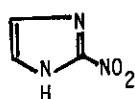
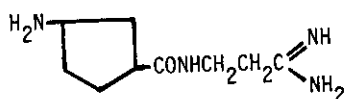


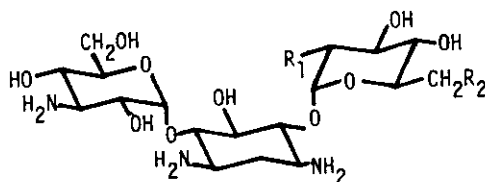
SUMMARY OF STRUCTURES OF MICROBIAL SECONDARY METABOLITES
DETERMINED BY DR. H. UMEZAWA



Azomycin (1955)

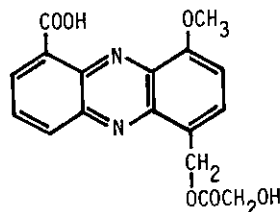


Amidinomycin (1961)

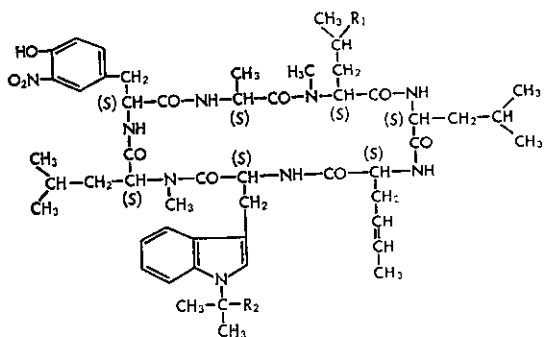


Kanamycins (1958)

- A: $R_1=OH, R_2=NH_2$
- B: $R_1=NH_2, R_2=NH_2$
- C: $R_1=NH_2, R_2=OH$

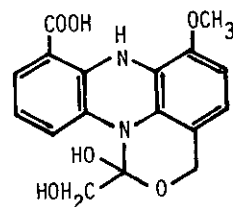


Griseolutein A (1959)

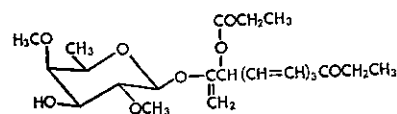


Ilamycins (1964)

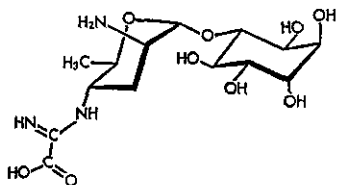
- A: $R_1=CHO, R_2=CH-CH_2$
- B₁: $R_1=CH_3, R_2=CH=CH_2$
- B₂: $R_1=CH_3, R_2=CH-CH_2$



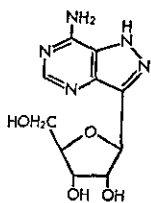
Griseolutein B (1964)



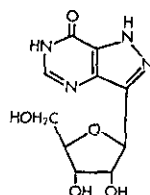
Labilomycin (1964)



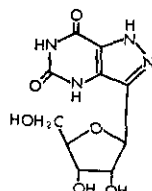
Kasugamycin (1966)



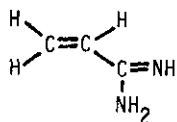
Formycin (1966)



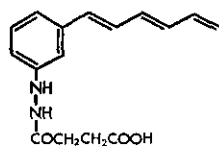
Formycin B (1966)



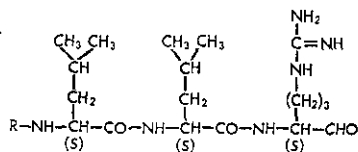
Oloformycin B (1968)



Acrylamidine (1968)

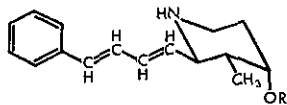


Spinamycin (1968)



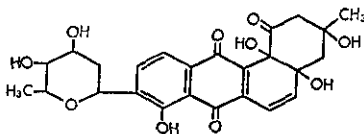
Leupeptins (1969)

Ac-LI: R=CH₃CO
Pr-LI: R=CH₃CH₂CO

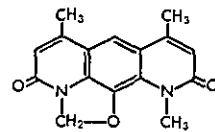


Dienomycins (1970)

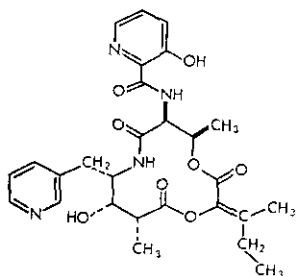
A: R=COCH(CH₃)₂
B: R=COCH₃ C: R=H



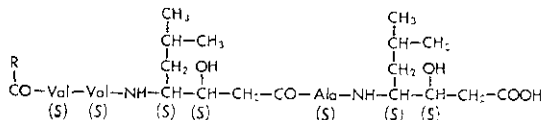
Aquayamycin (1970)



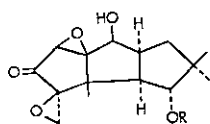
Deoxyrybomycin (1970)



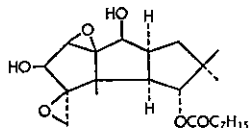
Pyridomycin (1970)



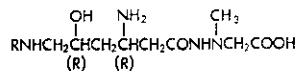
Pepstatins (1970) R=CH₃, C₂H₅, C₃H₇, C₄H₉, C₆H₁₃, ... etc.



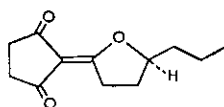
Coriolin (1971)
 R=H
 Coriolin C (1971)
 R=COCH₂C₆H₁₃
 OH



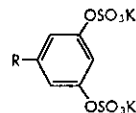
Coriolin B (1971)



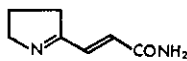
Negamycin (1971)
 R=H
 Leucynegamycin (1971)
 R=Leu



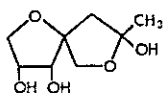
Oudenone (1971)



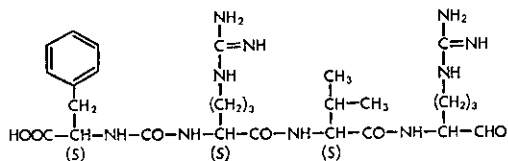
Panosialins (dipotassium salts) (1971)
 R=(CH₃)₂CH(CH₂)₁₂-, CH₃(CH₂)₁₄-,
 (CH₃)₂CH(CH₂)₁₁-



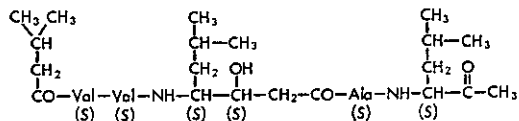
Cyclamidomycin (1971)



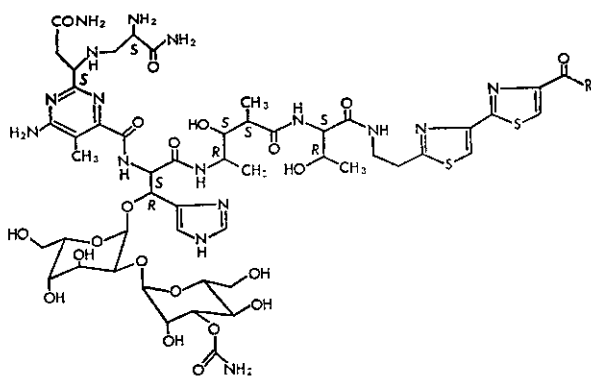
Sphydrofuran (1971)



Antipain (1972)




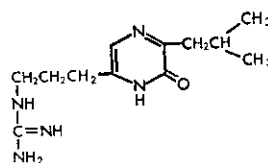
Pepstanone A (1972)



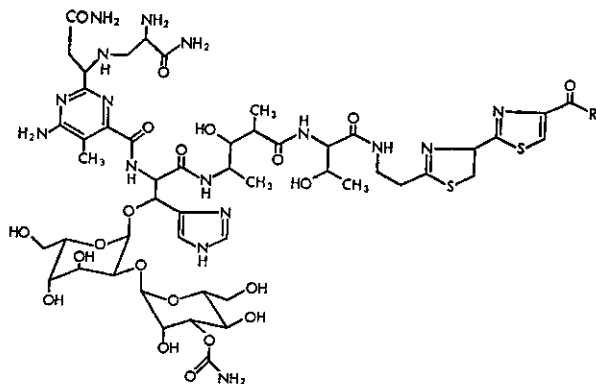
Bleomycins (1978)

- A₂₁: R=NH(CH₂)₅SOCH₃
- A₂₂: R=NH(CH₂)₅S⁺(CH₃)₂
- A_{27-b1}: R=NH(CH₂)₅NH₂
- A₄₁: R=NH(CH₂)₅NH(CH₂)₄NH₂
- B_{2/1}: R=NH₂
- B₄₁: R=NH(CH₂)₄NH₂C^{NH}NH(CH₂)₄NH₂C^{NH}NH₂
- Bleomycinic acid: R=OH

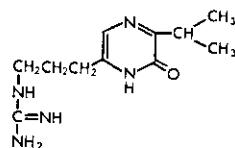
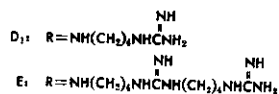
- Demethyl-A₂: R=NH(CH₂)₅SCH₃
- A_{27-a1}: R=NH(CH₂)₄NH₂
- A_{27-c1}: R=NH(CH₂)₅
- A₄₂: R=NH(CH₂)₅NH(CH₂)₄NH(CH₂)₄NH₂
- B₂: R=NH(CH₂)₄NH₂C^{NH}NH₂



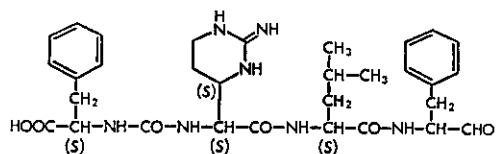
Arglecin (1972)



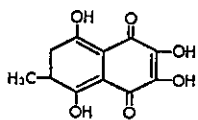
Phleomycins (1978)



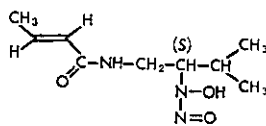
Argvalin (1973)



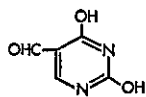
Chymostatin (1973)



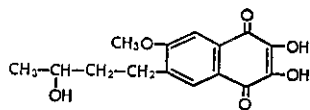
Dihydromethylspinazarin (1973)



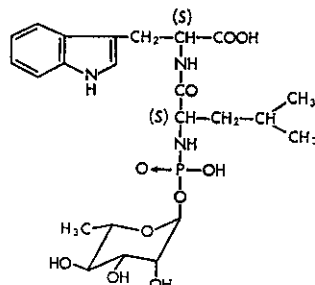
Dopastin (1973)



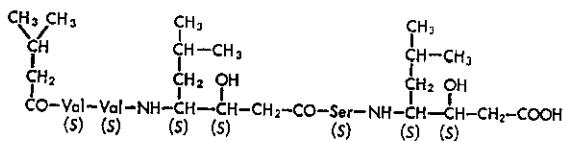
5-Formyluracil (1973)



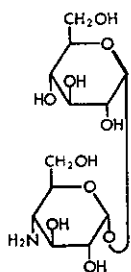
6-(3-Hydroxy-*n*-butyl)-7-O-methyl-spinochrome B (1973)



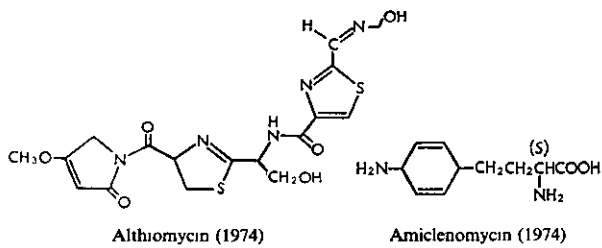
Phosphoramidon (1973)



Hydroxypepstatin A (1973)

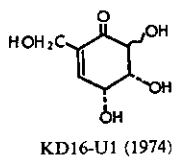


4-Amino-4-deoxy- α -trehalose (1974)

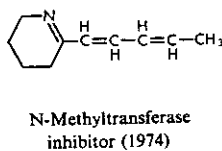


Althiomycin (1974)

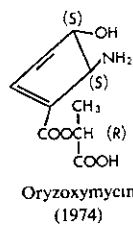
Amiclenomycin (1974)



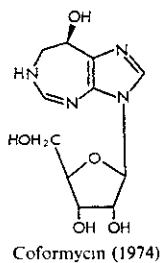
KD16-U1 (1974)



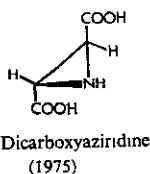
N-Methyltransferase inhibitor (1974)



Oryzoxymycin (1974)



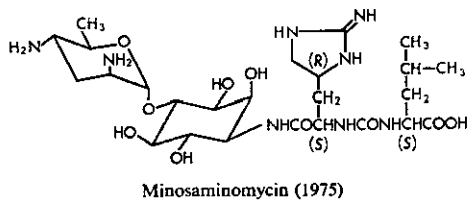
Coformycin (1974)



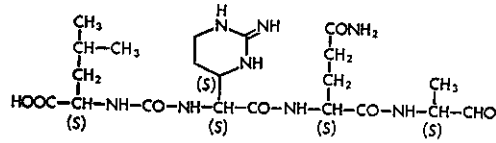
S-2,3-Dicarboxyaziridine (1975)



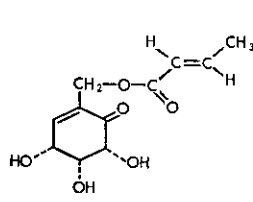
Calvatic acid (1975)



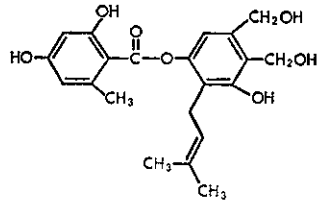
Minosaminomycin (1975)



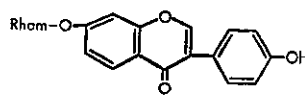
Elastatinal (1975)



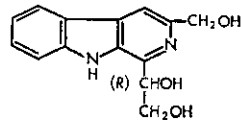
Glyoxalase inhibitor,
glyo II (1975)



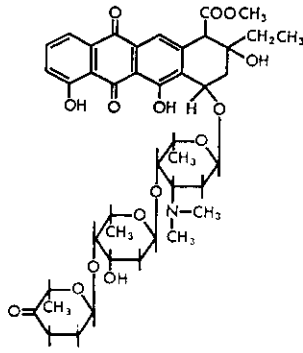
Glyoxalase inhibitor,
MS-3 (1975)



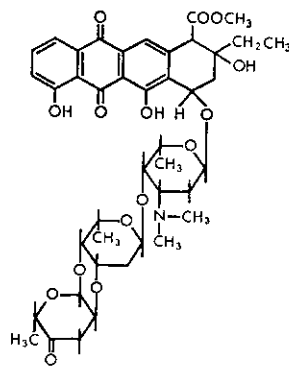
New isoflavone rhamnoside
inhibiting β -galactosidase
(1975)



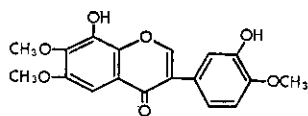
Pyridindolol (1975)



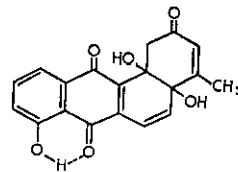
Aclacinomycin A
(1975)



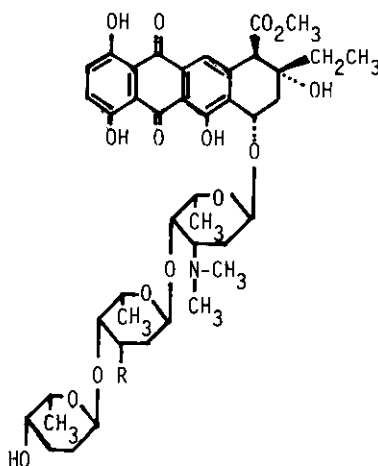
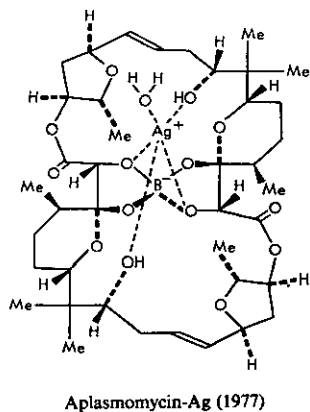
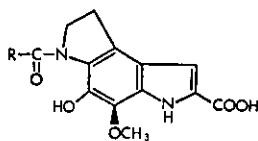
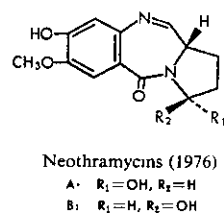
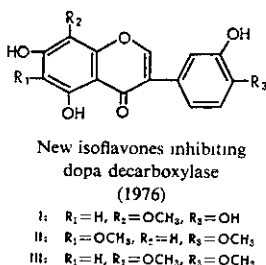
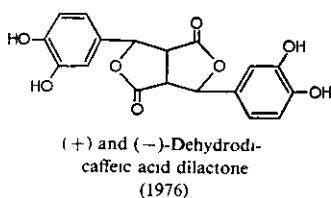
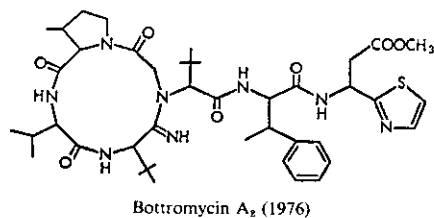
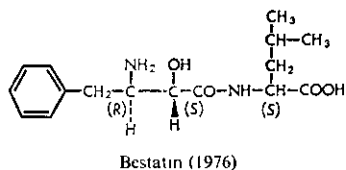
Aclacinomycin B
(1975)

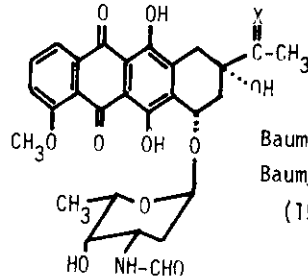
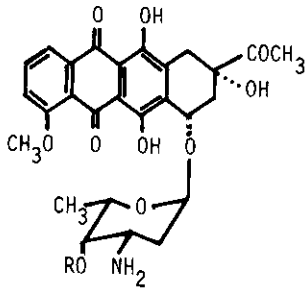


Specific inhibitor of catechol
O-methyltransferase (1975)



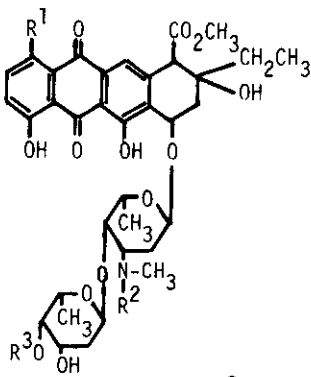
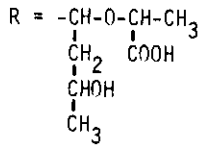
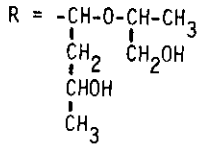
SS-228Y (1975)





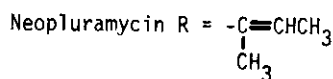
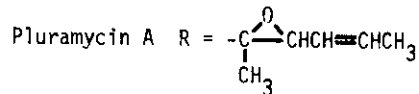
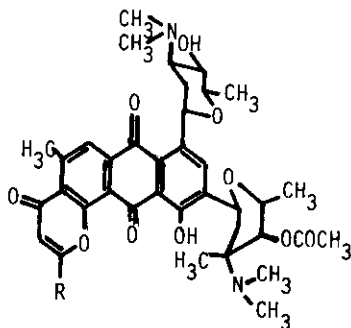
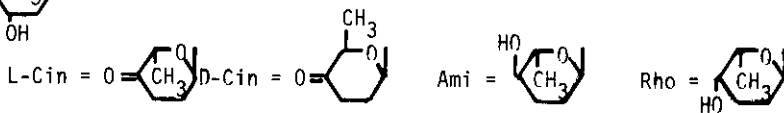
Baumycin C1 X = O
 Baumycin C2 X = OH, H
 (1977)

Baumycins A1 and A2 Baumycins B1 and B2 (1977)

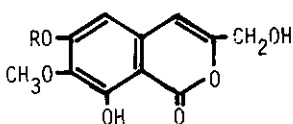


	R ¹	R ²	R ³
MA144 L1	H	H	L-Cin
MA144 G1	H	CH ₃	D-Cin
MA144 M1	H	CH ₃	Ami
MA144 N1	H	CH ₃	Rho
MA144 S1	H	CH ₃	H
1-Hydroxy-MA144 M1	OH	CH ₃	Ami
1-Hydroxy-MA144 S1	OH	CH ₃	H

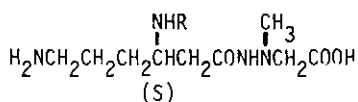
(1977)



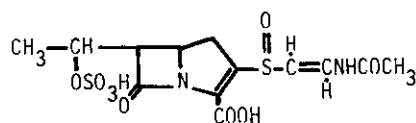
(1977)



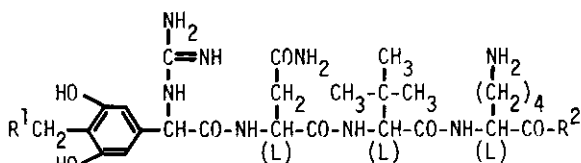
8-Hydroxy-6,7-dimethoxy-3-hydroxymethylisocoumarine R = CH₃
 6,8-Dihydroxy-7-methoxy-3-hydroxymethylisocoumarine R = H
 (1977)



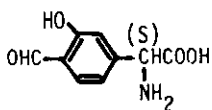
3-Epi-deoxynegamycin R = H
 Leucyl-3-epi-deoxynegamycin R = Leu
 (1977)



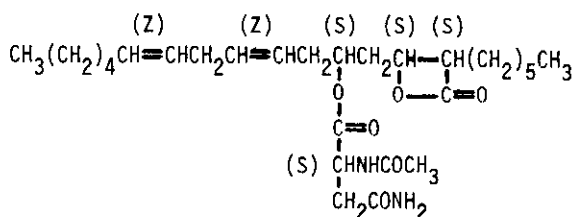
MC696-SY2-A
 (1977)



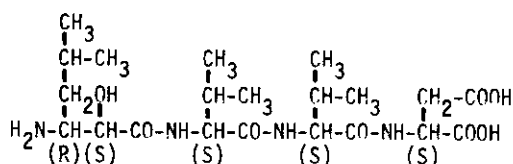
Pheganomycin R¹ = OH, R² = OH
 Pheganomycin-D R¹ = OH, R² = Asp
 Pheganomycin-DR R¹ = OH, R² = Asp-Arg
 Pheganomycin-DPGT R¹ = OH, R² = Asp-Pro-Gly-Thr
 Deoxypheganomycin-D R¹ = H, R² = Asp
 (1977)



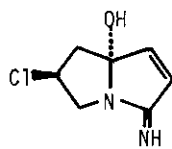
Forphenicine
 (1978)



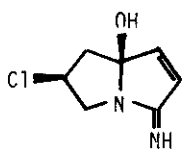
Esterastin (1978)



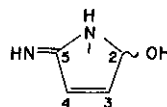
Amastatin (1979)



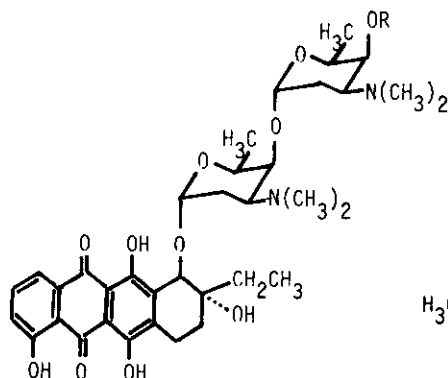
Clazamycin A
(1979)

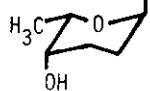


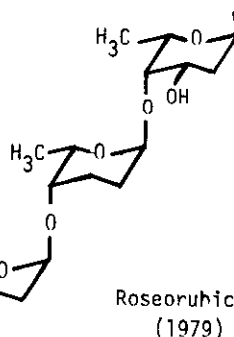
Clazamycin B
(1979)



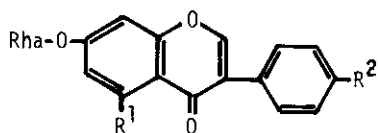
2-Hydroxy-5-iminoazacyclopent-3-ene
(1979)



Roseorubicin A R = 
(1979)



Roseorubicin B R = H
(1979)



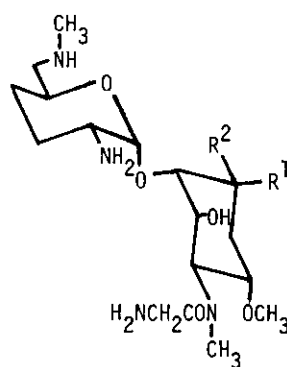
Daidzein 4',7-di- α -L-rhamnoside $R^1=H$, $R^2=O-Rha$

Daidzein 7- α -L-rhamnoside $R^1=H$, $R^2=OH$

Genistein 4',7-di- α -L-rhamnoside $R^1=OH$, $R^2=O-Rha$

Genistein 7- α -L-rhamnoside $R^1=OH$, $R^2=OH$

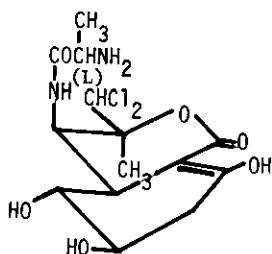
(1979)



Istamycin A: $R^1=NH_2$, $R^2=H$

Istamycin B: $R^1=H$, $R^2=NH_2$

(1979)



Bactobolin (1979)