Thayer, P. Inhibitory activity of selected compwnds against Neurospora crassa 4A.

The following is exerpted from "A comparative study of the use of microorganisms in the screening of potential antitumor agents" by Foley, McCarthy, Binns, Snell, Guirard, Kidder, Dewey and Thayer 1958 Ann. N. Y. Acad. Sci. 76:413, in which paper the inhibitory activity of 196 selected compwnds against N. crassa 4A was tested. The compounds were tested at 1,000, 100, and 10 µg/ml., etc. in Beadle and Tatum medium. Growth was determined by mycelial weight, and results are expressed as a range bracketing the 50% inhibition concentration.

A. Compounds not inhibitory at 1,000 µg/ml. (N = 94)

Puromycin aminonucleoside
10-(ß-Hydroxyethyl)-7,8-di-methyl-pyrimido 4,5-b quinoxaline-2,4-(3H,10H)dione acetate
Isoriboflavin
Formamide
Deoxypyridoxine. HCl (2,4-dimethyl-3-hydroxy-5-hydroxymethylpyridine)
Colchicine
2-Amino-1,3,4-thiadiazole
6-Thioguanine
Galactoflavin
4,6-Diamino-1-(4'-chlorophenyl)-2,2-dimethyl-1,2-dihydro- -triazine HCl
Ethyl carbamate
N-Methylacetamide
6-Chloropurine
4,6-Diamino-1,2-dihydro-2,2-dimethyl-1 1-(2,6-xylyl)- -triazine. HCl
5-Nitro-2-furfurylidene semicarbazone
Strophanthin K
ß-Diethylaminoethyl chloride. HCl
10-(ß-Hydroxyethyl)-7,8-dimethyl-pyrimido 4,5-b -quinoxaline-2,4 (3H,10H)-dione succinate
10-(ß-Hydroxyethyl)-7,8-dimethyl-pyrimido 4,5-b -quinoxaline-2,4-(3h,10H)dione
6-Mercaptopurine hydrate
Purine
2-Acetamido-1,3,4-thiadiazole
Myleran (1,4-dimethanesulfonyloxy-butane)
Deacetyl-N-methylcolchicine
Hydrocortisone
Puromycin dihydrochloride
N-Methylformamide
Dl-Desthiobiotin
Brucine Sulfate
Protopine hydrochloride
S-benzylthiuronium chloride
5,6-Diaminouracil, hemisulfate
Allyl lactate
Guanylurea sulfate
Methionine sulfoxide
Ethanol,2-(2-methoxyethoxy)-
p-Aniraldehydc thiosemicarbazone
4-Acetylmorpholine
2,6-Diaminopyridine
2-Aminopyrimidine
5-Pyrimidinecarboxylic acid-1,2,3,4-tetrahydro-2,4-dioxomonohydrate
p-Biguanidobenzamide
N-2-Hydroxyethylphthalimide
Diethyl ethane phosphonate
1,2,3,6-Tetrahydro-3,6-dioxo-2-phenyl-4-pyridazineacetic acid
5,7-Dihydroxy-(3,1,2)oxadiazolo(d) pyrimidine
1,3-Diethylurea
n-Lauryl thiocyanate
4,6-Diamino-1-(p-carboxyphenyl)-1,2-dihydro-2,2-dimethyl- -triazone HCl
1-Propanol,3-(methylthio)-
Guanidineacetic acid (glycocyamine)
a,a-Dimethylbenzyltrimethylammonium iodide
Narcotine
2-Dimethylaminoethanol
Meconic acid
Chloramphenicol, Chloromycetin
Theobromine
4-Chlorochalcone
Methyl carbamate
Theophyline
Strychnine
2-Naphthoic acid, 3-hydroxy-7-sulfo-
Methyl 3-pyridyl ketone (3-acetylpyridine)
D-Glucosamine HCl
Codeine sulfate.5H2O
8-Aza-2,6-diaminopurine sulfate
Cotarnine HCl
N-Phenylsuccinimide
Thebaine hydrochloride ethanolate
Trichloroacrylic acid, sodium salt
Benzylidene adonitol (or dibenzylidene adonitol)
2-2'-Sulfinyldiethanol
3-Pyridine sulfonic acid, sodium salt
Tetrapropyl thiopyrophocphate
3-Methoxypropylamine
Morphine sulphate.5H2O
2-Methyl pseudourea HCl
Ethylene sulfite (cyclic ester)
p-Acetamino-m-oniridine
Thiopanic acid (pantoyltaurine)
N-(5-Nitro-2-furfurylidene)-1-amino-hydantoin (Furadantin)
Nicotine
2-Hydroxy-4,6-dimethyl pyrimidine HCl
Cinchonidine
Benzenesulfonic acid, diester with diethylene glycol
Di-N-nitrosopiperazine
p-Acetylaminobenzaldehyde semicarbazone
Cacotheline
Quinidine sulfate
Santonin
Lauranilide
Tetrahydrothebaine HCl trihydmte
2,4-Diamino-6-hydroxy-5-phenylazo-pyrimidine
N-(2-Carboxyethyl)-L-tyrosine

B. Compounds shaving 50% inhibition between 100 and 1,000 µg/ml (N = 51)

2-(2,4-Dichlorophenoxy)ethanol
Potassium arsenite
7-Chloro-4-(4-diethylamino-1-methyl-butylamino)-3,6-dimethylquinoline diphosphate dihydrate
4,6-Diamino-1-(3'-chlorophenyl)-1,2-dihydro-2,2-dimethyl-s-triazine HCl
4,6-Diamino-1-(3'-bromophenyl)-1,2-dihydro-2,2-dimethyl-s-triazine HCl
4,6-Diamino-1-(3',4'-dichlorophenyl)-1,2-dihydro-2,2-dimethyl-s-triazine HCl
2,4-Diamino-5-(p-chlorophenyl)-6-ethylpyrimidine
1,9-Dimethanesulfonoxynonane
3,3'-Diamino-4,4'-dihydroxyarseno-benzene dihydrochloride
Isopropyl N-phenylcarbamate
4,6-Diamino-1-(4'-chlorophenyl)-2-n-hexyl-1,2-dihydro- -triazine HCl
4-Amino-6-anilino-1,2-dihydro-2,2-dimethyl-s-triazine
2,4-Diamino-5-(3',4'-dichlorophenyl) -6-ethylpyrimidine
Quinine hydrobromide
4-Amino-6-anilino-1,2-dihydro-2-phenyl-s-triazine
2-Ethylamino-1,3,4-thiadiazole HCl
Camphoric acid
Folic acid
Resorcinol
2-(1,1-Dimethyl-3-guanidino)-4-methyl-6-chloroquinazoline nitrate hydrate
Benzotriazole
5-Chlorobenzimidazole
Tri-n-butyl-phosphitc

ß-Mercaptopropionic acid
n-Butyl thiocyanate
Salicylamide
Caffeine
2,4'-Sulfonyldiphenol
2-Amino-2-methyl-1-propanol
8-Azaxanthine
Ethylhydrocupreine HCl
α-Cyano-ß-phenylacrylic acid
Dimethyl sulfoxide
4-Amino-6-(p-chloroanilino)-1,2-dihydro-2,2-dimethyl-s-triazine. $1H_2O$
2-Allylamino-5-methyl-1,3,4-thiadiazole HCl
Cyclopropanecarboxylic acid
ß-Benzoylpropionic acid
p-Fluoroaniline
Benzimidazole
Benzenephosphonic acid
Benzoic acid, m-sulfo-
Acetylene dicarboxylic acid
Methylolacrylamide
9-(-Di-n-butylaminopropylamino)-1,2,3,4-tetrahydroacridine phosphate
2,4-Dimethyl-3-pentanone semicarbazone
2-Benzoyl-1-(α-pyridyl)propanol-1
5-Iodosalicylic acid
6-Nitrobenzimidazole
Berberine sulfate
ß-Chloropropionic acid
Chloral hydrate

C. Compounds showing 50% inhibition between 10 and 100 µg/ml (N = 21)

1,5-Diaminobiuret
4-(p-Dimethylaminostyryl)-quinoline
4,6-Diamino-1-(3'-chlorophenyl)-1,2-dihydro-2-n-hexyl- -triazine HCl
1-Phenyl-3,3-dimethyltriazene
Neutral red (toluylene red)
Oxophenarsine. HCl (2-amino-4-arsenoso-phenol HCl)
Benzenesulfonhydrazide
ß,ß'-Dithiocyanodiethyl ether
Ethylene dithiocyanate
Pyrogallol
ß-2-Thienylalanine
p-Nitrobenzamide
6-Methoxyquinoline-4-aldehyde
Allyl p-chlorophenylcarbonate
Lauric acid hydmzide
2-Amino-5-nitrothiazole
2,6-Dimethyl-4-(2-oxo-2-phenylethyl-mercapto)pyrylium bromide
Chloromethyl p-chlorophenyl sulfonate
Phenol, p-chloro
3,5-Dibromoanthranilic acid
Apomorphine HCl

D. Compounds showing 50% inhibition between 1 and IO µg/ml (N = 21)

4-(p-Diethylaminostyryl)-quinoline
Netropsin HCl
Methyl bis(ß-chloroethyl)-amine HCl
Azaserine (O-diazoacetyl-L-serine)
2,6-Diaminopurine hydrate
4-(p-Diethylaminostyryl)-quinoline HCl
DL-Ethionine
Aminopterin
A-Methopteri"
4-(p-Dimethylaminostyryl)-quinoline methiodide
Methylene blue chloride (methylthionine chloride)
4,6-Diamino-1-(m-bromophenyl)-1,2-dihydro-2-(n-undecyl)-s-triazine. HCl
4-(p-Dimethylaminostyryl)-quinoline methochloride
-Dinitrophenol (2,4-dinitrophenol)
2-(p-Dimethylaminostyryl)-quinoline methiodide
Methyl green
α-Chloracetanilide
Di-n-octylamine
Pyronin B
Methyl chloroacetate
Phenol, 2,4-dichloro

E. Compounds showing 50% inhibition between 0. 1 and 1.0 µg/ml (N = 7)

4-(p-Diethylaminostyryl)-quinoline dihydrochloride
Sodium azide
Actinomycin D
8-Azaguanine
Crystal violet (gentian violet)
Picryl chloride
Dodecyl 4-n-nonylpyridinium chloride

F. Compounds showing 50% inhibition at less than 0.1 µg/ml (N = 2)

Actidione
8-Hydroxyquinoline

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