]

U.S. Pat., 3 993 749, (1972); *CA*, **86**, 41806 (*synth, ir, pmr*)
Vézina, C. *et al*, *J. Antibiot.*, 1975, **28**, 721; 1983, **36**, 351 (*isol*)
Swindells, D.C.N. *et al*, *Can. J. Chem.*, 1978, **56**, 2491 (*cryst struct*)
Baker, H. *et al*, *J. Antibiot.*, 1978, **31**, 539; 1979, **32**, 630 (*pharmacol*)
Findlay, J.A. *et al*, *Can. J. Chem.*, 1982, **60**, 2046 (*uv, ir, pmr, cmr, ms, cd*)
U.S. Pat., 4 375 464, (1983); *CA*, **98**, 177506 (*isol*)
McAlpine, J.B. *et al*, *J. Antibiot.*, 1991, **44**, 688 (*pmr, cmr*)
Paiva, N.L. *et al*, *J. Nat. Prod. (Lloydia)*, 1991, **54**, 167 (*cmr, biosynth*)
Curran, D.P. *et al*, *Tetrahedron Lett.*, 1992, **33**, 2295 (*synth*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th Ed., Van Nostrand-Reinhold, 1992, RBK000.

Raphanusol A R-00047

6-O-β-D-Glucopyarnosyl β-D-glucopyranose 1,4-bis[3-(4-hydroxy-3,5-dimethoxyphenyl)-2-propenoate], 9CI. 1,4-Di-O-sinapoylgentiobiose

[74565-72-3]

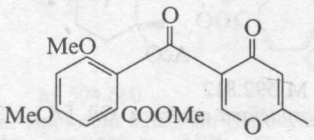


$C_{34}H_{42}O_{19}$ M 754.694

Isol. from *Raphanus sativus* (Sakura jima radish) seedling. Endogenous hypocotyl growth inhibitor. Powder (Me_2CO/C_6H_6). Mp 137-138°. $[\alpha]_D^{22}$ +79.4° (c, 0.23 in MeOH).

Hase, T. *et al*, *Phytochemistry*, 1982, **21**, 1021 (*isol, struct*)
Hase, T. *et al*, *CA*, 1985, **103**, 138518b.

Rapicone R-00048



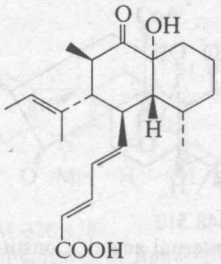
$C_{17}H_{16}O_7$ M 332.309

Metab. of *Ramichloridium apiculatum*. Needles (C_6H_6). Mp 162-163°.

Nozawa, K. *et al*, *Phytochemistry*, 1992, **31**, 4178 (*isol, pmr, cmr*)

Rapiculine R-00049

[133961-70-3]



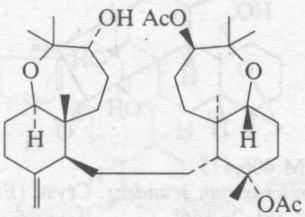
$C_{21}H_{30}O_4$ M 346.466

Metab. of the soil fungus *Ramichloridium apiculatum*. Needles (C_6H_6). Mp 199°. $[\alpha]_D^{23}$ −73° (c, 0.35 in MeOH).

Nozawa, K. *et al*, *J. Chem. Soc., Perkin Trans. 1*, 1991, 537 (*isol, pmr, cmr*)
Nozawa, K. *et al*, *Phytochemistry*, 1992, **31**, 4177 (*abs config*)

Raspacionin R-00050

[132210-64-1]

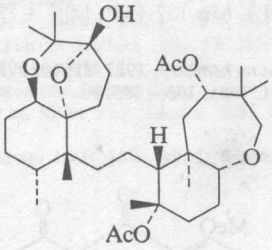


$C_{34}H_{56}O_7$ M 576.812

Constit. of sponge *Raspaciona aculeata*. Prisms (heptane). Mp 188-189°. $[\alpha]_D$ +31.4° (c, 1.5 in $CHCl_3$).

Cimino, G. *et al*, *Tetrahedron Lett.*, 1990, **31**, 6565 (*cryst struct*)

Raspacionin A R-00051

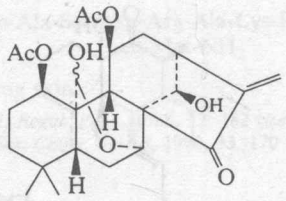


$C_{34}H_{56}O_8$ M 592.812
Constit. of *Raspaciona aculeata*. Oil. $[\alpha]_D$ −3.95° (c, 1.17 in $CHCl_3$).

Cimino, G. *et al*, *Tetrahedron*, 1992, **48**, 9013 (*isol, pmr, cmr, cryst struct*)

Rastronol D R-00052

ent-*1α,11α-Diacetoxy-7β,20-epoxy-14α,20-dihydroxy-16-kauren-15-one*
[59859-96-0]

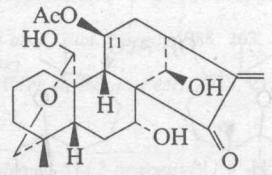


$C_{24}H_{32}O_8$ M 448.512
A cyclic (20→7) internal acetal. Constit. of *Englerastrum scandens*. Cryst. (Me_2CO). Mp 198.1-199.2°. $[\alpha]_D$ −80.5°.

Nomoto, K. *et al*, *Helv. Chim. Acta*, 1976, **59**, 772.

Rastronol G R-00053

ent-*11α-Acetoxy-19,20-epoxy-7β,14α,20-trihydroxy-16-kauren-15-one*
[59859-99-3]

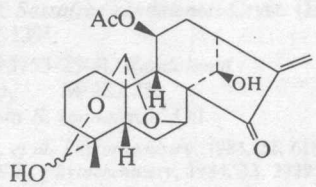


$C_{22}H_{30}O_7$ M 406.475
Constit. of *Englerastrum scandens*. Cryst. (Et_2O). Mp 228.4-228.9°. $[\alpha]_D$ −146°.

Nomoto, K. *et al*, *Helv. Chim. Acta*, 1976, **59**, 772.

Rastronol H R-00054

ent-*11α-Acetoxy-7β,20:19,20-diepoxy-14α,19-dihydroxy-16-kauren-15-one*
[59860-00-3]

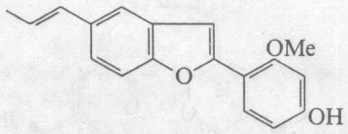


$C_{22}H_{28}O_7$ M 404.459
Constit. of *Englerastrum scandens*. Cryst. (MeOH). Mp 173.5-174.5°. $[\alpha]_D$ −77.2°.

Nomoto, K. *et al*, *Helv. Chim. Acta*, 1976, **59**, 772.

Ratanhiaphenol III R-00055

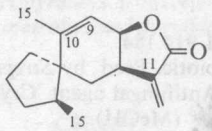
[91432-06-3]



$C_{18}H_{16}O_3$ M 280.323
Constit. of *Krameria lanceolata*. Cryst. Mp 134-135°.

Achenbach, H. *et al*, *Phytochemistry*, 1989, **28**, 1959.

9,11(13)-Ratibidadien-12,8-olide R-00056

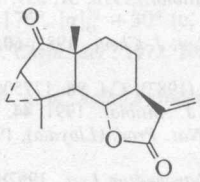


$C_{15}H_{20}O_2$ M 232.322
(4S,5S,7R,8R)-form [94137-83-4]
Constit. of *Ratibida columnifera*. Gum.
$\Delta^{10,15}$-*Isomer:* [94137-79-8]. ***10(15),11(13)-Ratibidadien-12,8-olide***
$C_{15}H_{20}O_2$ M 232.322
Constit. of *R. columnifera*. Gum.

Herz, W. *et al*, *J. Org. Chem.*, 1985, **50**, 610.

Ratibinolide R-00057

[130170-06-8]



$C_{15}H_{18}O_3$ M 246.305
Constit. of *Ratibida latipalearis*. Cryst. Mp 142-144°. $[\alpha]_D^{25}$ +94° ($CHCl_3$).

Mata, R. *et al*, *Heterocycles*, 1990, **31**, 1111 (*isol, pmr, cmr, cryst struct*)

Raucaffridine R-00058

Struct. unknown

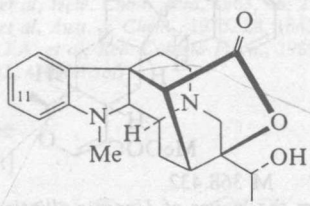
$C_{21}H_{24}N_2O_3$ M 352.432
Alkaloid from *Rauwolfia caffra* (Apocynaceae). Mp 221° dec.

Khan, N.H. *et al*, *Pak. J. Sci. Ind. Res.*, 1965, **8**, 23.

Raucubaine R-00059

1,2,19,20-Tetrahydro-19,20-dihydroxy-1-methylakuammilan-17-oic acid γ-lactone, 9CI. Quaternoline

[75418-95-0]



$C_{20}H_{24}N_2O_3$ M 340.421

Identity of Raucubaine and Quaternoline not certain, may be stereoisomers. Alkaloid from the leaves of *Rauwolfia salicifolia* (Apocynaceae). Cryst. (MeOH). Mp 224°. $[\alpha]_D^{20}$ −18° ($CHCl_3$). Poss. artifact, also obt. by acid treatment of Cathafoline, C-00553.

11-Methoxy: [56283-51-3]. ***Caberoline***

$C_{21}H_{26}N_2O_4$ M 370.447

Alkaloid from *Cabucala* spp. and *Alstonia plumosa* (Apocynaceae). Poss. artifact; also obt. by acid treatment of Caberine.

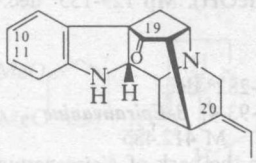
[57498-99-4]

Mamatas-Kalamaras, S. *et al, Phytochemistry*, 1975, **14**, 1849 (*Quaternoline*)
Kutney, J.P. *et al, Heterocycles*, 1980, **14**, 1309 (*uv, ir, pmr, cd, ms, cryst struct*)
Pauptit, R.A. *et al, Can. J. Chem.*, 1981, **59**, 1007 (*cryst struct*)
Jacquier, M.J. *et al, Phytochemistry*, 1982, **21**, 2973 (*isol*)
Sierra, P. *et al, Collect. Czech. Chem. Commun.*, 1982, **47**, 2912 (*isol, spectra, abs config*)

Rauflorine R-00060

19,20-Didehydro-1-demethylajmalan-17-one, 9CI

[36063-54-4]



$C_{19}H_{20}N_2O$ M 292.380

Alkaloid from the root bark of *Rauwolfia confertiflora* (Apocynaceae). Cryst. (MeOH). Mp 221°. $[\alpha]_D^{20}$ +312° (c, 1.54 in $CHCl_3$).

10-Methoxy: [67627-71-8]. ***Endolobine***

$C_{20}H_{22}N_2O_2$ M 322.406

Alkaloid from the leaves and stem bark of *R. cumminsii*, and the leaves of *R. mombasiana* (Apocynaceae).

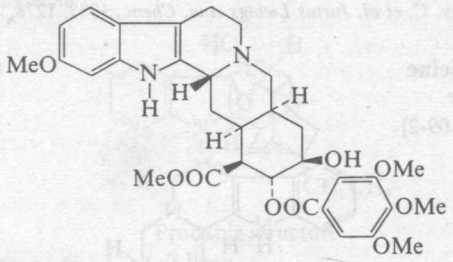
11-Methoxy, N-*Me:* [70522-05-3]. ***Rauflexine***

$C_{21}H_{24}N_2O_2$ M 336.433

Alkaloid from the leaves of *R. reflexa* (Apocynaceae). Cryst. (pet. ether/EtOAc). Mp 154-155°. Originally confused with Purpeline, P-02203.

Danieli, B. *et al, Chim. Ind. (Milan)*, 1971, **53**, 1042 (*uv, ir, pmr, ms, struct*)
Chatterjee, A. *et al, Experientia*, 1976, **32**, 1236 (*Rauflexine*)
Chatterjee, A. *et al, Tetrahedron Lett.*, 1978, 3879 (*Rauflexine*)
Iwu, M.M. *et al, Phytochemistry*, 1978, **17**, 1651 (*Endolobine*)
Iwu, M.M. *et al, Planta Med.*, 1978, **33**, 232, 360 (*Endolobine*)

Raugustine R-00061



$C_{32}H_{38}N_2O_9$ M 594.660

Alkaloid from *Rauwolfia ligustrina* (Apocynaceae). Cryst. + $1H_2O$. Mp 160-170° dec. $[\alpha]_D^{24}$ −50° (c, 0.609 in $CHCl_3$).

B,HNO₃: Mp 262-263° dec. (*in vacuo*).

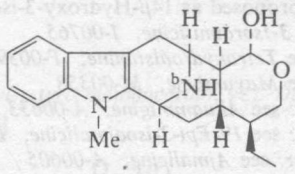
Mono-Ac: Mp 232-234° (block).

Müller, J.M., *Experientia*, 1957, **12**, 479 (*isol, uv*)

Raumacline R-00062

4-Demethyl-20,21-dihydroalstophyllan-17-ol, 9CI

[132923-02-5]



$C_{20}H_{26}N_2O_2$ M 326.438

Alkaloid from cell cultures of *Rauwolfia serpentina* (Apocynaceae). Mp 197-200°.

N^b-*Me:* [132943-65-8]. ***N^b-Methylraumacline***

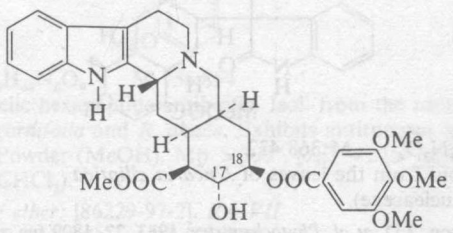
$C_{21}H_{28}N_2O_2$ M 340.464

Alkaloid from cell cultures of *R. serpentina* (Apocynaceae). Amorph. solid.

Polz, L. *et al, Tetrahedron Lett.*, 1990, **31**, 6693 (*isol, uv, cd, pmr, cmr, struct*)

Raunescine† R-00063

[117-73-7]



$C_{31}H_{36}N_2O_8$ M 564.634

Alkaloid from *Rauwolfia canescens* and *R. tetraphylla*, also detected in *R. ligustrina* (Apocynaceae). Cryst. (MeOH aq.). Mp 160-170°. $[\alpha]_D$ −74°.

B,HNO₃: Mp 223-225°. $[\alpha]_D$ −80° (c, 1 in 5M AcOH).

Mono-Ac: Mp 157-162°. $[\alpha]_D$ −157° (c, 1 in $CHCl_3$).

O^{17}-(*3,4,5-Trimethoxybenzoyl*), O^{18}-*de*-(*3,4,5-trimethoxybenzoyl*): [483-07-8]. ***Isoraunescine***

$C_{31}H_{36}N_2O_8$ M 564.634

Alkaloid from *R. canescens*, also detected in *R. ligustrina* (Apocynaceae). Cryst. (MeOH aq.). Mp 241-242°. $[\alpha]_D$ −70°.

O^{17}-*Me:* see *Deserpidine, D-00554*

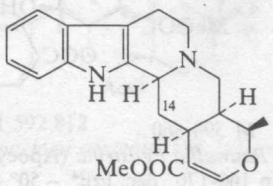
Hosanky, N. *et al, J. Am. Pharm. Assoc.*, 1955, **44**, 635 (*isol, uv*)

Huebner, C.F. *et al*, *J. Am. Chem. Soc.*, 1957, **79**, 250 (*struct*)
van Tamelen, E.E. *et al*, *J. Am. Chem. Soc.*, 1957, **79**, 5256 (*struct*)
Szántay, C. *et al*, *Justus Liebigs Ann. Chem.*, 1983, 1278.

Rauniticine R-00064

Ervine

[5299-09-2]



$C_{21}H_{24}N_2O_3$ M 352.432

Alkaloid from *Rauwolfia nitida*, *Uncaria elliptica*, *U. attenuata*, *Vinca libanotica*, *V. major* and *Veratrum album lobelianum* (Apocynaceae, Naucleaceae, Liliaceae). Cryst. (MeOH). Mp 233-235°. $[\alpha]_D$ −6.6° (Py), $[\alpha]_D$ −38.4° ($CHCl_3$).

14α-Hydroxy: ***14α-Hydroxyrauniticine***
$C_{21}H_{24}N_2O_4$ M 368.432
Alkaloid from the leaves of *U. attenuata* (Naucleaceae). Originally proposed as 14β-Hydroxy-3-isorauniticine.

3-Epimer: see *3-Isorauniticine*, *I-00765*

19-Epimer: see *Tetrahydroalstonine*, *T-00391*

20-Epimer: see *Mayumbine*, *M-00358*

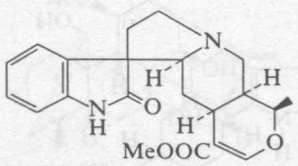
3,19-Diepimer: see *Akuammigine*, *A-00633*

3,20-Diepimer: see *19-Epi-3-isoajmalicine*, *E-00332*

19,20-Diepimer: see *Ajmalicine*, *A-00605*

Salkin, R. *et al*, *J. Pharm. Sci.*, 1961, **50**, 1038 (*isol*, *uv*, *ir*, *struct*)
Shamma, M. *et al*, *J. Am. Chem. Soc.*, 1963, **85**, 2507 (*stereochem*)
Finch, N. *et al*, *Tetrahedron*, 1966, **22**, 1327 (*uv*, *ord*, *stereochem*)
Aynilian, G.H. *et al*, *J. Nat. Prod.* (*Lloydia*), 1974, **37**, 299 (*isol*, *uv*, *ir*, *ms*)
Ponglux, D. *et al*, *Phytochemistry*, 1980, **19**, 2013 (*isol*, *uv*, *pmr*, *ms*)
Phillipson, J.D. *et al*, *Phytochemistry*, 1983, **22**, 1809 (*isol*, *pmr*)
Yamanaka, E. *et al*, *Chem. Pharm. Bull.*, 1986, **34**, 3713 (*14α-Hydroxyrauniticine*)

Rauniticine oxindole A R-00065



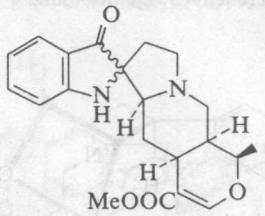
$C_{21}H_{24}N_2O_4$ M 368.432

Alkaloid from the leaves of *Uncaria elliptica* (Naucleaceae).

Phillipson, J.D. *et al*, *Phytochemistry*, 1983, **22**, 1809 (*uw*, *pmr*, *ms*, *struct*)

Rauniticine pseudoindoxyl R-00066

10,11-Didemethoxy-3-isoreserpiline pseudoindoxyl, *9CI*



$C_{21}H_{24}N_2O_4$ M 368.432

Alkaloid from the leaves of *Uncaria elliptica* (Naucleaceae).

3-Epimer: ***3-Isorauniticine pseudoindoxyl***
$C_{21}H_{24}N_2O_4$ M 368.432
Alkaloid from leaves of *U. elliptica* (Naucleaceae).

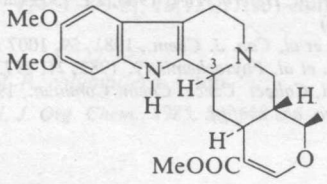
3,19-Diepimer: ***Akuammigine pseudoindoxyl***
$C_{21}H_{24}N_2O_4$ M 368.432
Alkaloid from leaves of *U. elliptica* (Naucleaceae).

[5802-00-6, 88335-34-6, 88335-35-7, 88375-63-7]

Phillipson, J.D. *et al*, *Phytochemistry*, 1983, **22**, 1809 (*uw*, *pmr*, *ms*, *struct*, *synth*)

Rauvanine R-00067

[3148-42-3]



$C_{23}H_{28}N_2O_5$ M 412.485

Alkaloid from *Rauwolfia vomitoria* (Apocynaceae). Leaflets + 0.5H_2O (MeOH). Mp 129-135° dec. $[\alpha]_D$ +32.5° (c, 1 in $CHCl_3$).

▷ RP5776500.

B,HCl: Mp 280-282° dec.

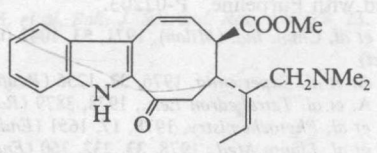
3-Epimer: [6835-93-4]. ***3-Epirauvanine***
$C_{23}H_{28}N_2O_5$ M 412.485
Alkaloid from the bark of *Neisosperma oppositifolia* (Apocynaceae). Amorph. $[\alpha]_D$ +111° ($CHCl_3$).

Goutarel, R. *et al*, *C. R. Hebd. Seances Acad. Sci.*, 1961, **253**, 2589 (*uv*, *ir*, *pmr*, *struct*)
Poisson, J. *et al*, *Bull. Soc. Chim. Fr.*, 1964, 2853 (*epimer*, *synth*, *ir*, *pmr*)
Finch, N. *et al*, *Tetrahedron*, 1966, **22**, 1327 (*uv*, *ord*, *stereochem*)
Amarasekara, A.S. *et al*, *Fitoterapia*, 1986, **57**, 55; *CA*, **105**, 39383p (*epimer*, *isol*)

Rauviridine R-00068

Vobasine methine

[57567-12-1]



$C_{22}H_{26}N_2O_3$ M 366.459

Alkaloid from the stem bark of *Rauwolfia viridis* (Apocynaceae). Needles (Et_2O/pet. ether). Mp 145-146°. $[\alpha]_D$ −103.7° (c, 0.9 in $CHCl_3$). Data given relates to synthetic prod.