Supplementary Materials:

Recent Advances in Search of Bioactive Secondary Metabolites from Fungi Triggered by Chemical Epigenetic Modifiers

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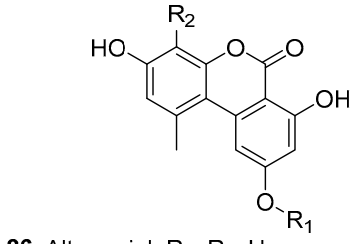
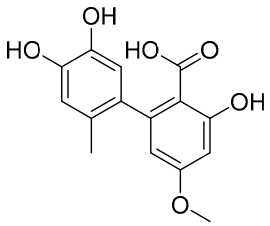
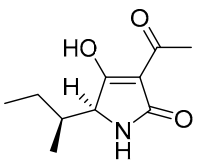


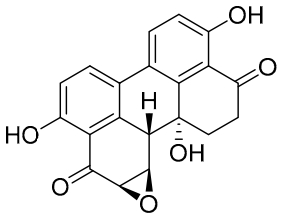
26. Alternariol, R_1=R_2=H
27. Alternariol-5-*O*-methyl ether, R_1=CH_3, R_2=H
28. 3'-Hydroxyalternariol-5-*O*-methyl ether, R_1=CH_3, R_2=OH



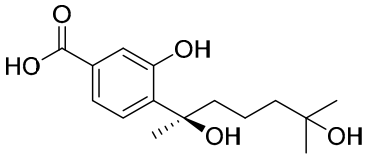
29. Altenusin



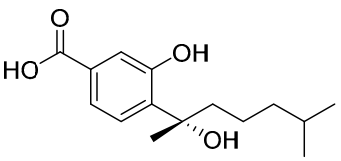
30. Tenuazonic acid



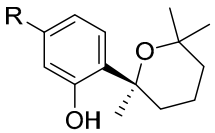
31. Altertoxin II



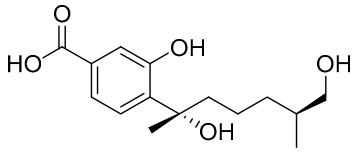
32. (7*R*)-Hydroxysydonic acid



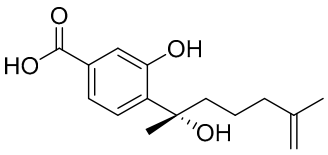
33. (7*S*)-Sydonic acid



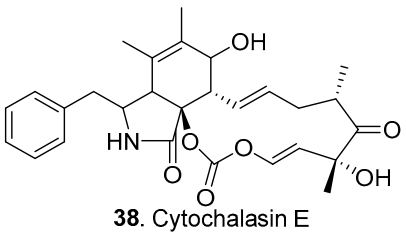
34. (*S*)-5-(Hydroxymethyl)-2-(2',6',6'-trimethyltetrahydro-2*H*-pyran-2-yl) pheol, R=CH_2OH
37. (*S*)-Sydowic acid, R=COOH



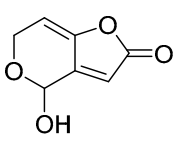
35. (7*S*,11*S*)-Hydroxysydonic acid



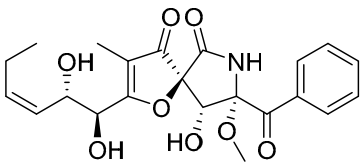
36. (7*S*)-11-Dehydrosydonic acid



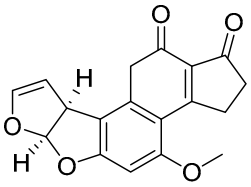
38. Cytochalasin E



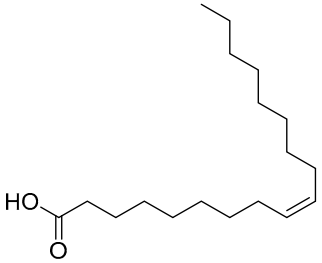
39. Patulin



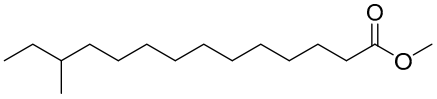
40. Pseurotin A



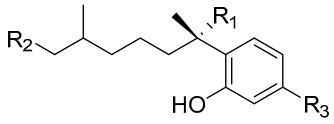
41. Aflatoxin B1



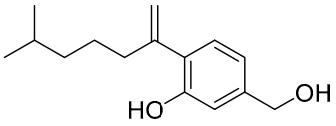
42. (*Z*)-9-Octadecenoic acid



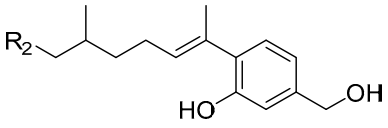
43. 12-Methyl-tetradecanoic acid methylester



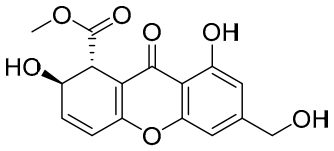
44. (7*S*)-7-*O*-Methylsydonol, R_1=OCH_3, R_2=H, R_3=CH_2OH
45. (7*S*,11*S*)-12-Hydroxysydonic acid, R_1=OH, R_2=OH, R_3=COOH
47. (*S*)-Sydonol, R_1=OH, R_2=H, R_3=CH_2OH



46. 7-Deoxy-7,14-didehydrosydonol



48. Anhydrowaraterpol B, R=OH
49. (*E*)-5-Hydroxymethyl-2-(6'-methyl hept-2'-en-2'-yl)phenol, R=H



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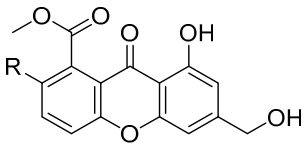
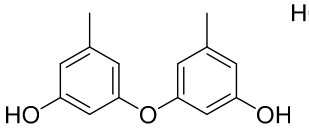
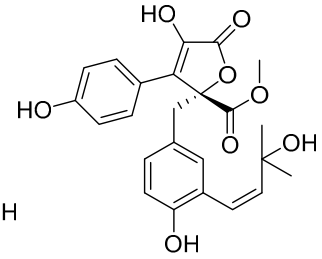


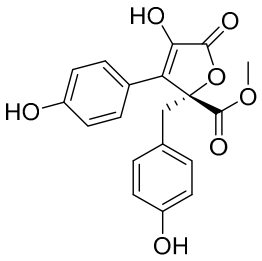
51. Sydowinin A, R=H
52. Sydowinin B, R=OH



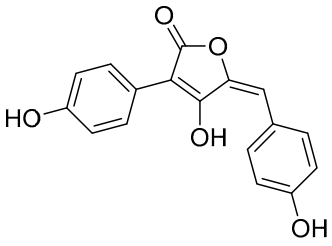
53. Diorcinol



54. Asperbutyrolactone A



55. Asperbutyrolactone B



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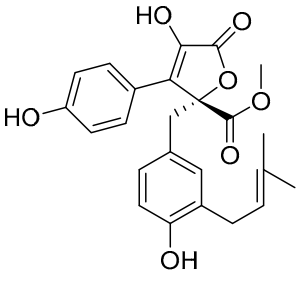
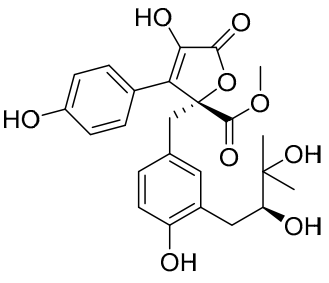


57. Butyrolactone I



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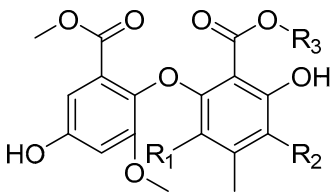
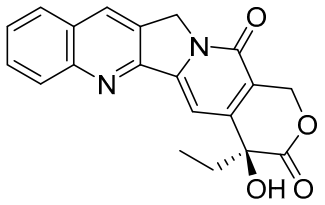
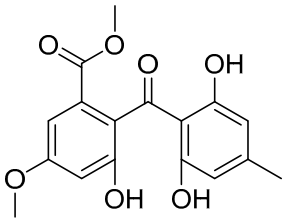


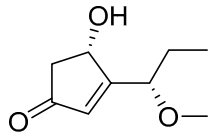
59. Asterric acid, R_1=H, R_2=H, R_3=H
60. Penicillither, R_1=Cl, R_2=H, R_3=CH_3
61. Methyl asterrate, R_1=H, R_2=H, R_3=CH_3
62. 4',6',-Dichloroasterric acid, R_1=Cl, R_2=Cl, R_3=CH_3



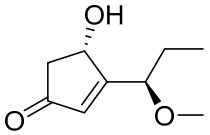
63. Camptothecine



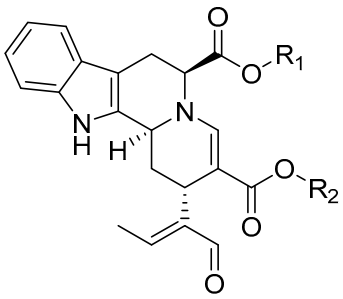
64. Isosulochrin



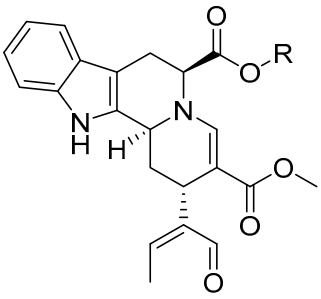
65. Globosporin A



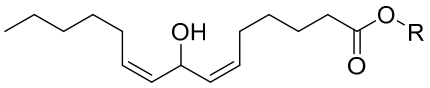
66. Globosporin B



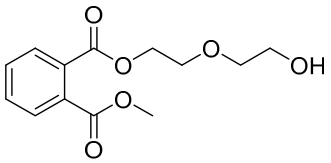
67. Globosporine C, R_1=CH_3, R_2=H
69. Mappianine E, R_1=H, R_2=CH_3



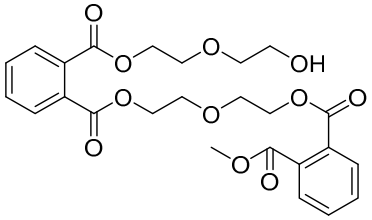
68. Globosporine D, R=H
70. 19(20)*Z*-5-Carboxymethylvallesiachotamine, R=CH_3



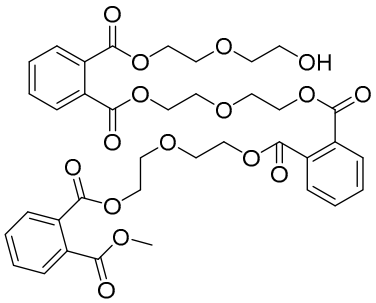
71. (9*Z*,12*Z*)-11-Hydroxyoctadeca-9,12-dienoic acid, R=H
72. (9*Z*,12*Z*)-11-Hydroxyoctadeca-9,12-dienoic acid, methyl ester, R=CH_3
73. (9*Z*,12*Z*)-11-Hydroxyoctadeca-9,12-dienoic acid glycerol conjugate, R=CH_2-CHOH-CH_2OH



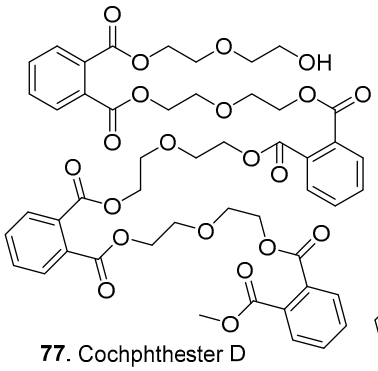
74. Cochphthester A



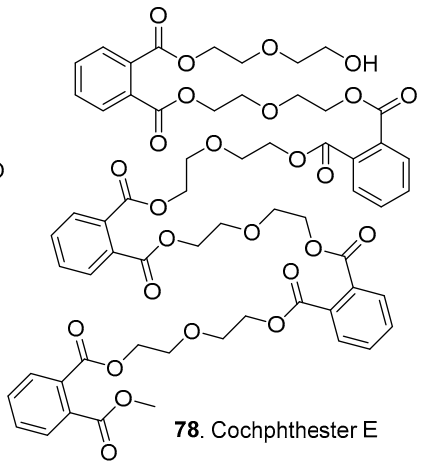
75. Cochphthester B



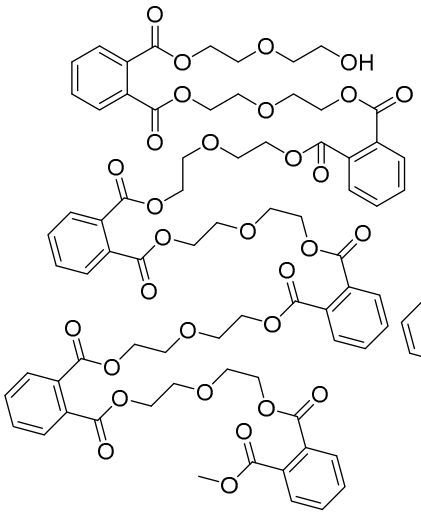
76. Cochphthester C



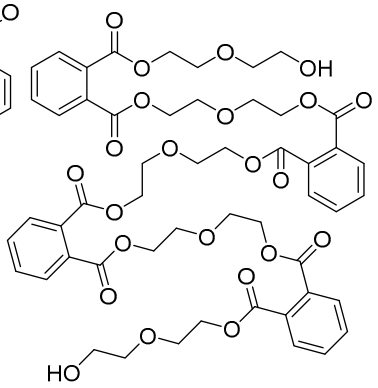
77. Cochphthester D



78. Cochphthester E



79. Cochphthester F



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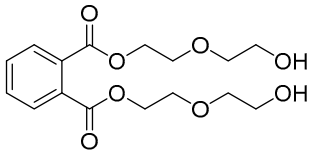
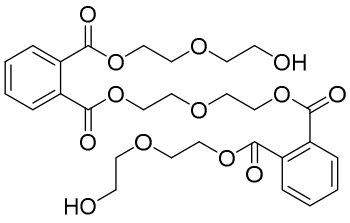
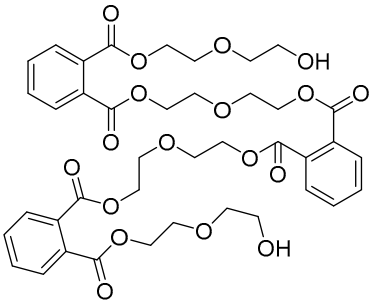


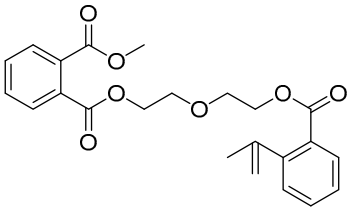
81. 1,2-Benzenedicarboxylic acid,1,2-bis [2-(2-hydroxyethoxy) ethyl] ester



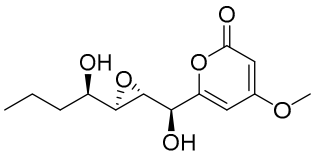
82 1,2-Benzenedicarboxylic acid,1,1-(oxydi-2,1-ethanediyl) 2,2 -bis [2-(2-hydroxyethoxy) ethyl] ester



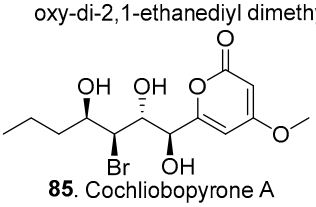
83. 1,2-Benzenedicarboxylic acid, 1,2-bis[2-[[2-[[2-(2-hydroxyethoxy) ethoxy] carbonyl] oxy] ethoxy] ethyl] ester



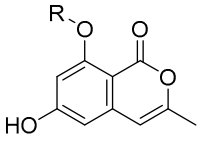
84. 1,2-Benzenedicarboxylic acid, oxy-di-2,1-ethanediyl dimethylester



86. Cochliobopyrone B

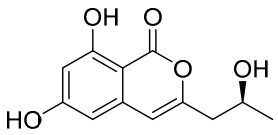


85. Cochliobopyrone A

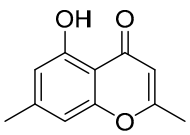


87. 3-Methyl-6,8-dihydroxyisocoumarin, R=CH_3

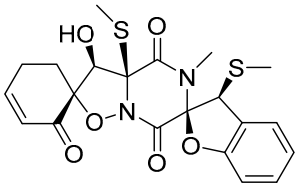
88. 6-Hydroxy-8-methoxy-3-methyl-isocoumarin, R=H



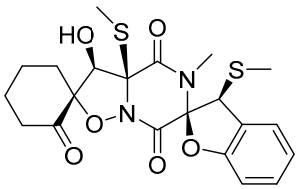
89. (*S*)-Orthosporin



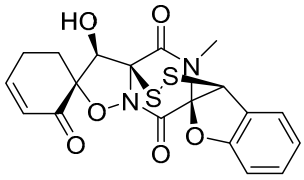
90. Altechromone A



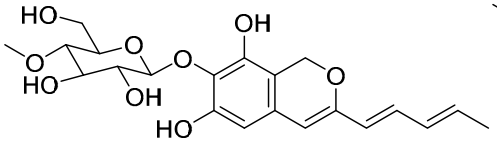
91. Botryosulfuranol A



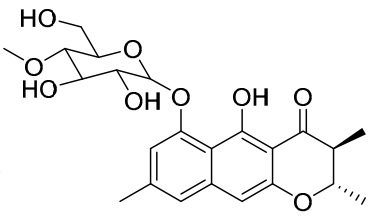
92. Botryosulfuranol B



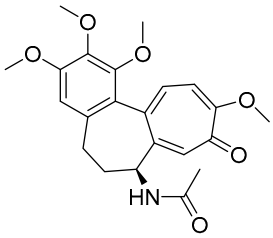
93. Botryosulfuranol C



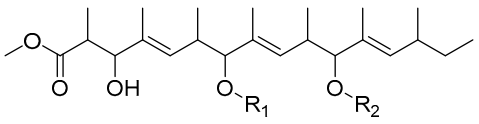
94. Indigotide A



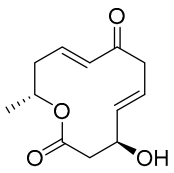
95. Indigotide B



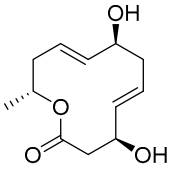
96. Colchicine



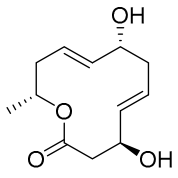
97. Lunalide A, R_1=H, R_2=β-D-Mannopyranoside
98. Lunalide B, R_1=R_2=β-D-Mannopyranoside



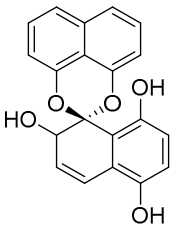
99. Dendrodolide E



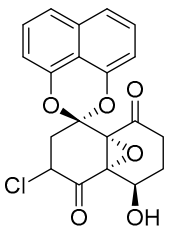
100. Dendrodolide G



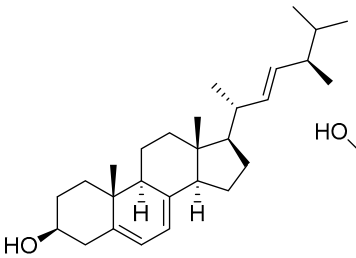
101. Dendrodolide I



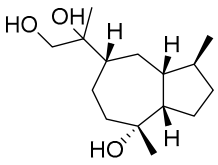
102. Palmarumycin C30



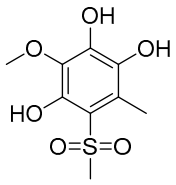
103. Palmarumycin C8



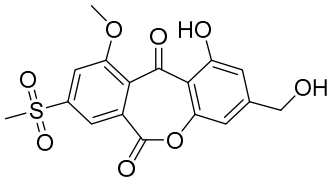
104. Ergosterol



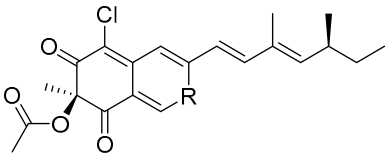
105. Xylaguaianol C



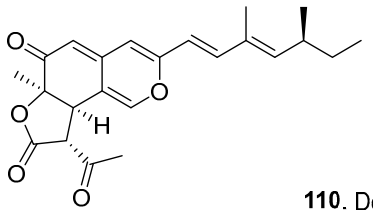
106. 3-Methoxy-6-methyl-5-(methylsulfonyl) benzene-1,2,4-triol



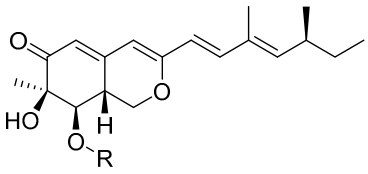
107. Neosartoryone A



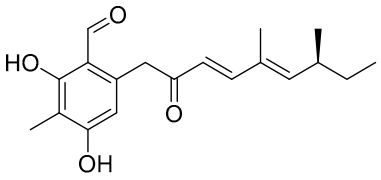
108. Sclerotiorin, R=O
113. Sclerotioramine, R=NH



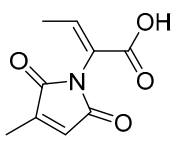
109. Ochrephilone



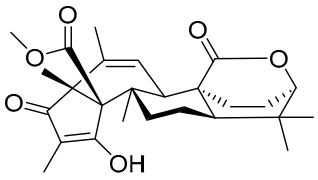
110. Dechloroisochromophilone III, R=H
111. Dechloroisochromophilone IV, R=Ac



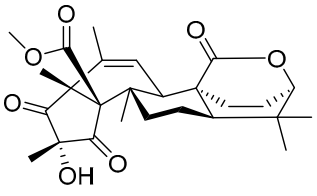
112. 6-((3E,5E)-5,7-Dimethyl-2-methylenenona-3,5-dienyl)-2,4-dihydroxy-3-methylbenzaldehyde



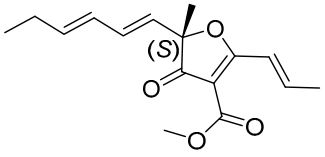
114. Pencolide



115. Atlantinone A



116. Atlantinone B



120. Aspertetronin A

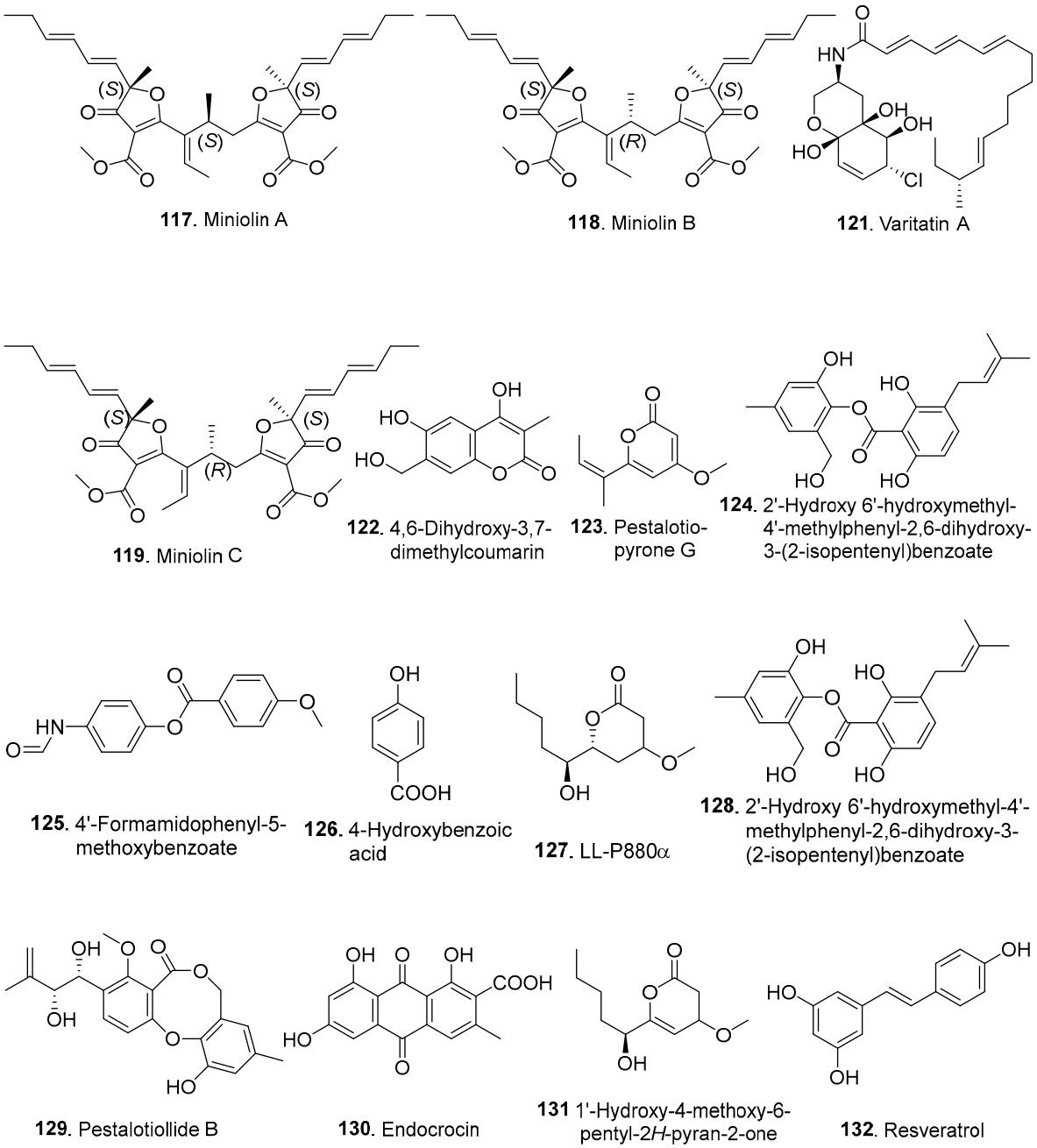


Figure S1. Structures of the compounds **26–132** isolated from fungi treated with 5-azacydidine (5-Aza).

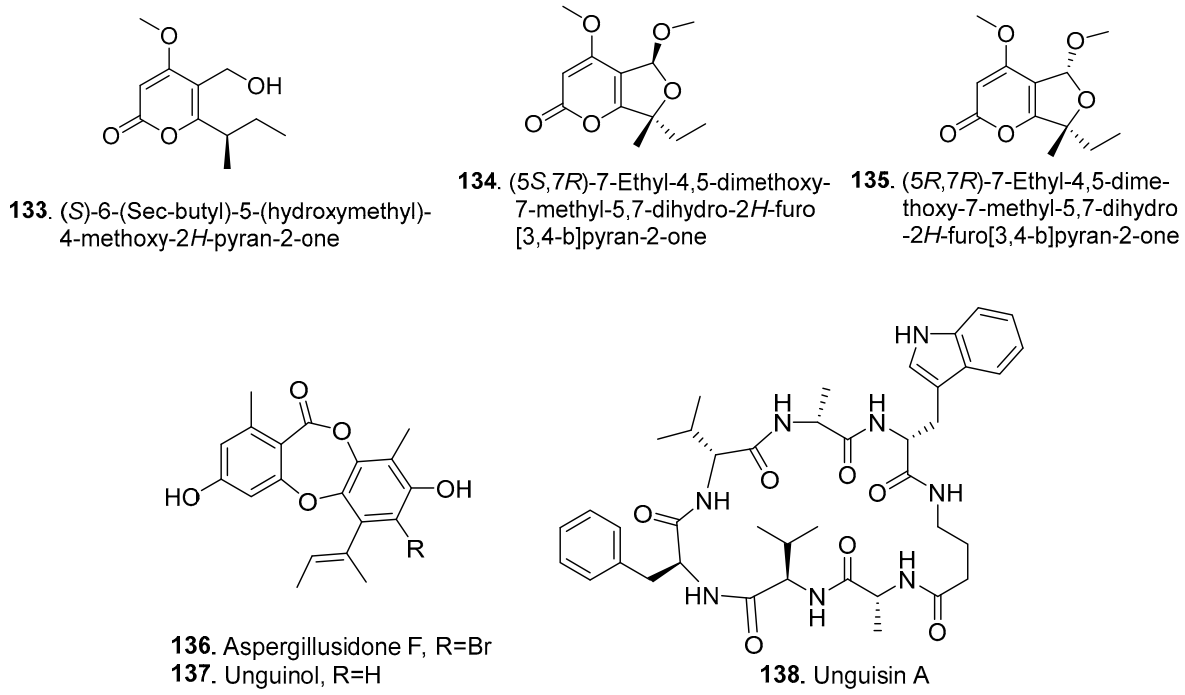


Figure S2. Structures of the compounds **133–138** isolated from fungi treated with other DNA methyltransferase modifiers.

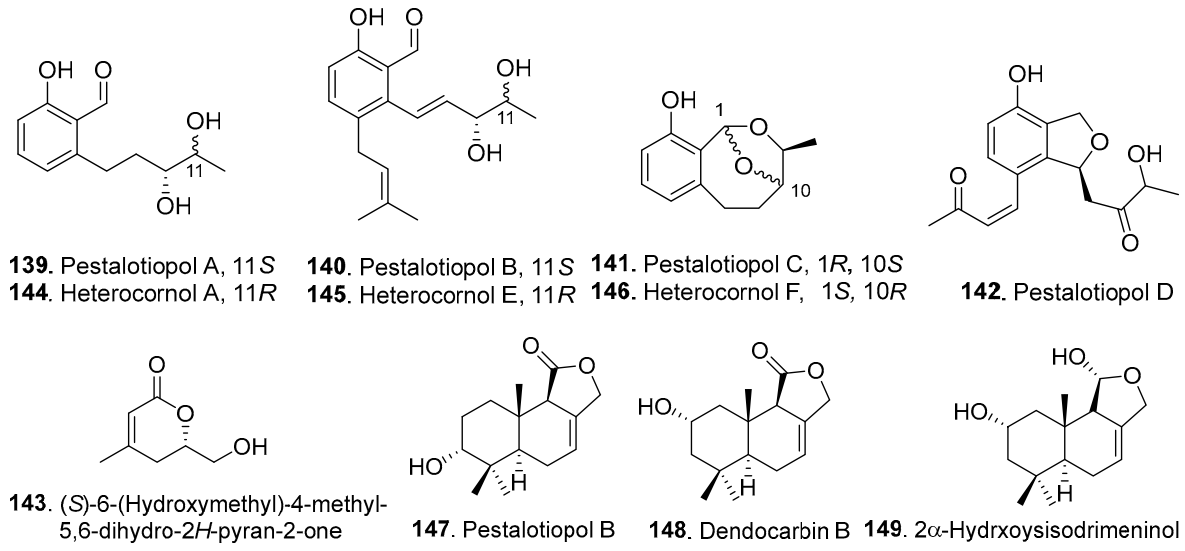
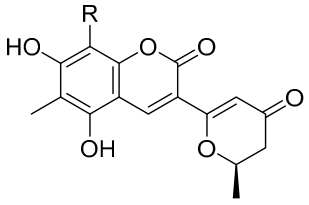
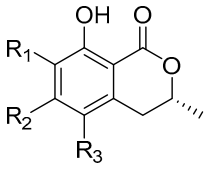


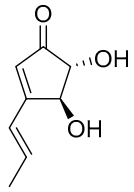
Figure S3. Structures of the compounds **139–149** isolated from fungi treated with two DNA methyltransferase modifiers.



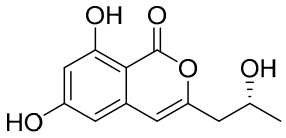
150. Aspyranochromenone A, R=OH
151. Aspyranochromenone B, R=H



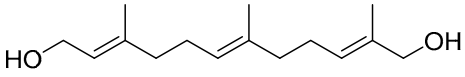
152. 6,7-Dihydroxymellin, R_1=OH, R_2=OH, R_3=H
154. 6-Hydroxymellein, R_1=H, R_2=OH, R_3=H
156. 6,7-Dimethoxymellein, R_1=OCH_3, R_2=OCH_3, R_3=H
157. 6-Methoxymellein, R_1=H, R_2=OCH_3, R_3=H
159. 5,6-Dihydroxymellein, R_1=H, R_2=OH, R_3=OH



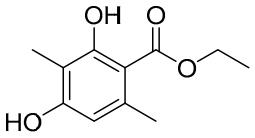
153. Terrein



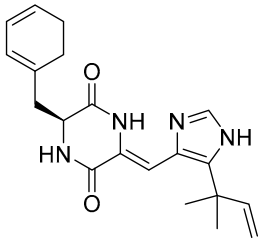
155. (*R*)-Orthosporin



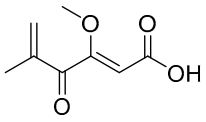
158. (2*E*,6*E*,10*E*)-12-Hydroxyfarnesol



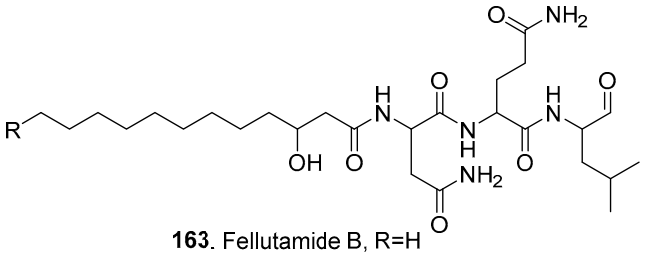
160. Ethyl 3-methylorsellinate



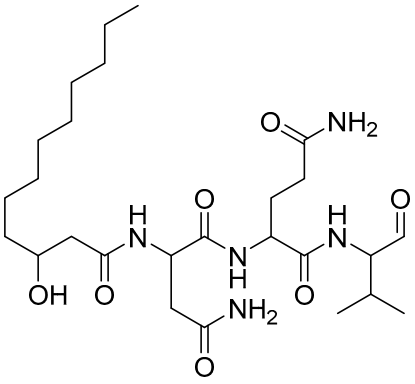
161. Phenylahistin



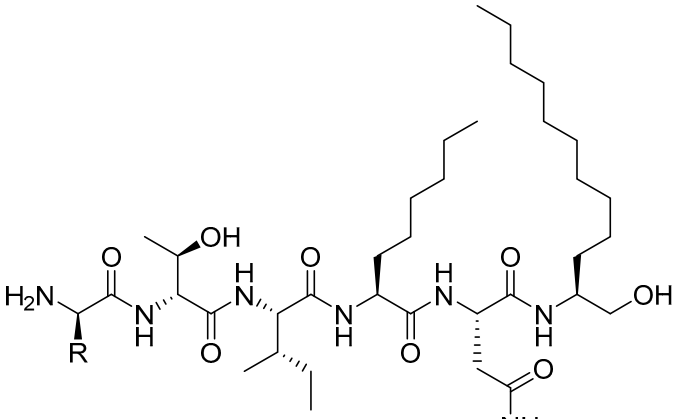
162. Penicillic acid



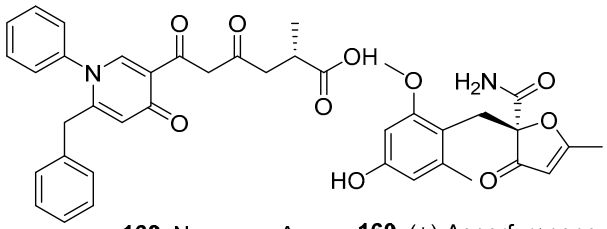
163. Fellutamide B, R=H
164. Antibiotic 15656G, R=CH_2CH_3



165. Antibiotic 3127

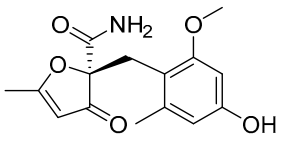


166. Aspercryptin A1, R=CH_2OH
167. Aspercryptin A2, R=CH_3

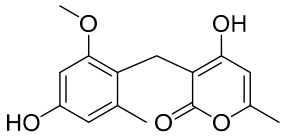


168. Nygerone A

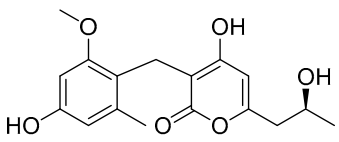
169. (+)-Asperfuranone



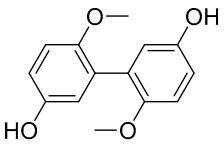
170. (-)-Asperfuranone



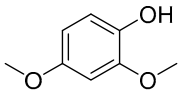
171. Asperpyranone A



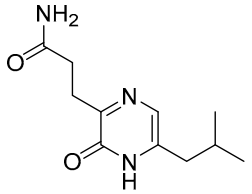
172. Asperpyranone B



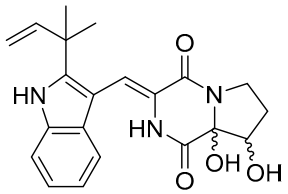
173. Versiperol A



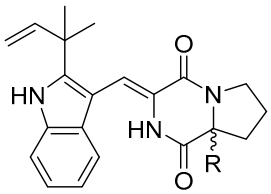
174. 2,4-Dimethoxyphenol



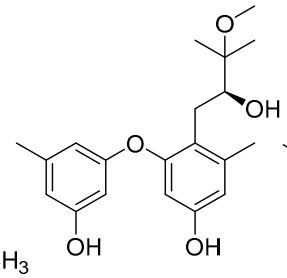
175. 3-[6-(2-Methylpropyl)-2-oxo-1*H*-pyrazin-3-yl] propanamide



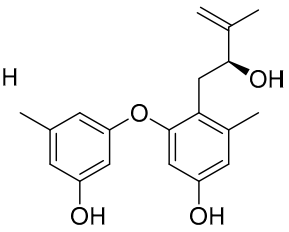
176. Brevianamide X



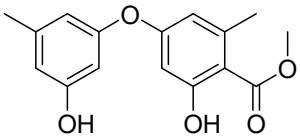
177. Brevianamide R, R=OCH_3
178. Brevianamide Q, R=OH



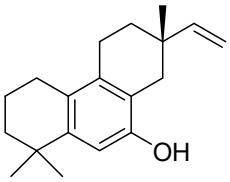
179. Diorcinol C



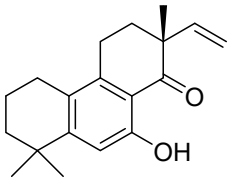
180. Diorcinol E



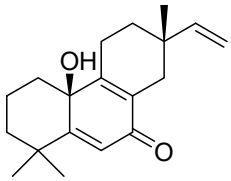
181. Diorcinol-4-carboxylate



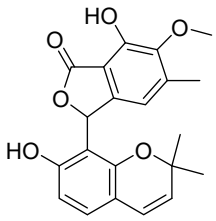
182. Aspewentin A



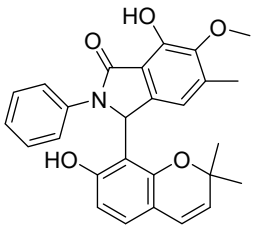
183. Aspewentin B



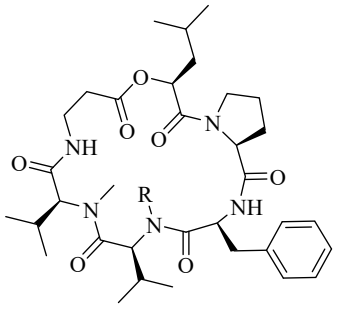
184. Aspewentin C



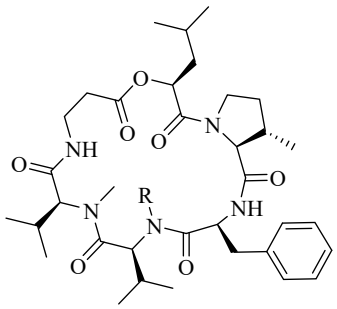
185. Primarolide A



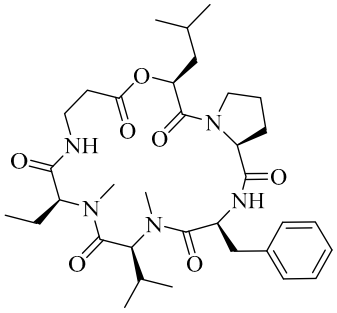
186. Primarolide B



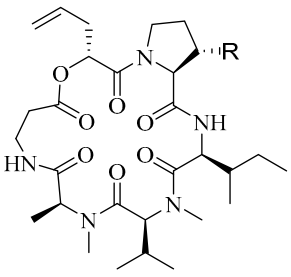
187. Desmethylisaridin E, R=H
188. Isaridin E, R=CH_3



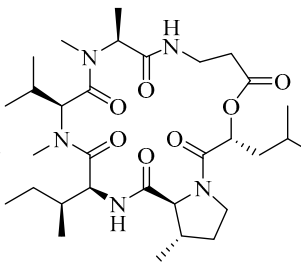
189. Desmethylisaridin C2, R=H
190. Isaridin C2, R=CH_3



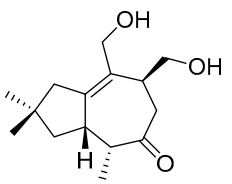
191. Isaridin F



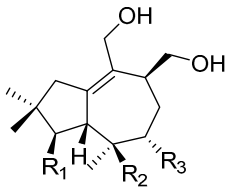
192. Destruxin A, R=H
193. Roseotoxin B, R=CH_3



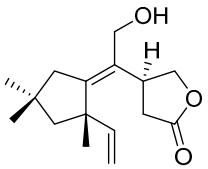
194. Roseocardin



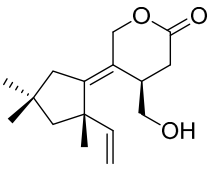
195. 11,12-Dihydroxy-1-tremulen-5-one



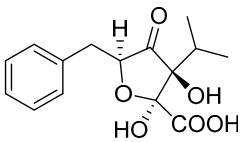
196. (3*S*,6*R*,7*R*)-Tremul-1-ene-6,11,12-triol, R_1=H, R_2=OH, R_3=H
197. Ceriponol A, R_1=OH, R_2=H, R_3=H
198. Conocenol B, R_1=H, R_2=H, R_3=OH



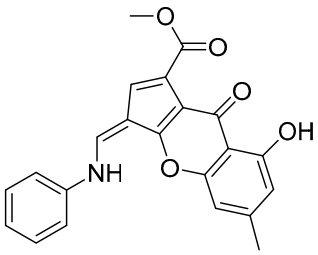
199. Conocenolide A



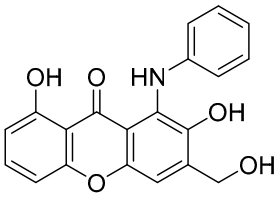
200. Conocenolide B



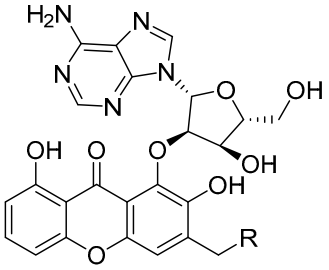
201. Botrycinereic acid



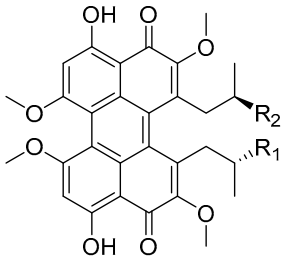
202. Chalaniline A



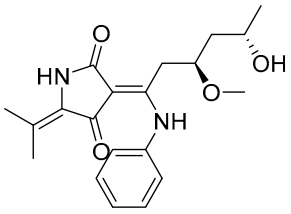
203. Chalaniline B



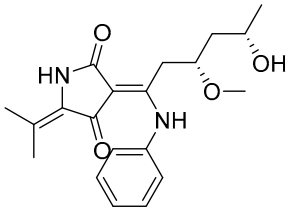
204. Xanthone A, R=H
205. Xanthone B, R=OH



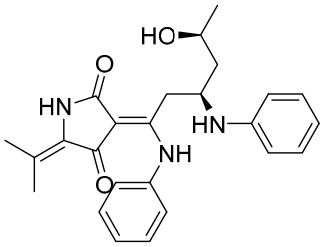
206. Cladochrome F, R_1=OH, R_2=ρ-Hydroxybenzoate
207. Cladochrome G, R_1=OH, R_2=ρ-Hydroxycarbonate
208. Cladochrome A, R_1=R_2=β-Hydroxycarbonate
209. Cladochrome B, R_1=β-Hydroxybutyrate, R_2=Benzoate
210. Cladochrome D, R_1=ρ-Hydroxybutyrate, R_2=ρ-Hydroxybenzoate
211. Cladochrome E, R_1=ρ-Hydroxycarbonae, R_2=Benzoate
212. Calphostin B, R_1=OH, R_2=Benzoate



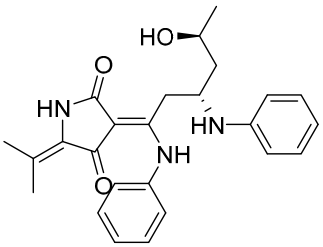
213. Cladosin H



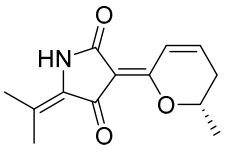
214. Cladosin I



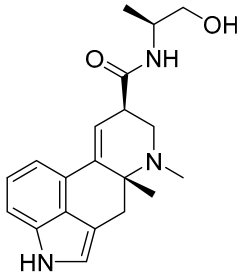
215. Cladosin J



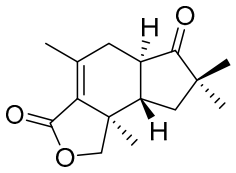
216. Cladosin K



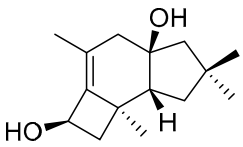
217. Cladodionen



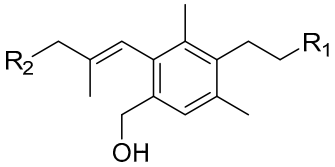
218. Ergometrine



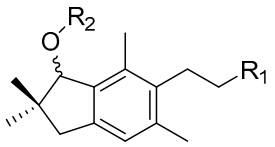
219. Cystercorolide



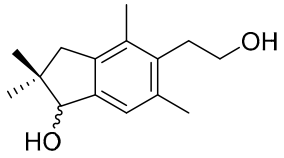
220. Cystercorodiol A



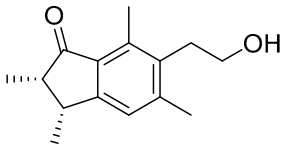
221. 4-*O*-Acetylcybrodol, R_1=OAc, R_2=OH
222. 14-Dehydroxybrodol, R_1=OH, R_2=H
231. Cybrodol, R_1=OH, R_2=OH



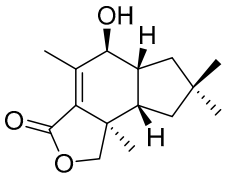
223. Cystercorodiol B, R_1=OH, R_2=H
224. 4-*O*-Acetylcystercorodiol B, R=OAc, R_2=H
225. 1-*O*-Methoxycystercorodiol B, R_1=OH, R_2=CH_3



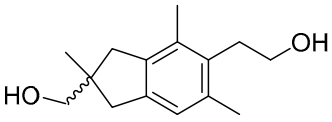
226. Cystercorodiol C



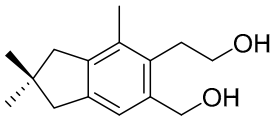
227. Cystercorotone



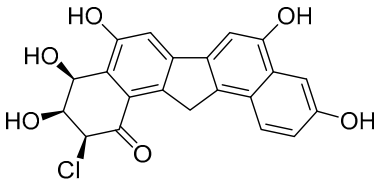
228. Epicoterpene D



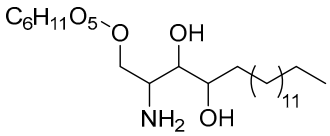
229. Russujaponol F



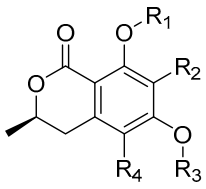
230. Riparol B



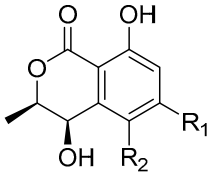
232. Daldinone E



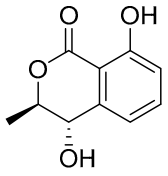
233. Hexosylphytosphyngosine



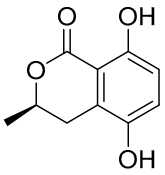
234. Palmaerone A, R_1=CH_3, R_2=H, R_3=H, R_4=H
235. Palmaerone B, R_1=CH_3, R_2=Br, R_3=H, R_4=H
236. Palmaerone C, R_1=CH_3, R_2=Br, R_3=CH_3, R_4=H
237. Palmaerone D, R_1=H, R_2=Br, R_3=H, R_4=H
238. Palmaerone E, R_1=CH_3, R_2=OH, R_3=H, R_4=Br
239. Palmaerone F, R_1=CH_3, R_2=H, R_3=H, R_4=Cl
240. Palmaerone G, R_1=CH_3, R_2=Cl, R_3=H, R_4=H
241. (*R*)-5-Cholro-6-hydroxymellein, R_1=H, R_2=H, R_3=H, R_4=Cl
243. Palmaerin A, R_1=CH_3, R_2=Cl, R_3=H, R_4=Cl
244. Palmaerin B, R_1=H, R_2=Br, R_3=H, R_4=Br
245. Palmaerin D, R_1=H, R_2=H, R_3=H, R_4=Br



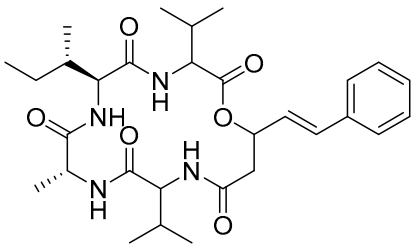
242. (3*R*,4*R*)-5-Cholro-4,6-dihydroxymellein, R_1=OH, R_2=Cl
247. *cis*-4-Hydroxymellein, R_1=H, R_2=H



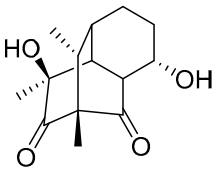
246. *trans*-4-Hydroxymellein



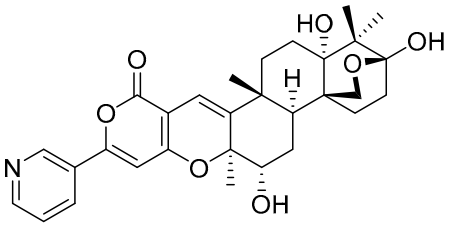
248. (*R*)-5-hydroxymellein



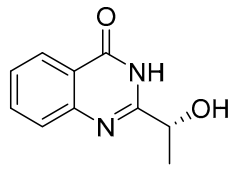
249. EGM-556



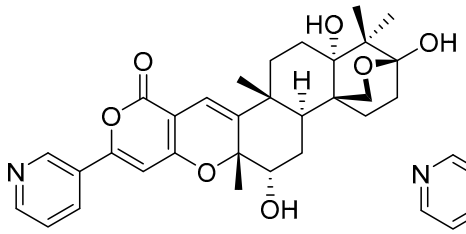
250. 4-Epipenicillone B



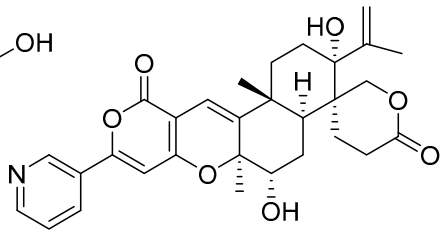
252. Pyrandecarurin A



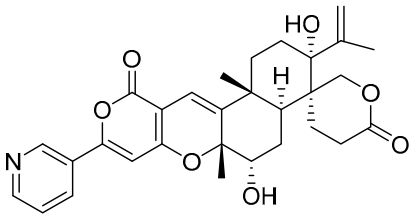
251. (*R*)--Chrysogine



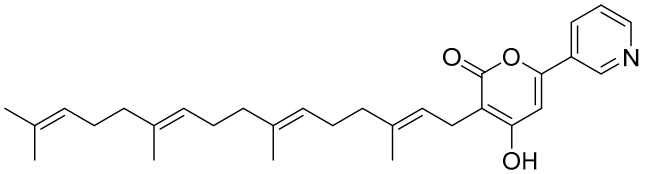
253. Pyrandecarurin B



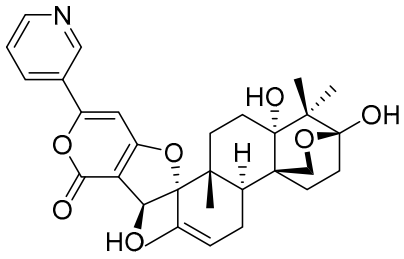
254. Pileotin A



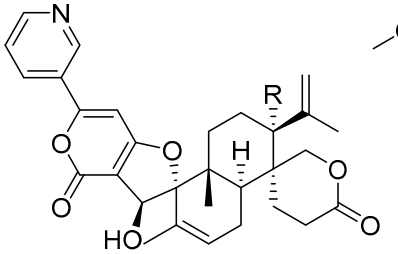
255. Pileotin B



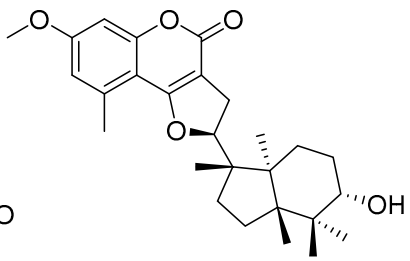
256. Decaturenoid



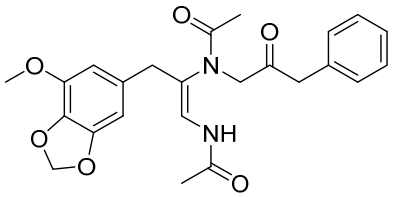
257. 15-Hydroxydecaturin A



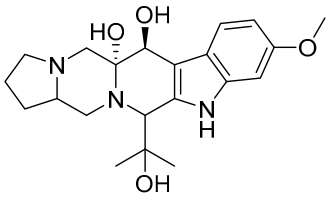
258. Oxalicine A, R=H
259. Oxalicine B, R=OH



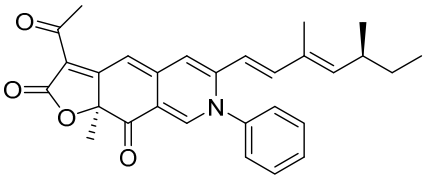
260. Penisarin B



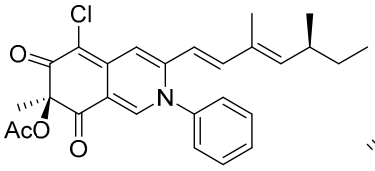
261. Brasiliamide A



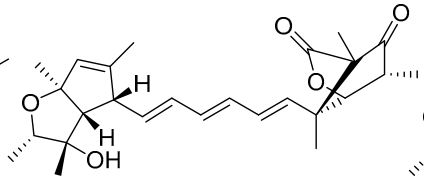
262. Verruculogen TR2



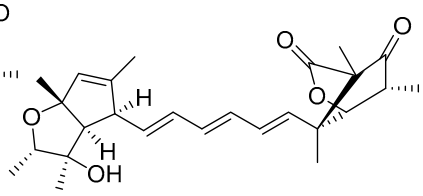
263. Isochromophilone XIV



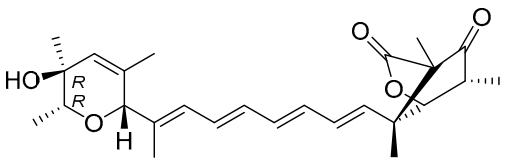
264. Isochromophilone XV



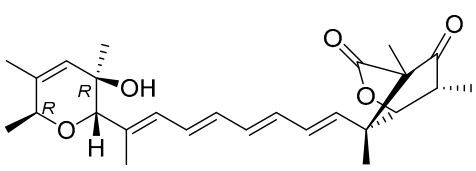
265. Varilactone A



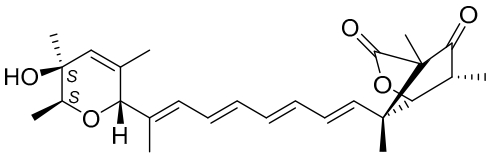
266. Varilactone B



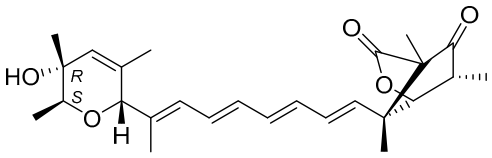
267. Wortmannilactone M



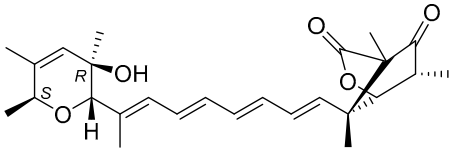
268. Wortmannilactone N



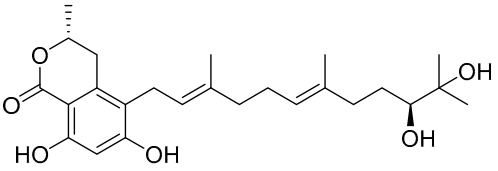
269. Wortmannilactone E



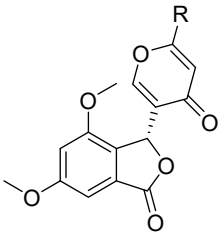
270. Wortmannilactone F



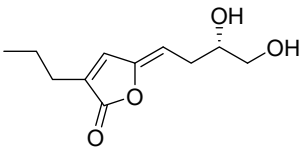
271. Wortmannilactone H



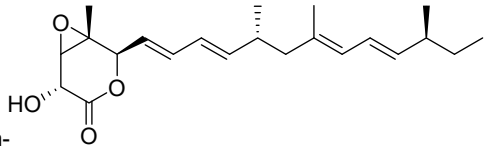
272. (10'*S*)-Verruculide B



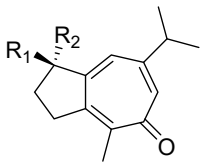
273. Vermistatin, R=CH=CHCH$_3$
274. Dihydrovermistatin, R=CH$_2$CH$_2$CH$_2$CH$_3$



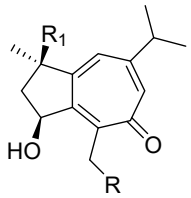
275. (*S*,*Z*)-5-(3',4'-Dihydroxy-butylidene)-3-propylfuran-2(5*H*)-one



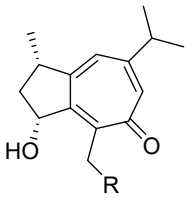
276. Nafuredin



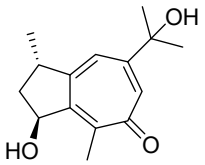
277. Spiromaterpene A, R$_1$=H, R$_2$=CH$_3$
278. Spiromaterpene B, R=CH$_3$, R$_2$=OH



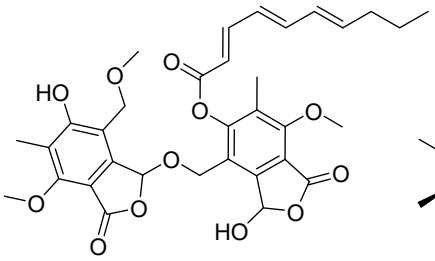
279. Spiromaterpene A, R$_1$=H, R$_2$=H
282. Spiromaterpene F, R$_1$=H, R$_2$=OH
285. Spiromaterpene I, R$_1$=OH, R$_2$=H



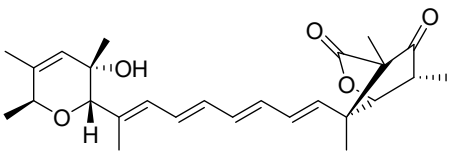
280. Spiromaterpene D, R=H
281. Spiromaterpene E, R=OH



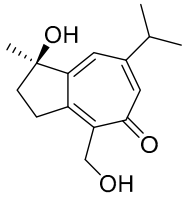
283. Spiromaterpene G



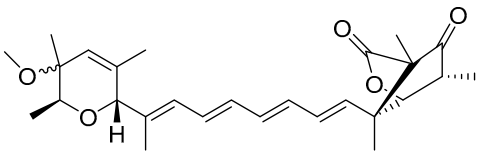
286. Funitatin A



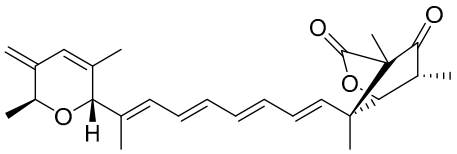
287. Wortmannilactone I



284. Spiromaterpene H

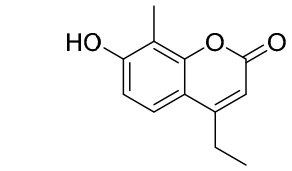


288. Wortmannilactone J, 19*S*
289. Wortmannilactone K, 19*R*

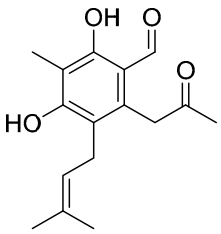


290. Wortmannilactone L

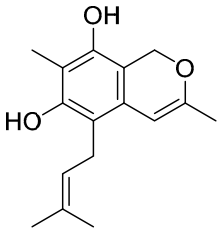
Figure S4. Structures of the compounds **150–290** isolated from fungi treated with suberoylanilide hydroxamic acid (SAHA).



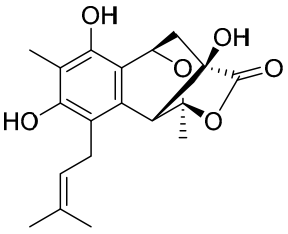
291. 4-Ethyl-7-hydroxy-8-methyl-2*H*-1-benzopyran-2-one



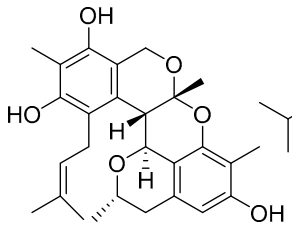
292. Chaetophenol A



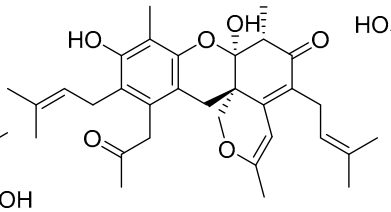
293. Chaetophenol B



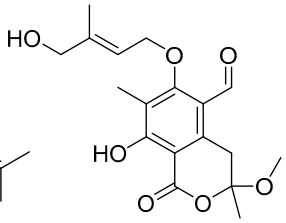
294. Chaetophenol C



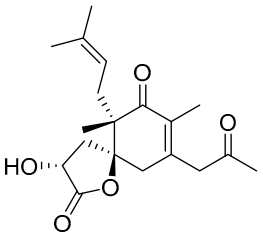
295. Chaetophenol D



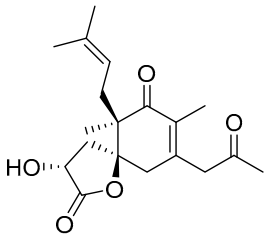
296. Chaetophenol E



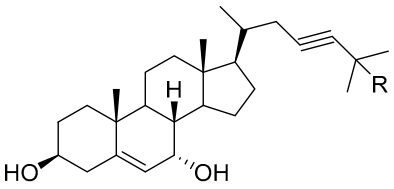
297. Chaetophenol F



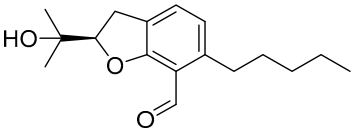
298. Spiroindicumide A



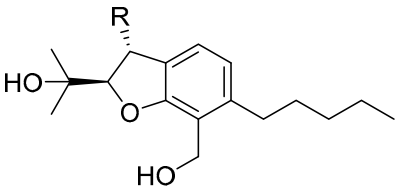
299. Spiroindicumide B



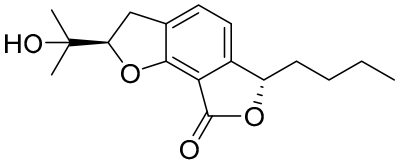
300. (3β,7α)-Cholest-5-en-23-yne-3,7-diol, R=H
301. (3β,7α)-Cholest-5-en-23-yne-3,7,25-triol, R=OH



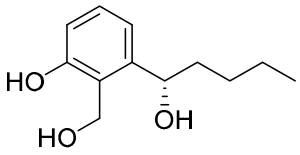
302. Annullatin A



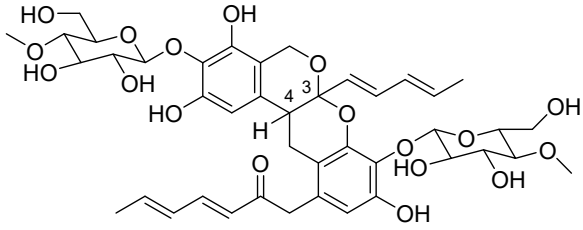
303. Annullatin B, R=H
304. Annullatin C, R=OH



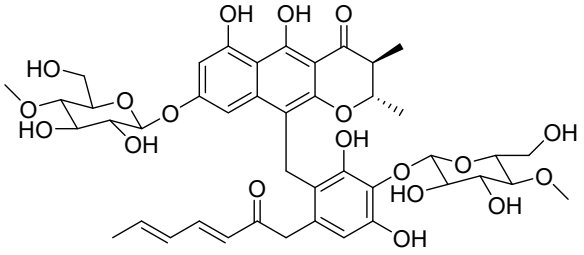
305. Annullatin D



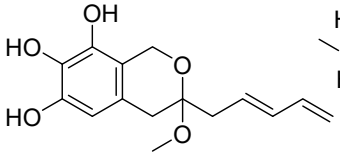
306. Annullatin E



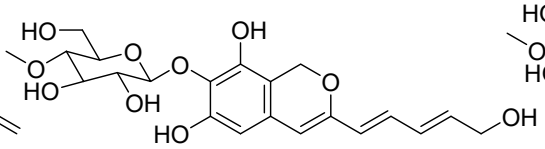
307. Indigotide C, 3*R*, 4*R*
308. Indigotide D, 3*S*, 4*S*



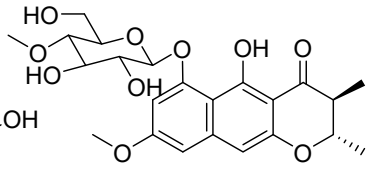
309. Indigolide E



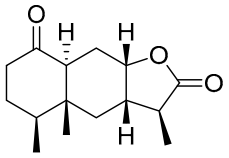
310. Indigotide F



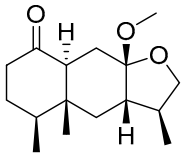
311. 13-Hydroxyindigotide A



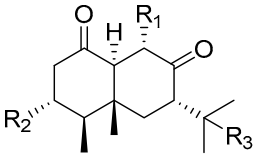
312. 8-*O*-MethylIndigotide B



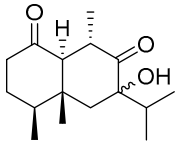
313. Eutyperemophilane A



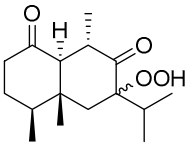
314. Eutyperemophilane B



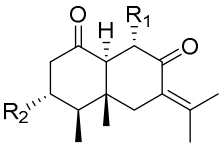
315. Eutyperemophilane C, R_1=R_2=R_3=H
316. Eutyperemophilane D, R_1=R_2=H, R_3=OH
317. Eutyperemophilane E, R_1=R_3=H, R_2=OH
318. Eutyperemophilane F, R_1=OH, R_2=R_3=H



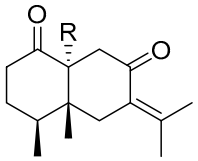
319. Eutyperemophilane G, ····· OH
320. Eutyperemophilane H, ▬ OH



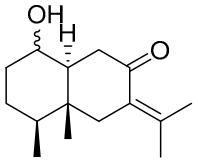
321. Eutyperemophilane I, ····· OOH
322. Eutyperemophilane J, ▬ OOH



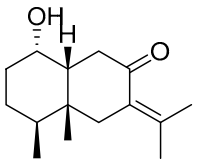
323. Eutyperemophilane K, R_1=R_2=H
324. Eutyperemophilane L, R_1=OH, R_2=H
325. Eutyperemophilane M, R_1=H, R_2=OH



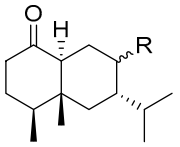
326. Eutyperemophilane N, R=H
327. Eutyperemophilane O, R=OH



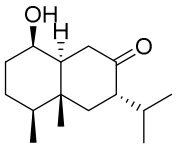
328. Eutyperemophilane P, ▬ OH
329. Eutyperemophilane Q, ····· OH



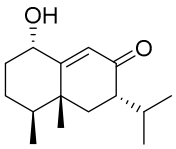
330. Eutyperemophilane R



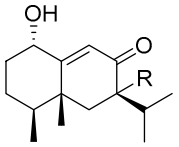
331. Eutyperemophilane S, ▬ OH
332. Eutyperemophilane T, ····· OH



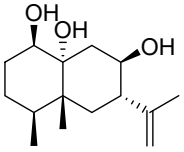
333. Eutyperemophilane U



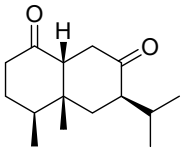
334. Eutyperemophilane V



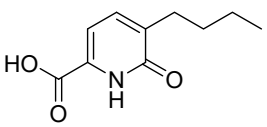
335. Eutyperemophilane W, R=H
336. Eutyperemophilane X, R=OH



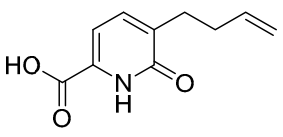
337. Eutyperemophilane Y



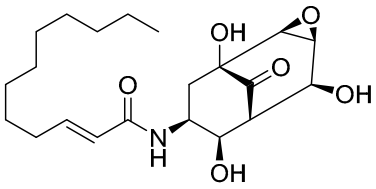
338. Eutyperemophilane Z



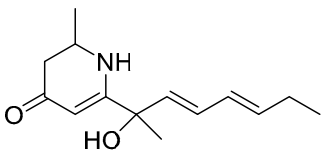
339. 5-Butyl-6-oxo-1,6-dihydropyridine-2-carboxylic acid



340. 5-(But-9-enyl)-6-oxo-1,6-dihydropyridine-2-carboxylic acid.



341. Isariotin A



342. JBIR-54

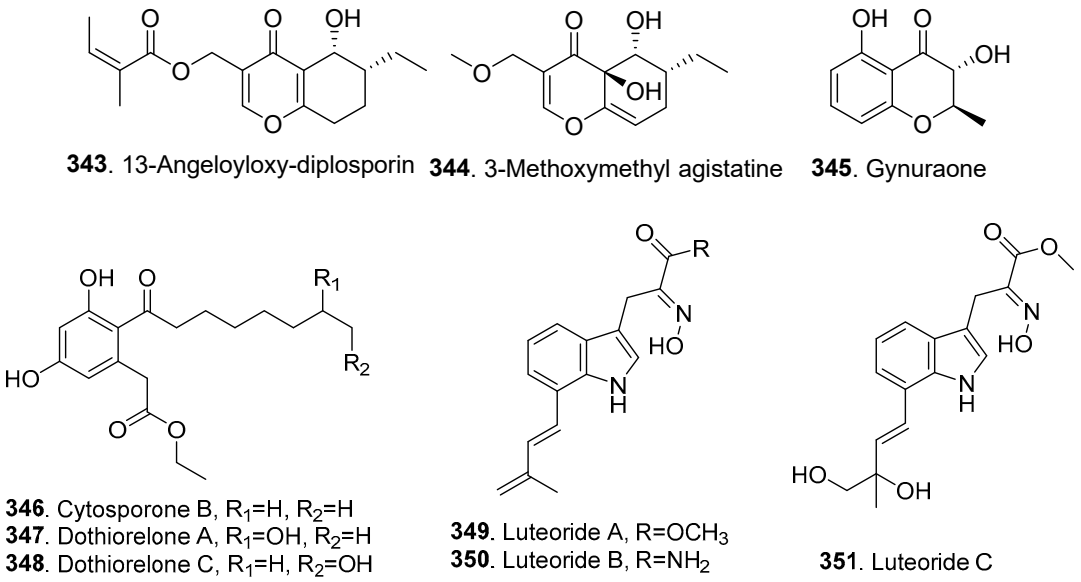
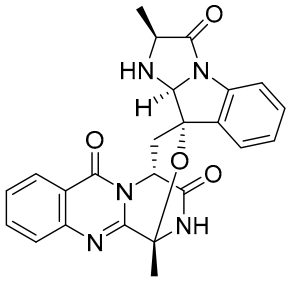
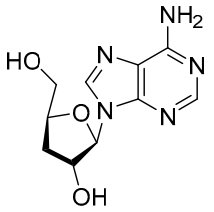


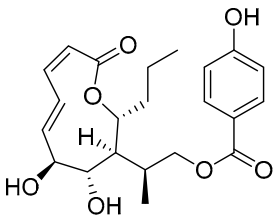
Figure S5. Structures of the compounds **291–351** isolated from fungi treated with suberoylbishydroxamic acid (SBHA).



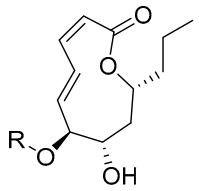
352. Fumiquinazoline C



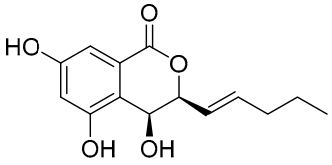
353. Cordycepin



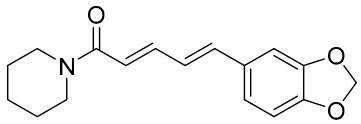
354. Xylarolide A



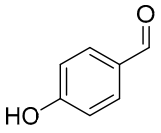
355. Xylarolide B, R=CH_3
357. Xylarolide, R=H



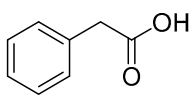
356. Diportharine A



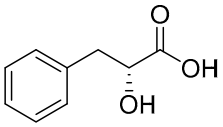
358. Piperine



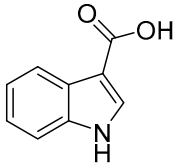
359. *p*-Hydroxy benzaldehyde



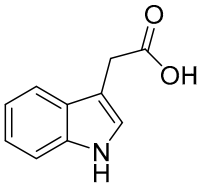
360. Phenyl acetic acid



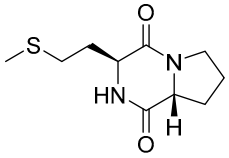
361. Phenyllactic acid



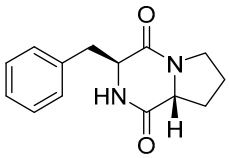
362. Indole-3-carboxylic acid



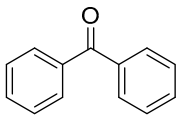
363. Indole-3-acetic acid



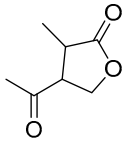
364. Cyclo-(proline-methionine)



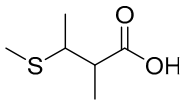
365. Cyclo-(phenylalanine-proline)



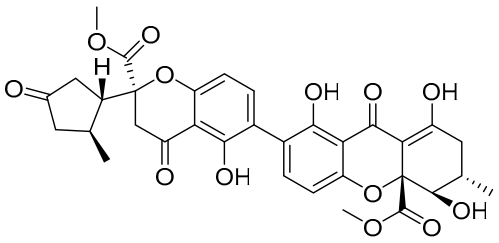
366 Benzophenone



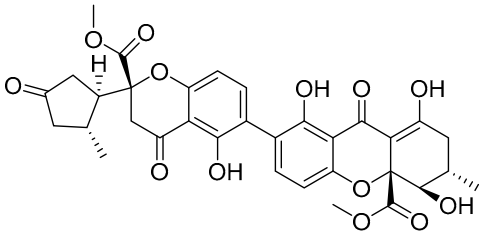
367. 3-Acetyl-2-methyl dihydrofuran-2(3H)-one



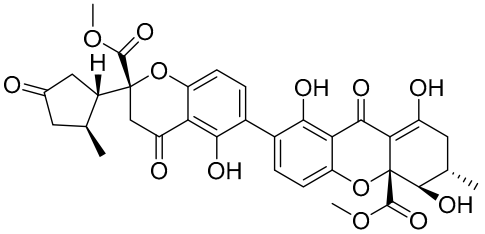
368. 2-Methyl-3-methylthio-butanoic acid



369. Chrysoxanthone A

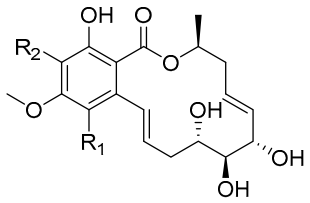


370. Chrysoxanthone B

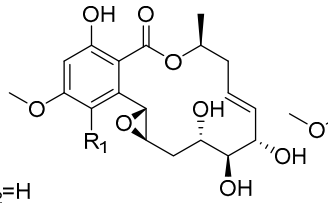


371. Chrysoxanthone C

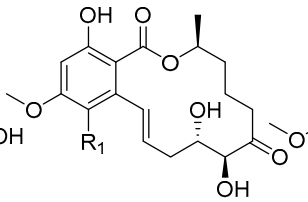
Figure S6. Structures of the compounds **352–371** isolated from fungi treated with valproic acid (VAP) or sodium valproate (SVP).



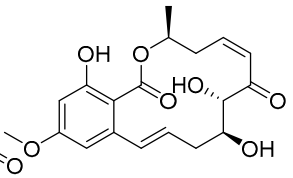
372. 5-Brommozeaenol, R_1=Br, R_2=H
373. 3,5-Dibromozeaenol, R_1=Br, R_2=Br
375. Zeaenol, R_1=H, R_2=H



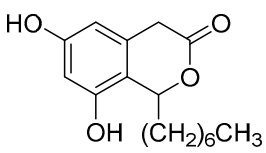
374. Aigialomycin B



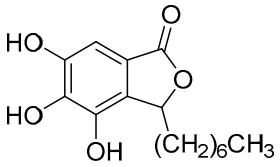
376. LL-Z1640-1



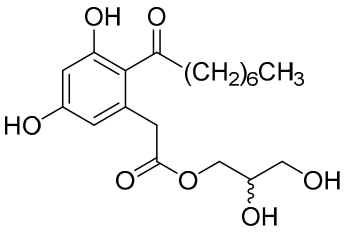
377. LL-Z1640-2



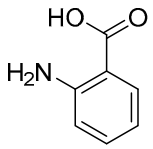
378. Cytosporone C



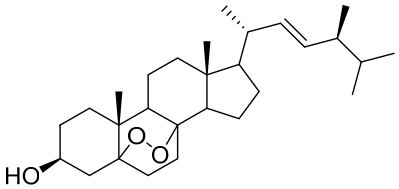
379. Cytosporone E



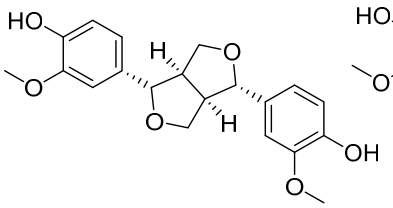
380. Cytosporone R



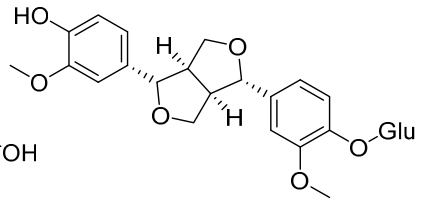
381. Anthranilic acid



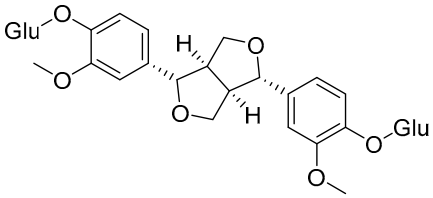
382. Ergosterol peroxide



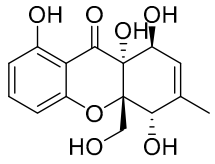
383. Pinoresinol



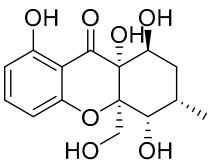
384. Pinoresinol monoglucoside



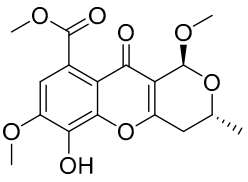
385. Pinoresinol diglucoside



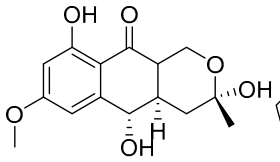
386. Phaseolorin J



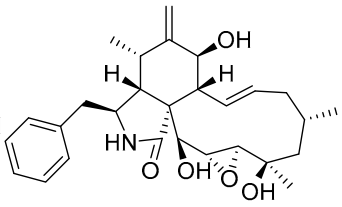
387. Phaseolorin D



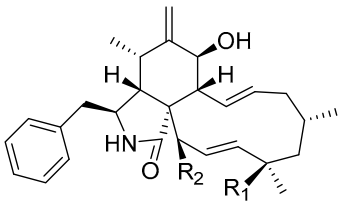
388. Chaetochromone B



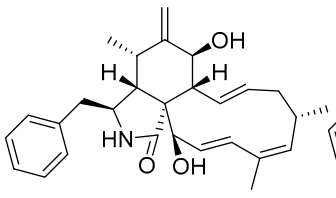
389. Pleosporalin D



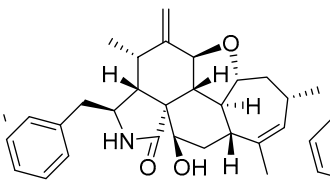
390. Phomoparagin D



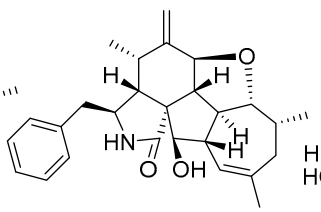
391. Cytochalasin J, R_1=OH, R_2=OH
392. Cytochalasin J1, R_1=OCH_3, R_2=OH
393. Cytochalasin J2, R_1=OH, R_2=OAc



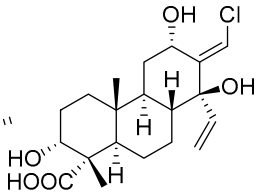
394. Cytochalasin J3



395. Cytochalasin H



396. Phomopchalasin D



397. Harzianolic acid

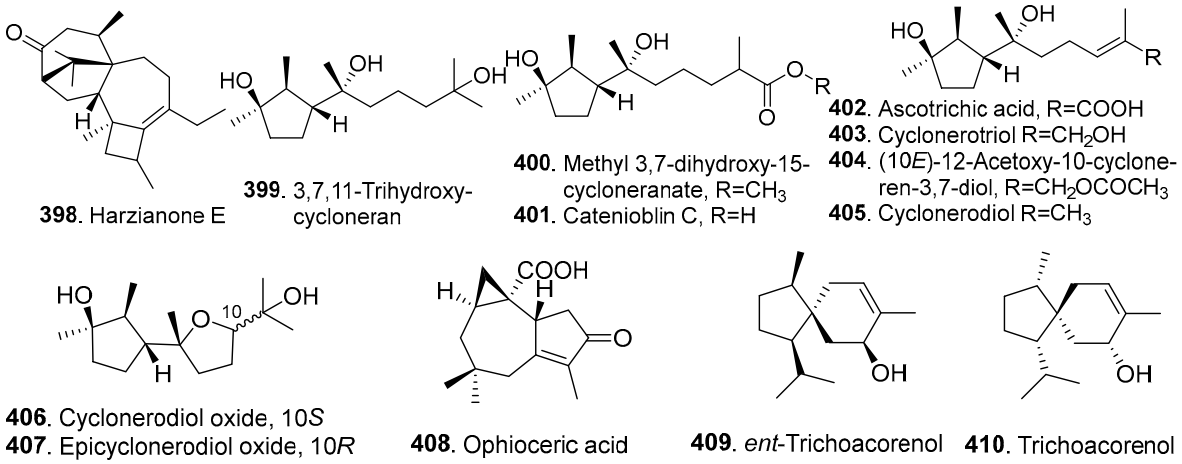
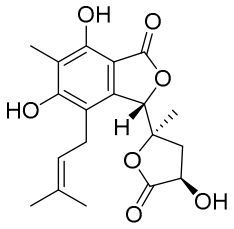
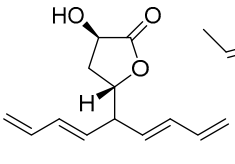


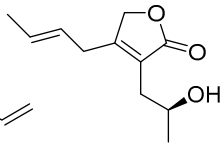
Figure S7. Structures of the compounds **372–410** isolated from fungi treated with sodium butyrate (NaBut).



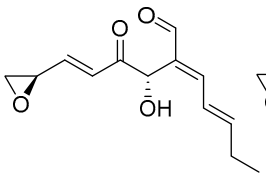
411. Chaetophenol G



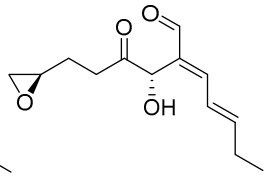
412. Cancrolide A



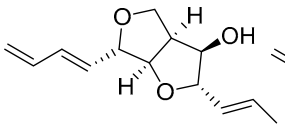
413. Cancrolide B



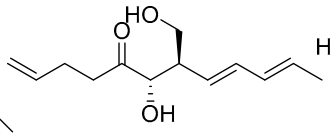
414. Mollipilin A



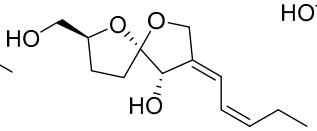
415. Mollipilin B



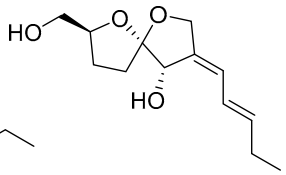
416. Mollipilin C



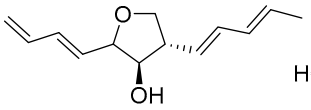
417. Mollipilin D



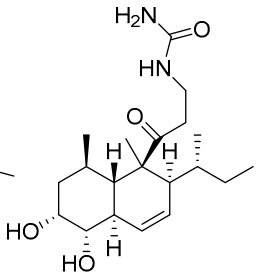
418. Mollipilin E



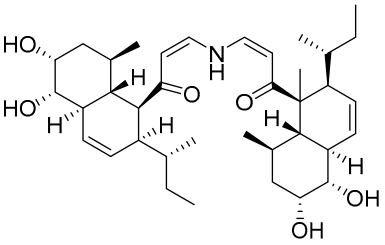
419. Mollipilin F



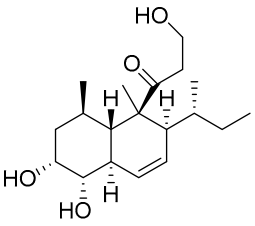
420. Aureonitol



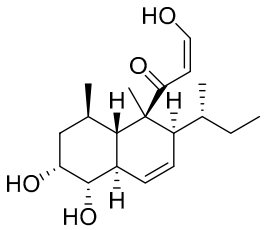
421. Eupenicinicol C



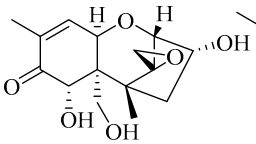
422. Eupenicinicol D



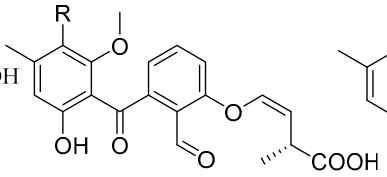
423. Eujavanicol A



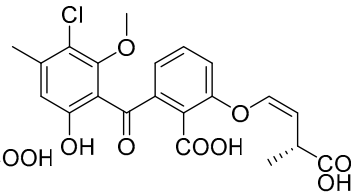
424. Eupenicinicol A



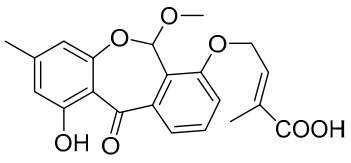
425. Deoxynivalenol



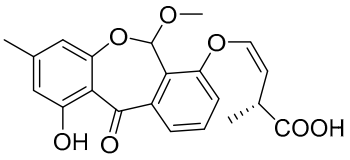
426. Cephalanone A, R=Cl
428. Cephalanone C, R=H



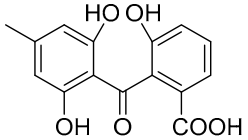
427. Cephalanone B



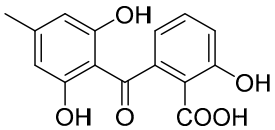
429. Cephalanone D



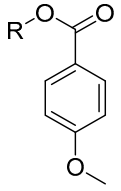
430. Cephalanone E



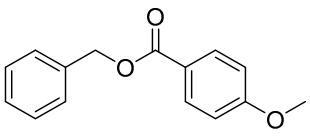
431. Cephalanone F



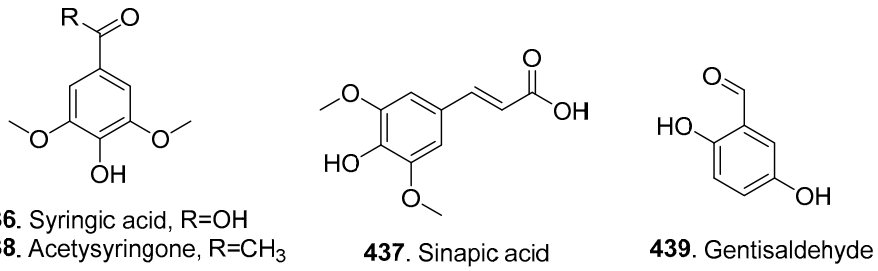
432. 2-(2,6-Dihydroxy-4-methylbenzoyl)-6-hydroxybenzoic acid



433. *p*-Anisic acid, R=H
434. *p*-Anisic acid methyl ester, R=CH_3



435. Benzyl anisate

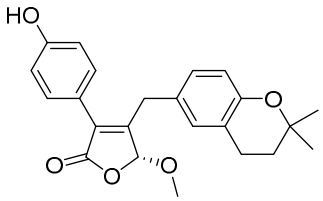


436. Syringic acid, R=OH
438. Acetysyringone, R=CH_3

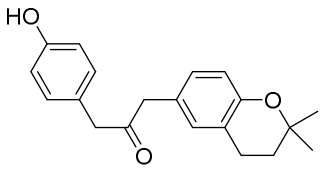
437. Sinapic acid

439. Gentisaldehyde

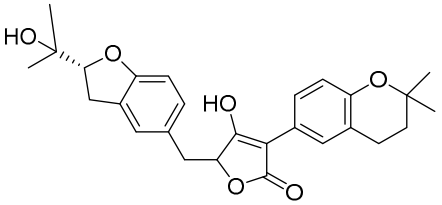
Figure S8. Structures of the compounds **411–439** isolated from fungi treated with nicotinamide.



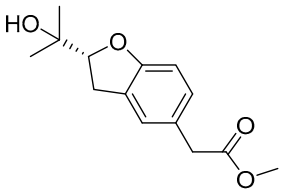
435. (*R*)-4-((2,2-Dimethylchroman-6-yl) methyl)-3-(4-hydroxyphenyl)-5-methoxyfuran-2(5*H*)-one



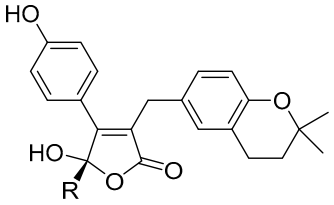
436. 1-(2,2-Dimethylchroman-6-yl)-3-(4-hydroxyphenyl)propan-2-one



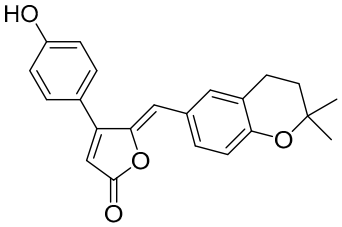
437. (*R*,*E*)-3-(2,2-Dimethylchroman-6-yl)-4-hydroxy-5-((2-(2-hydroxypropan-2-yl)-2,3-dihydrobenzofuran-5-yl)methylene) furan-2(5*H*)-one



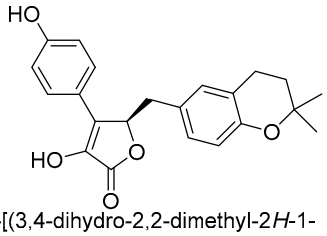
438. Methyl (*R*)-2-(2-(2-hydroxypropan-2-yl)-2,3-dihydrobenzofuran-5-yl) acetate



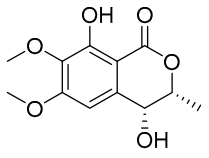
439. Flavipesolide A, R=$COOCH_3$
440. Flavipesolide B, R=$COOCH_2CH_3$
441. Flavipesolide C, R=COOH



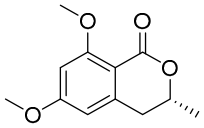
442. Rubrolide S



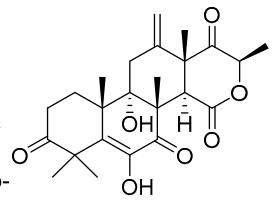
443. 5-[(3,4-dihydro-2,2-dimethyl-2*H*-1-benzopyran-6-yl)- me-thyl]-3-hydroxy-4(4-hydroxyphenyl)-2(5*H*)-furanone



444. (3*R*,4*R*)-3,4-Dihydro-4,8-dihydroxy-6,7-dimethoxy-3-methylisocoumarin



445. (3*R*)-3,4-dihydro-6,8-dimethoxy-3-methylisocoumarin



446, Terretonin C

Figure S9. Structures of the compounds **440–451** isolated from fungi treated with trichostatin A (TSA).

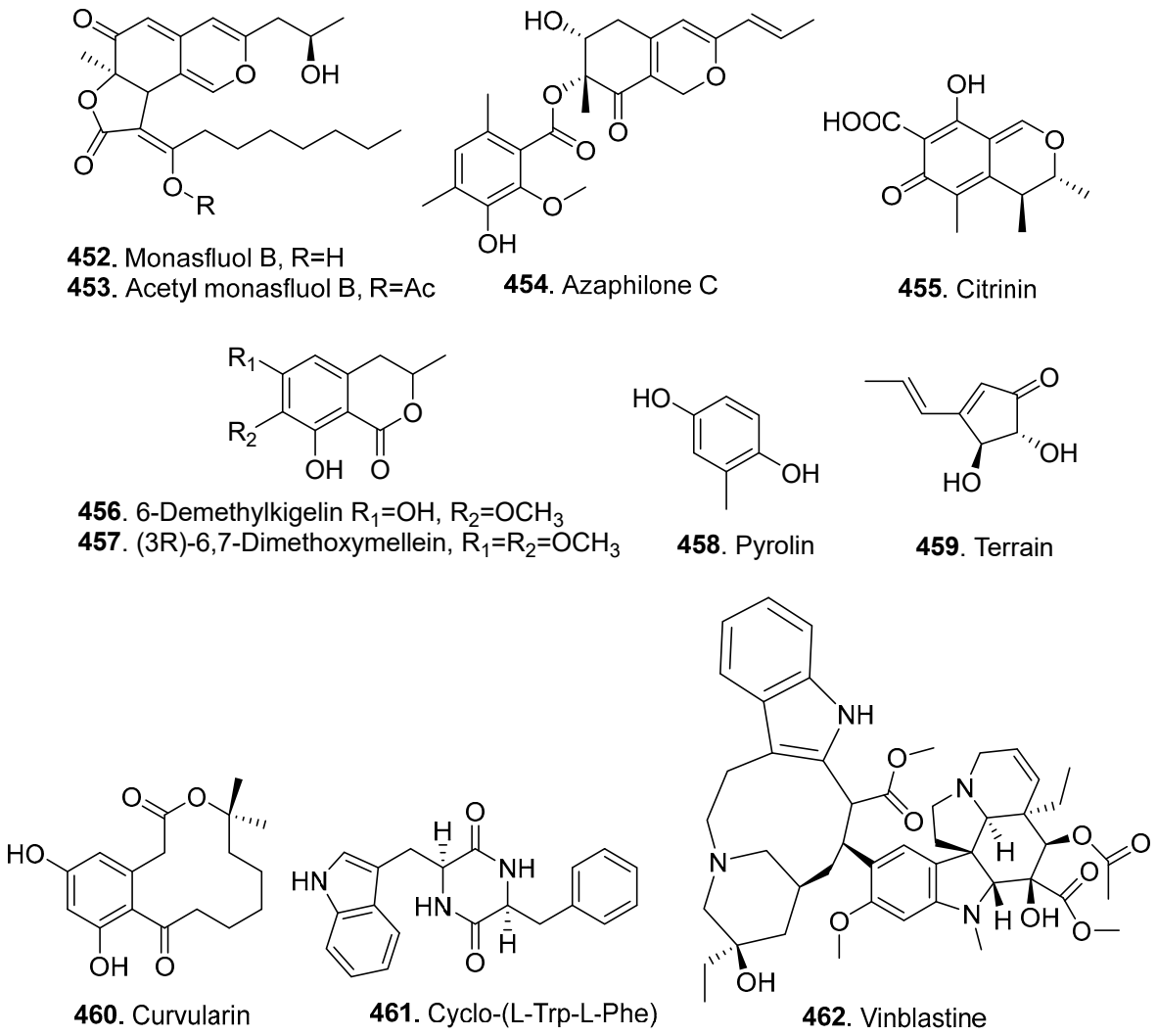
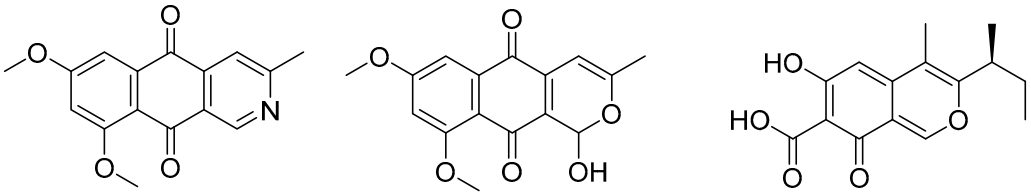


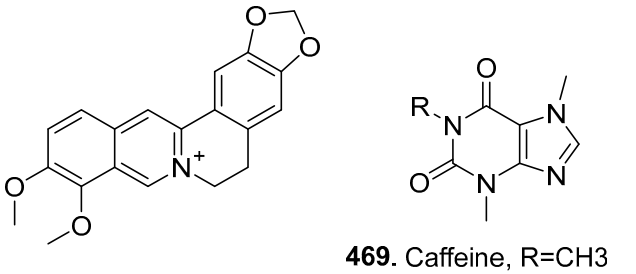
Figure S10. Structures of the compounds **452**–**462** isolated from fungi treated with other histone deacetylase modifiers.

Figure S11. Structures of the compounds **463** and **464** isolated from fungi treated with two histone deacetylase modifiers.



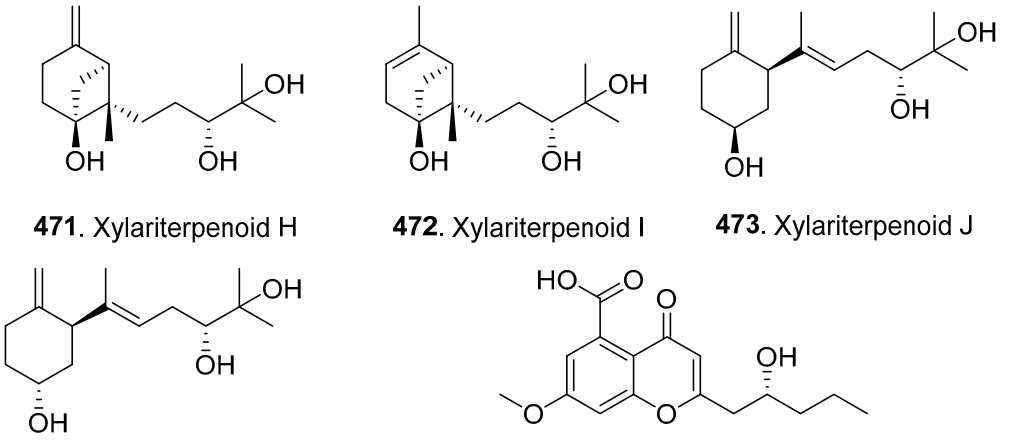
465. Scorpinone **466.** 1-Hydroxydehydroherbarin **467.** Ascochitine

Figure S12. Structures of the compounds **465**–**467** isolated from fungi treated with histone acetyltransferase modifier anacardic acid.



468. Berberine **469.** Caffeine, R=CH3
470. Theobromine, R=H

Figure S13. Structures of the compounds **468**–**470** isolated from fungi treated with histone methyltransferase modifier BRD4770.



471. Xylariterpenoid H **472**. Xylariterpenoid I **473**. Xylariterpenoid J

474. Xylariterpenoid K **475**. (*R*)-2-(2-Hydroxypentyl)-5-carboxy-7-methoxychromone

Figure S14. Structures of the compounds **471**–**475** isolated from fungi treated with proteasome modifier bortezomib.

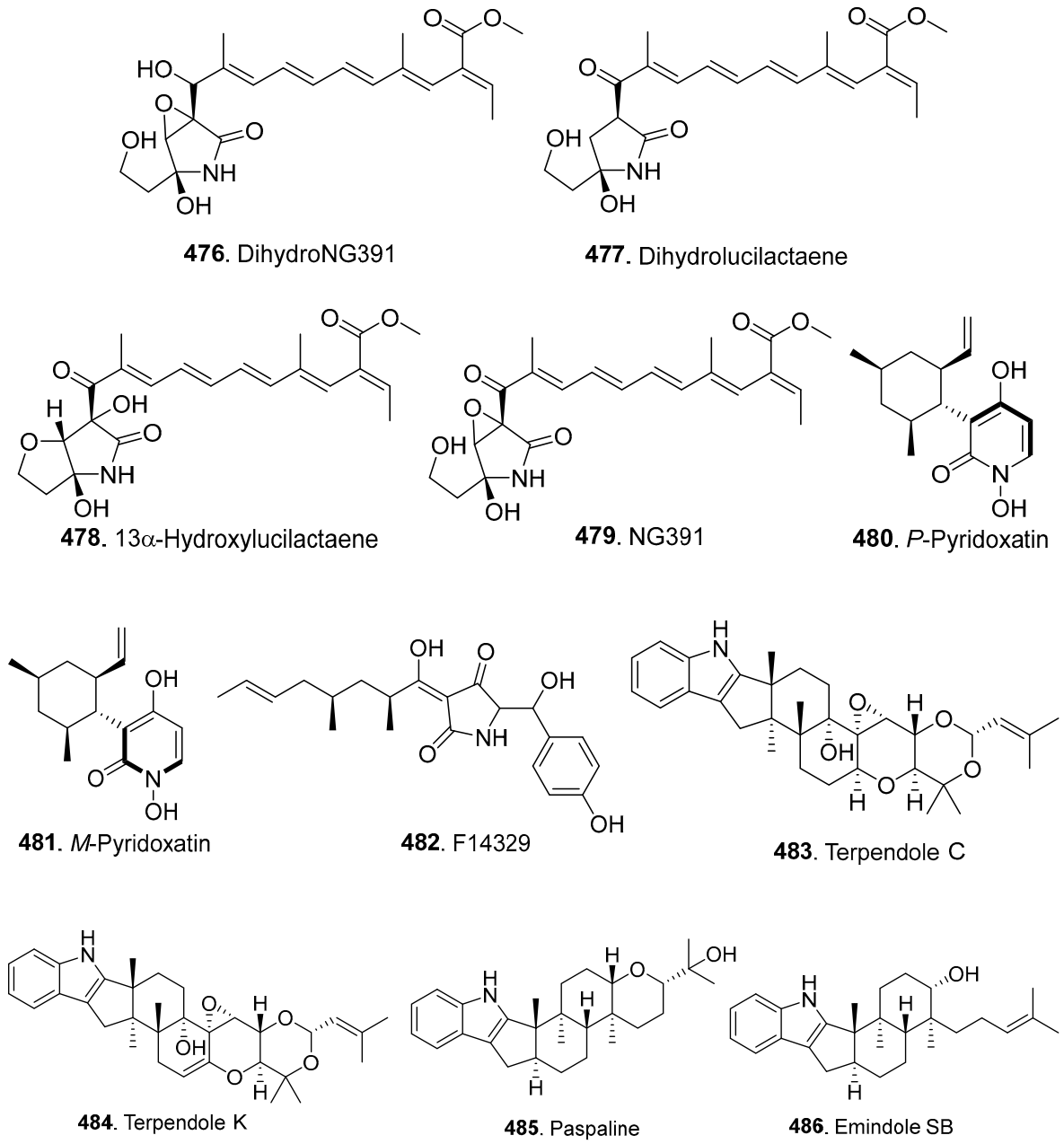
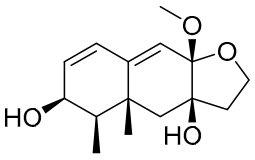
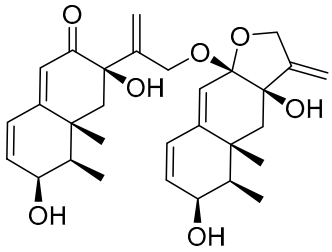


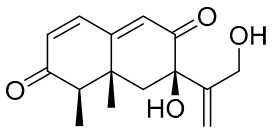
Figure S15. Structures of the compounds **476–486** isolated from fungi treated with NPD938.



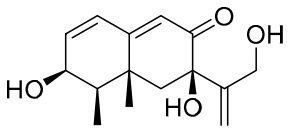
487. Dihydrobipolaroxin B



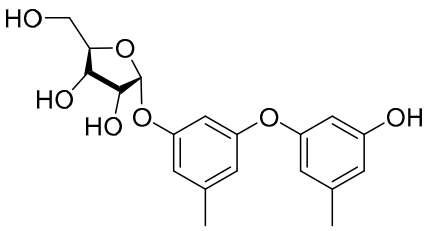
488. Dihydrobipolaroxin C



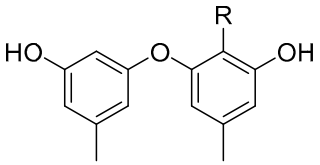
489. Dihydrobipolaroxin D



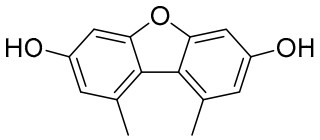
490. Dihydrobipolaroxin



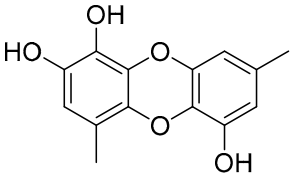
491. Diorcinol-3-*O*-α-D-ribofuranoside



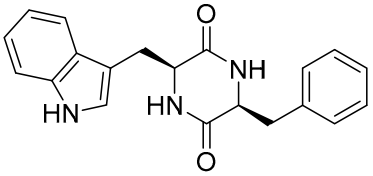
492. Diorcinal, R=H
494. Cordyol, R=OH



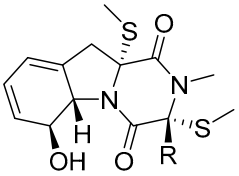
493. 3,3'-Dihydroxy-5,5'-dimethyldibenzofuran



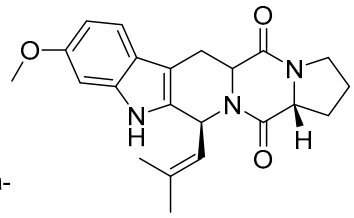
495. Gibellulin B



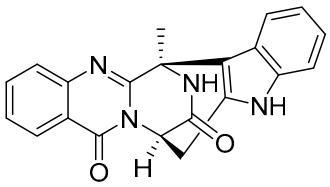
496. Cyclo-(L-Trp-L-Phe)



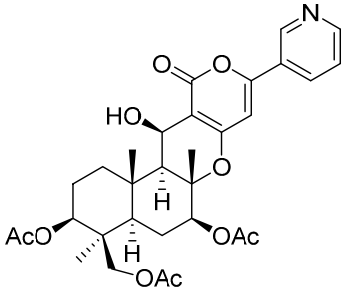
497. 3-Dehydroxymethylbisdethio-3,10a-bis(methylthio) gliotoxin, R=H
498. Bisdethiobis (methylthio) gliotoxin, R=CH_2OH



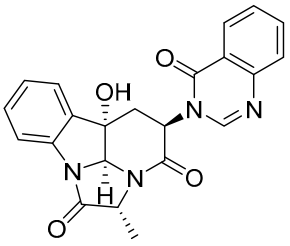
499. Fumitremorgin C



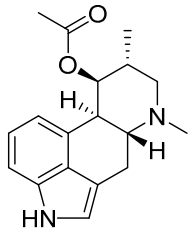
500. Fumiquinazoline J



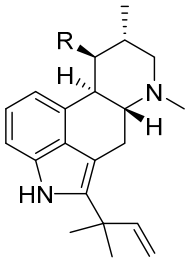
501. Pyripyropene A



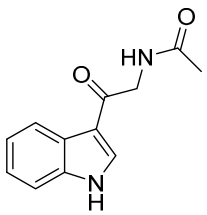
502. Chaetominine



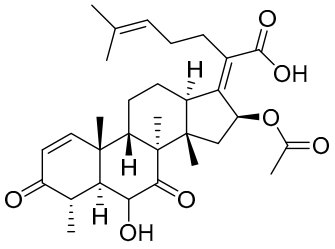
503. Fumigaclavine A



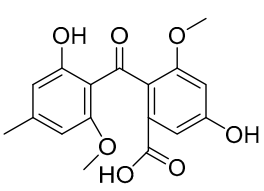
504. 9-Deacetoxyfumigaclavine C, R=H
505. Fumigaclavine C, R=$OCOCH_3$



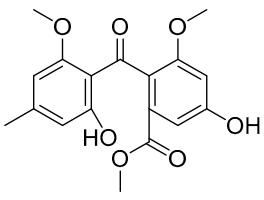
506. 3-Hydroxyacetyl indole



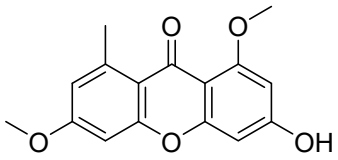
507. Helvolinic acid



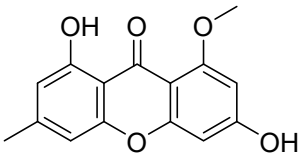
508. Rhizoctonic acid,



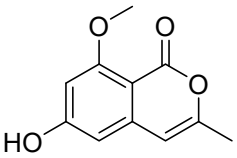
509. Monomethylsulochrin



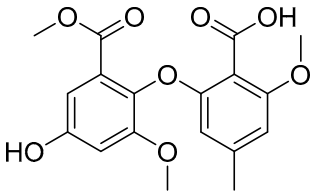
510. 3-Hydroxy-1,6-dimethoxy-8-methyl 9*H*-xanthen-9-one



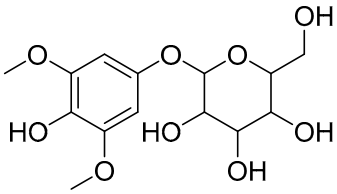
511. Questin



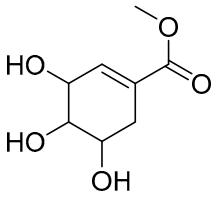
512. 6-Hydroxy-8-methoxy-3-methylisocoumarin



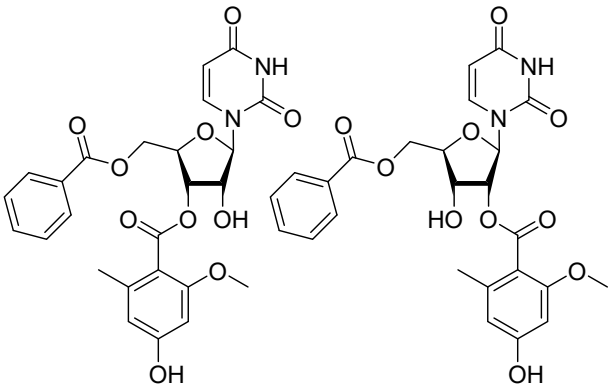
513. Circinoporic acid



514. Koaburaside

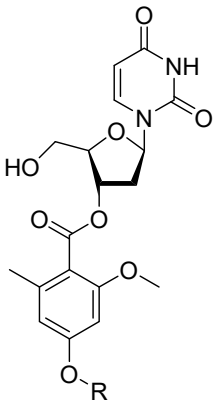


515. Methyl shikimate

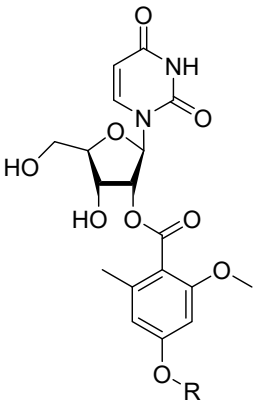


516. Kipukasin K

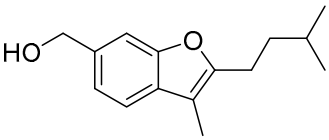
517. Kipukasin L



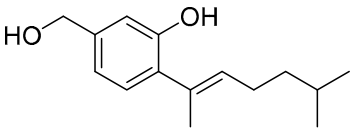
519. Kipukasin I, R=H
521. Kipukasin D, R=CH_3



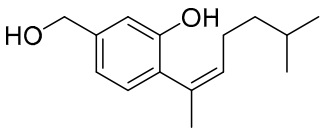
520. Kipukasin H, R=H
522. Kipukasin E, R=CH_3



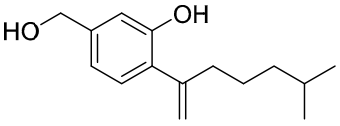
518. Aspergillusene E



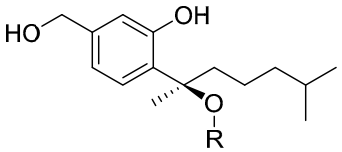
523. (*E*)-5-(Hydroxymethyl)-2-(6'-methylhept-2'-en-2'-yl) phenol



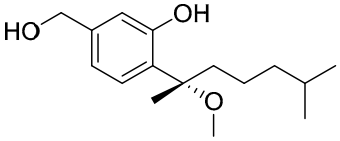
524. (*Z*)-5-(Hydroxymethyl)-2-(6'-methylhept-2'-en-2'-yl) phenol



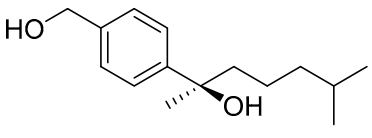
525. 7-Deoxy-7,14-dide-hydrosydonol



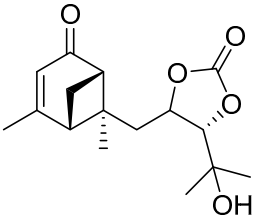
526. (7*R*)-Sydonol, R=H
527. (7*R*)-Methoxysydonol, R=CH_3



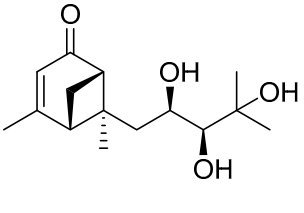
528. (7*S*)-Methoxysydonol



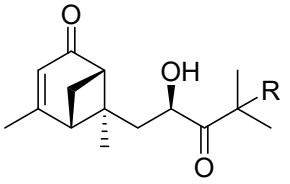
529. Aspergiterpenoid A



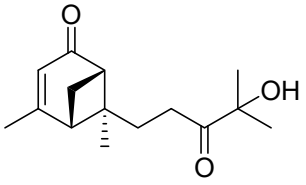
530. Eutypeterpene A



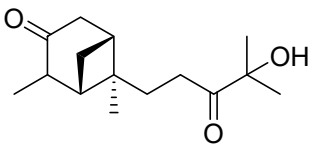
531. Eutypeterpene B



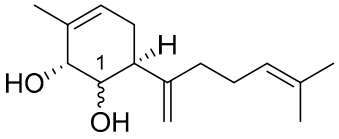
532. Eutypeterpene C, R=OH
533. Eutypeterpene D, R=H



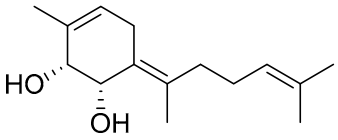
534. Eutypeterpene E



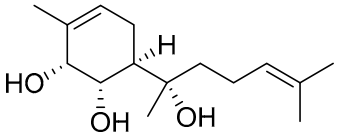
535. Eutypeterpene E



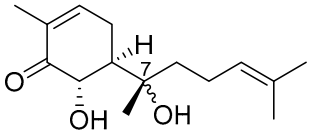
536. Eutypeterpene G, 1*S*
537. Eutypeterpene H, 1*R*



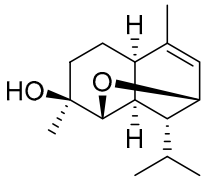
538. Eutypeterpene I



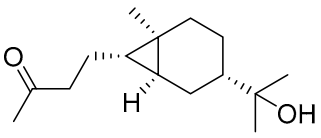
539. Eutypeterpene J



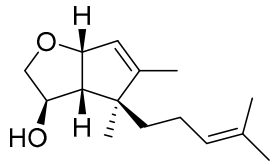
540. Eutypeterpene K, 7*S*
541. Eutypeterpene L, 7*R*



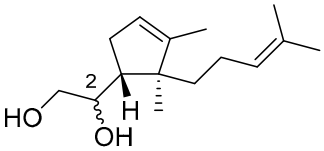
542. Eutypeterpene M



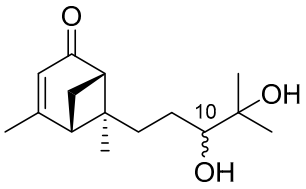
543. Eutypeterpene N



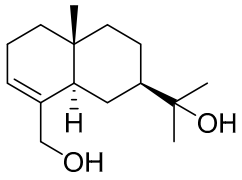
544. Eutypeterpene O



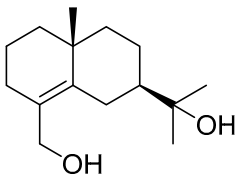
545. Eutypeterpene P, 2*S*
546. Eutypeterpene Q, 2*R*



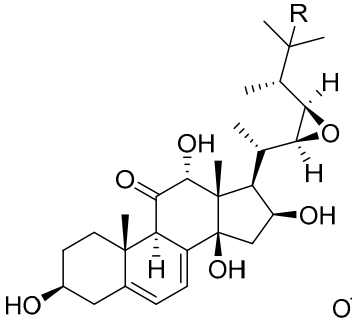
547. Xylariterpene A, 10*S*
548. Xylariterpene B, 10*R*



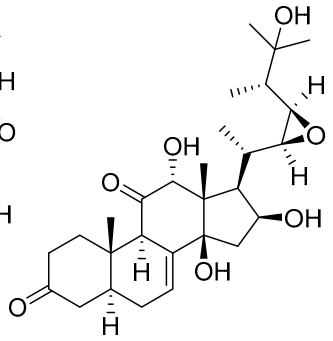
549. Eudesma-3-en-11,15-diol



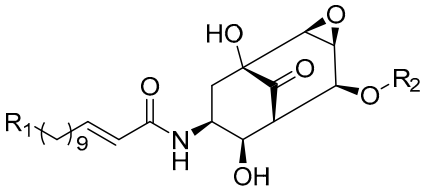
550. Eudesma-4-en-11,15-diol



551. Formosterol A, R=OH
558. Formosterol C, R=H



552. Formosterol B



553. 12'-*O*-Acetylisariotin A, R_1=OAc, R_2=H
561.TK-57-164A, R_1=H, R_2=CH_3

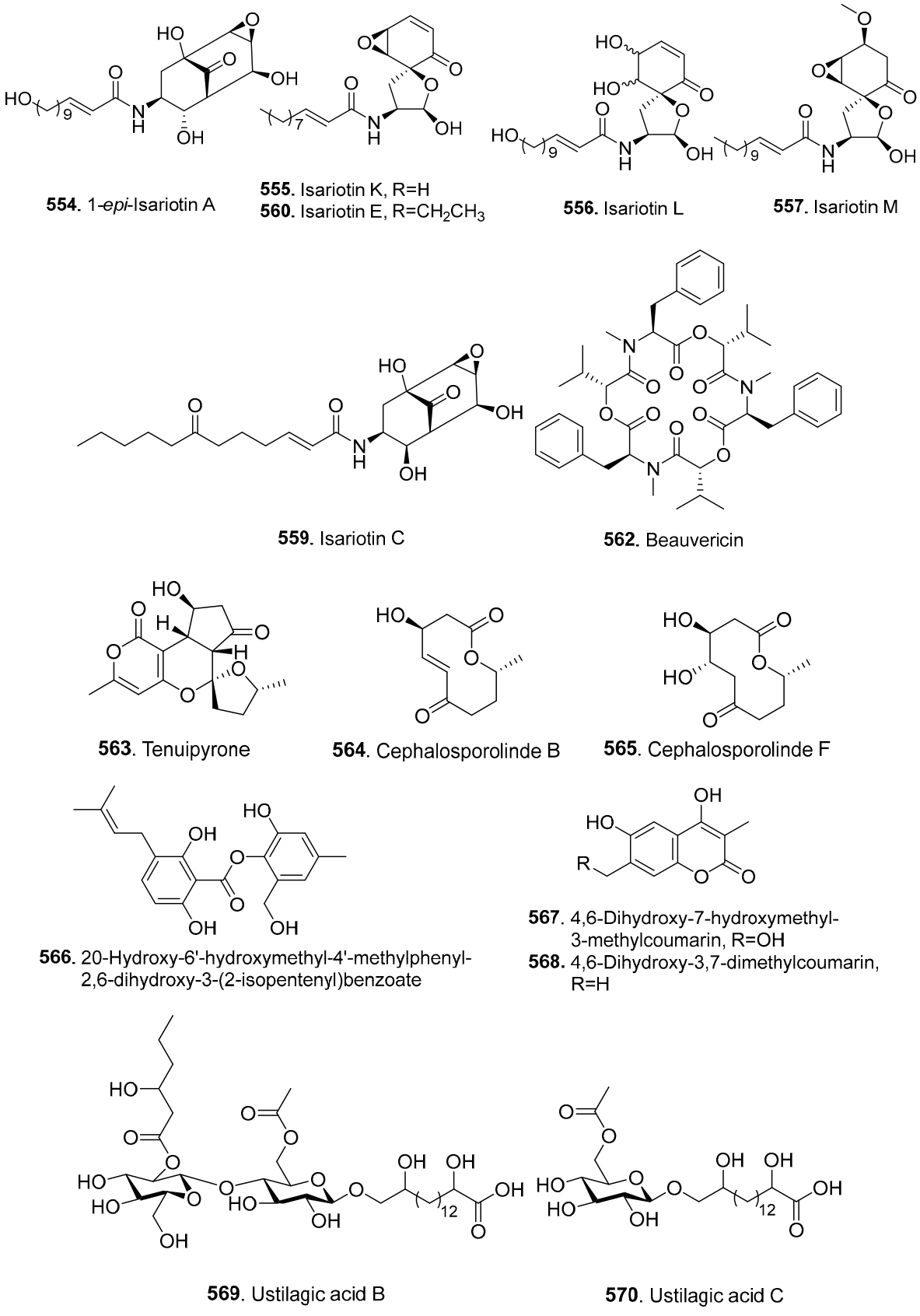


Figure S16. Structures of the compounds **487–570** isolated from fungi treated with two types of chemical epigenetic modifiers.

Table S1. The examples of 5-Aza affecting production of fungal secondary metabolites.

Fungal Species	Concentration of 5-Aza	Compounds Induced/Enhanced/Decreased	Ref.
Alternaria sp.	250 μM	Induced production of alternariol (**26**), alternariol-5-*O*-methyl ether (**27**), 3′-hydroxyalternariol-5-*O*-methyl ether (**28**), altenusin (**29**), tenuazonic acid (**30**), and altertoxin II (**31**).	[51]
Aspergillus sp. XS-20090066	2 μM	Induced production of (7*R*)-hydroxysydonic acid (**32**), (7*S*)-sydonic acid (**33**), (*S*)-5-(hydroxymethyl)-2-(2′,6′,6′-trimethyltetrahydro-2*H*-pyran -2-yl)phenol (**34**), (7*S*,11*S*)-12-hydroxysydonic acid (**35**), (7*S*)-11-dehydrosydonic acid (**36**), and (*S*)-sydowic acid (**37**).	[52]
Aspergillus clavatus	2 μM	Enhanced production of cytochalasin E (**38**), patulin (**39**) and pseurotin A (**40**).	[25]
A. flavus	1 mM	Inhibited production of aflatoxin B1 (**41**).	[53-55]
A. parasiticus	1 mM	Inhibited production of aflatoxin B1 (**41**).	[56]
A. niger	1 μM	Enhanced production of (*Z*)-9-octadecenoic acid (**42**) and 12-methyl-tetradecanoic acid methylester (**43**).	[15]
A. sydowii	100 μM	Induced production of three new bisabolane-type sesquiterpenoids namely (7*S*)-sydonic acid (**33**), (7*S*)-7-*O*-methylsydonol (**44**), (7*S*,11*S*)-12-hydroxysydonic acid (**45**) and 7-deoxy-7,14-didehydrosydonol (**46**), along with eight known compounds including (*S*)-sydonol (**47**), anhydrowaraterpol B (**48**), (*E*)-5-(hydroxymethyl)-2-(6′-methylhept-2′-en-2′-yl)phenol (**49**), AGI-B4 (**50**), sydowinin A (**51**), sydowinin B (**52**), and diorcinol (**53**).	[57]
A. terreus GZU-31-1	50 μM	Induced production of five butanolide derivatives namely asperbutyrolactones A (**54**) and B (**55**), aspulvinone E (**56**), butyrolactone I (**57**), and butyrolactone VI (**58**), and four diphenyl ether derivatives namely, asterric acid (**59**), penicillither (**60**), methyl asterrate (**61**) and 4′,6′-dichloroasterric acid (**62**).	[58]
Botryosphaeria rhodina	10 mg/L	Enhanced production of camptothecine (**63**).	[59]
Chaetomium sp.	6 mM	Enhanced production of isosulochrin (**64**).	[60]
Chaetomium globosporum	120 mg/L	Induced production of two cyclopentenones globosporins A (**65**) and B (**66**) and two monoterpenoid indole alkaloids globosporines C (**67**) and D (**68**), as well as three known compounds pseurotin A (**40**), mappianine E (**69**), and 19(20)*Z*-5-carboxymethylvallesiachotamine (**70**).	[61]
Cladosporium cladosporioides	0.1 μM–10 mM	Induced production of oxylipins: (9*Z*,12*Z*)-11-hydroxyoctadeca-9,12-dienoic acid (**71**), its methyl ester (**72**), and glycerol conjugate (**73**)	[26]
Cochliobolus lunatus TA26–46	10 μM	Induced production of new diethylene glycol phthalate esters, cochphthesters A–G (**74**–**80**), along with four known analogues: 1,2-benzenedicarboxylic acid,1,2-bis [2-(2-hydroxyethoxy) ethyl] ester (**81**), 1,2-benzenedicarboxylic acid, 1,1 -(oxydi-2,1-ethanediyl) 2,2 -bis [2-(2-hydroxyethoxy) ethyl] ester (**82**), 1,2-benzenedicarboxylic acid, 1,2-bis[2-[[2-[[2-(2-hydroxyethoxy) ethoxy] carbonyl] oxy] ethoxy] ethyl] ester (**83**), and 1,2-benzenedicarboxylic acid, oxydi-2,1-ethanediyl dimethyl ester (**84**).	[62]

Cochliobolus lunatus TA26-46	10 μM	Induced production of two α-pyrones namely cochliobopyrones A (**85**) and B (**86**), three isocoumarins namely 3-methyl-6,8-dihydroxyisocoumarin (**87**), 6-hydroxy-8-methoxy-3-methylisocoumarin (**88**), (*S*)-orthosporin (**89**), and one chromone altechromone A (**90**).	[63]
Cophinforma mamane	1 μM	Induced production of three thiodiketopiperazines: botryosulfuranols A (**91**), B (**92**) and C (**93**).	[64]
Cordyceps indigotica	100 μM	Induced production of aromatic polyketide glycosides: indigotides A (**94**) and B (**95**).	[65]
Diaporthe perseae	1 μM	Increased production of colchicine (**96**).	[66]
Diatrype sp.	0.1–10 μM	Induced production of new glycosylated polyketides namely lunalides A (**97**) and B (**98**).	[26]
Dimorphosporicola tragani CF-090383	100 μM	Induced production of dendrodolides E (**99**), G (**100**), and I (**101**).	[67]
Lophiotrema sp. F6932	50 μM	Induced production of spirobisnaphthalenes: palmarumycins CP30 (**102**) and C8 (**103**).	[68]
Muscodor yucatanensis Ni30	50 μM	Enhanced production of ergosterol (**104**) and xylaguaianol C (**105**).	[69]
Neosartorya udagawae HDN13-313	73 mg/L	Induced production of 3-methoxy-6-methyl-5-(methylsulfonyl)benzene-1,2,4-triol (**106**) and neosartoryone A (**107**).	[70]
Penicillium citreonigrum	50 μM	Enhanced production of sclerotiorin (**108**), ochrephilone (**109**), dechloroisochromophilone III (**110**), dechloroisochromophilone IV (**111**), 6-((3*E*,5*E*)-5,7-dimethyl-2-methylenenona-3,5-dienyl)-2,4-dihydroxy-3-methylbenzaldehyde (**112**), sclerotioramine (**113**), pencolide (**114**), atlantinones A (**115**) and B (**116**).	[35]
Penicillium minioluteum	500 μM	Induced production of new aspertetronin dimers: miniolins A–C (**117**–**119**), along with their precursor aspertetronin A (**120**).	[71]
Penicillium variabile HXQ-H-1A	0.2 mM	Induced production of a highly modified fatty acid amide, varitatin A (**121**).	[72]
Pestalotiopsis crassiuscula	500 mM	Induced production of 4,6-dihydroxy-3,7-dimethylcoumarin (**122**), pestalotiopyrone G (**123**) and 2′-hydroxy-6′-hydroxy-methyl-4′-methylphenyl 2,6-dihydroxy-3-(2-isopentenyl)benzoate (**124**).	[73]
Pestalotiopsis microspora	500 μM	Induced production of 4′-formamidophenyl-5-methoxybenzoate (**125**), pestalotiopyrone G (**123**), 4-hydroxybenzoic acid (**126**), LL-P880α (**127**), 2′-hydroxy 6′-hydroxymethyl-4′-methylphenyl-2,6-dihydroxy-3-(2-isopentenyl)benzoate (**128**), pestalotiollide B (**129**), endocrocin (**130**) and 1′-hydroxy-4-methoxy-6-pentyl-2*H*-pyran-2-one (**131**).	[74]
Phomopsis sp. MD 86	10 mg/L	Enhanced production of camptothecine (**63**).	[59]
Xylaria psidii	10 μM	Enhanced production of resveratrol (**132**).	[75]

Table S2. The examples of SAHA affecting production of fungal secondary metabolites.

Fungal Species	Concentration of SAHA	Compounds Induced/Enhanced/Decreased	Ref.
Aspergillus sp. AST0006	250 μM	Induced production of two new 3-(4-oxopyrano)-chromen-2-ones namely aspyranochromenones A (**150**) and B (**151**), along with nine known metabolites namely 6,7-dihydroxymellein (**152**), terrein (**153**), (3*R*)-6-hydroxymellein (**154**), (*R*)-orthosporin (**155**), 6,7-dimethoxymellein (**156**), 6-methoxymellein (**157**), (2*E*,6*E*,10*E*)-12-hydroxyfarnesol (**158**), 5,6-dihydroxymellein (**159**), and ethyl 3-methylorsellinate (**160**).	[81]
A. calidoustus	100 μM	Increased production of phenylahistin (**161**).	[82]
A. nidulans	100 μM	Induced production of fellutamides fellutamide B (**163**), antibiotic 1656G (**164**) and antibiotic 3127 (**165**).	[83]
A. nidulans	100 μM	Induced production of aspercryptins A1 (**166**) and A2 (**167**).	[84]
A. niger ATCC1015	10 μM	Induced production of nygerone A (**168**).	[41]
A. terreus PF26	500 μM	Enhanced production of terrein (**153**) and (3*R*)-6-hydroxymellein (**154**).	[85]
A. terreus RA2905	100 μM	Induced production of (+)- and (-)-asperfuranones (**169** and **170**) together with two benzyl pyrones, asperpyranones A (**171**) and B (**172**).	[86]
A. versicolor MCCC 3A00080	20 mg/L	Induced production of versiperol A (**173**), diorcinol (**53**) and 2,4-dimethoxyphenol (**174**).	[87]
A. versicolor OUCMDZ-2738	10 μM	Induced production of diorcinol (**53**), 3-[6-(2-methylpropyl)-2-oxo-1*H* pyrazin-3-yl] propanamide (**175**), brevianamide X (**176**), brevianamide R (**177**), brevianamide Q (**178**), diorcinol C (**179**), diorcinol E (**180**), and methyl diorcinol-4-carboxylate (**181**).	[88]
A. wentii na-3	20 μM	Induced production of aspewentins A (**182**) and B (**183**), along with an oxygenated derivative, aspewentin C (**184**).	[89]
A. westerdijkiae	100 μM	Increased production of penicillic acid (**162**).	[82]
Asteromyces cruciatus	100 μM	Induced production of primarolides A (**185**) and B (**186**).	[91]
Beauveria felina	500 μM	Induced production of eight cyclodepsipeptides: desmethylisaridin E (**187**), isaridin E (**188**), desmethylisaridin C2 (**189**), isaridin C2 (**190**), isaridin F (**191**), destruxin A (**192**), reseotoxin B (**193**), and roseocardin (**194**).	[92]
Bjerkandera adusta	300 μM	Induced production of six tremulane sesqiterpenoids: 11,12-dihydroxy-1-tremulen-5-one (**195**), (3*S*,6*R*,7*R*)-tremul-1-ene-6,11,12-triol (**196**), ceriponol A (**197**), conocenol B (**198**), and conocenolides A (**199**) and B (**200**)	[93]
Botrytis cinerea B05.10	50–200 μM	Induced production of botrycinereic acid (**201**).	[10]
Chaetomium sp.	6 mM	Enhanced production of isosulochrin (**64**).	[60]
Chalara sp. 6661	1 mM	Induced production of chalanilines A (**202**) and B (**203**), and adenosine-coupled xanthones A (**204**) and B (**205**).	[94]
Cladosporium cladosporioides	10 mM	Induced production of cladochromes F (**206**) and G (**207**), cladochromes A (**208**), B (**209**), D (**210**), and E (**211**) and calphostin B (**212**).	[26]
Cladosporium sphaerospermum L3P3	300 μM	Induced production of cladosins H–K (**213**–**216**) and cladodionen (**217**).	[95]

Claviceps purpurea Cp-1	500 μM	Enhanced production of ergometrine (**218**).	[96]
Cyathus stercoreus	200 μM	Induced production of nine novel sesquiterpenoids: cystercorolide (**219**), cystercorodiol A (**220**), 4-*O*-acetylcybrodol (**221**), 14-dehydroxycybrodol (**222**), cystercorodiol B (**223**), 4-*O*-acetylcystercorodiol B (**224**), 1-*O*-methoxycystercorodiol B (**225**), cystercorodiol C (**226**), and cystercorotone (**227**) along with four known sesquiterpenes, epicoterpene D (**228**), russujaponol F (**229**), riparol B (**230**), and cybrodol (**231**).	[97]
Daldinia sp.	800 μM	Induced production of daldinone E (**232**).	[98]
Drechslera sp.	500 μM	Induced production of hexosylphytosphyngosine (**233**).	[40]
Lachnum palmae	500 μM	Induced production of eighteen dihydroisocoumarins: palmaerones A–G (**234**–**240**), mellein (**18**), (3*R*)-6-hydroxymellein (**154**), (*R*)-6-methoxymellein (**157**) (*R*)-5-cholro-6-hydroxymellein (**241**), (3*R*,4*R*)-5-cholro-4,6-dihydroxymellein (**242**), palmaerin A (**243**), palmaerin B (**244**), palmaerin D (**245**), *trans*-4-hydroxymellein (**246**), *cis*-4-hydroxymellein (**247**), and (*R*)-5-hydroxymellein (**248**).	[99]
Microascus sp.	100 μM	Induced production of a cyclic pentadepsipeptide namely EGM-556 (**249**).	[42]
Muscodor yucatanensis Ni30	50 μM	Induced production of ergosterol (**104**) and xylaguaianol C (**105**).	[69]
Penicillium sp. HS-11	80 mg/L	Induced production of 4-epipenicillone B (**250**) and (*R*)-chrysogine (**251**).	[100]
Penicillium sp. KMU18029	100 μM	Induced production of meroditerpenoids: pyrandecarurins A (**252**) and B (**253**), pileotins A (**254**) and B (**255**), along with their potential precursor decaturenoid (**256**), as well as the known meroterpenoids 15-hydroxydecaturin A (**257**), oxalicines A (**258**) and B (**259**), and penisarin B (**260**).	[101]
Penicillium brasilianum	200 μM	Induced production of brasiliamide A (**261**), verruculogen TR2 (**262**), and penicillic acid (**162**).	[27]
Pencillium mallochii CCH01	1 mM	Induced production of sclerotiorin (**108**), sclerotioramine (**113**), and isochromophilones XIV (**263**) and XV (**264**).	[102]
Penicillium variabile HXQ-H-1	300 μM	Induced production of seven polyketides, including four new ones namely varilactones A (**265**) and B (**266**) and wortmannilactones M (**267**) and N (**268**), as well as three biogenetically related known wortmannilactones E (**269**), F (**270**) and H (**271**).	[103]
Phoma sp. LG0217	500 μM	Induced production of (10′*S*)-verruculide B (**272**), vermistatin (**273**) and dihydrovermistatin (**274**).	[104]
Spiromastix sp.	500 μM	Induced production of nine new guaine-type sesquiterpenes named spiromaterpenes A (**277**), B (**278**), C (**279**), D (**280**), E (**281**), F (**282**), G (**283**), H (**284**), and I (**285**).	[105]
Talaromyces funiculosus HPU-Y01	300 μM	Induced production of funitatin A (**286**).	[106]
Talaromyces wortmannii	100 μM	Induced production of wortmannilactones I–L (**287**–**290**).	[107]
Xylaria psidii	5 μM	Increased production of resveratrol (**132**).	[75]

Table S3. The examples of SBHA affecting production of fungal secondary metabolites.

Fungal Species	Concentration of SBHA	Compounds Induced/Enhanced/Decreased	Ref.
Alternaria sp.	250 μM	Induced production of alternariol (**26**), alternariol-5-*O*-methyl ether (**27**), 3′-hydroxyalternariol-5-*O*-methyl ether (**28**), altenusin (**29**), tenuazonic acid (**30**), and altertoxin II (**31**).	[51]
Arthrobotrys foliicola	500 μM	Induced production of 4-ethyl-7-hydroxy-8-methyl-2*H*-chromen-2-one (**291**).	[109]
Chaetomium indicum	500 μM	Induced production of chaetophenols A–F (**292–297**).	[110]
C. indicum	500 μM	Induced production of spiroindicumides A (**298**) and B (**299**).	[111]
Cladosporium cladosporioides	0.1–10 mM	Induced production of cladochromes A (**208**), B (**209**), D (**210**), E (**211**), F (**206**), and G (**207**), and calphostin B (**212**).	[26]
Cladosporium colocasiae	500 μM	Induced production of (3β,7α)-cholest-5-en-23-yne-3,7-diol (**300**) and (3β,7α)-cholest-5-en-23-yne-3,7,25-triol (**301**).	[112]
Cordyceps annullata	500 μM	Induced production of four 2,3-dihydrobenzofurans, annullatins A–D (**302–305**), and one aromatic polyketide, annullatin E (**306**).	[113]
Cordyceps indigotica	1 mM	Induced production of six novel aromatic polyketides namely indigotides C–F (**307–310**), 13-hydroxyindigotide A (**311**), and 8-*O*-methylindigotide B (**312**) along with indigotides A (**94**) and B (**95**)	[114]
Eutypella sp. MCCC 3A00281	1 mM	Induced production of 26 eremophilane-type sesquiterpenoids namely eutyperemophilanes A–Z (**313–338**).	[115]
Fusarium oxysporum sp. conglutinans	500 μM	Induced production of two fusaric acid derivatives namely 5-butyl-6-oxo-1,6-dihydropyridine-2-carboxylic acid (**339**) and 5-(but-9-enyl)-6-oxo-1,6-dihydropyridine-2-carboxylic acid (**340**).	[116]
Gibellula formosana	1 mM	Enhanced production of isariotin A (**341**).	[38]
Paraconiothyrium brasiliense	500 μM	Induced production of JBIR-54 (**342**).	[117]
Phomopsis sp. 0391	500 μM	Induced production of new metabolite 13-angeloyloxy-diplosporin (**343**) and six known 3-methoxymethyl-agistatine D (**344**), gynuraone (**345**), mellein (**18**), cytosporone B (**346**), dothiorelone A (**347**), and dothiorelone C (**348**).	[118]
Torrubiella luteorostrata	1 μM	Induced production of three new prenylated tryptophan analogs, luteorides A–C (**349–351**).	[119]

Table S4. The examples of VPA or SVP affecting production of fungal secondary metabolites.

Fungal Species	VPA/SVP and its Concentration	Compounds Induced/Enhanced/Decreased	Ref.
Aspergillus clavatus	VPA, 60 μM	Enhanced production of cytochalasin E (**38**).	[25]
Aspergillus fumigatus GA-L7	VPA, 500 μM	Induced production of fumiquinazoline C (**352**).	[120]
Cordyceps militaris	VPA, 50 μM	Induced production of cordycepin (**353**).	[121]
Diaporthe sp.	VPA, 100 μM	Induced production of three novel cytotoxic secondary metabolites namely xylarolide A (**354**), diportharine A (**355**) and xylarolide B (**356**), along with one known compound xylarolide (**357**).	[122]
Diaporthe sp. PF20	VPA, 100 μM	Enhanced production of piperine (**358**).	[123]
Dimorphosporicola tragani CF-090383	VPA, 100 μM	Induced production of dendrodolides E (**99**), G (**100**) and I (**101**).	[67]
Doratomyces microspora	VPA, 50 μM	Enhanced production of *p*-hydroxy benzaldehyde (**359**), phenyl acetic acid (**360**), phenyllactic acid (**361**), indole-3-carboxylic acid (**362**), indole-3-acetic acid (**363**), cyclo-(proline-methionine) (**364**), and cyclo-(phenylalanine-proline) (**365**).	[27]
Drechslera sp.	VPA, 500 μM	Increased production of benzophenone (**366**).	[40]
Macrophomina phaseolina	SVP, 1 mM	Induced production of 3-acetyl-2-methyl dihydro-furan-2(3*H*)-one (**367**) and 2-methyl-3-methylthio-butanoic acid (**368**).	[124]
Penicillium chrysogenum HLS111	SVP, 10 μM	Induced production of three new heterdimeric tetrahydroxanthone–chromanone lactones chrysoxanthones A–C (**369**–**371**).	[125]

Table S5. The examples of NaBut affecting production of fungal secondary metabolites.

Fungal Species	Concentration of NaBut	Compounds Induced/Enhanced/Decreased	Ref.
Aspergillus clavatus	9 μM	Enhanced production of cytochalasin E (**38**), patulin (**39**), and pseurotin A (**40**).	[25]
Cochliobolus lunatus TA26-46	10 mM	Induced production of novel brominated resorcylic acid lactones: 5-bromozeaenol (**372**) and 3,5-dibromozeaenol (**373**), together with four known analogures aigialomycin B (**374**), zeaenol (**375**), LL-Z1640-1 (**376**), and LL-Z1640-2 (**377**).	[127]
Diaporthe sp. PF20	100 μM	Enhanced production of piperine (**358**).	[123]
Leucostoma persoonii	100 μM	Induced production of cytosporone R (**380**). Enhanced production of cytosporones B (**346**), C (**378**) and E (**379**).	[128]
Penicillium brevicompactum	10 mM	Enhanced production of anthranilic acid (**381**) and ergosterol peroxide (**382**).	[129]
Phomopsis sp. XP-8	1 mM	Decreased production of pinoresinol (**383**), pinoresinol monoglucoside (**384**), pinoresinol diglucoside (**385**).	[130]
Phomopsis asparagi DHS-48	50 μM	Induced production of new compounds phaseolorin J (**386**) and phomoparagin D (**387**), along with known chromones phaseolorin D (**388**), chaetochromone B (**389**), and pleosporalin D (**390**), and cytochalasins J (**391**), J1 (**392**), J2 (**393**), J3 (**394**), H (**395**) and phomopchalasin D (**396**).	[131]
Trichoderma harzianum XS-20090075	10 μM	Induced production of three new terpenoids harzianolic acid (**397**), harzianone E (**398**) and 3,7,11-trihydroxy-cycloneran (**399**), together with 11 known sesquiterpenoids methyl 3,7-dihydroxy-15-cycloneranate (**400**), catenioblin C (**401**), ascotrichic acid (**402**), cyclonerotriol (**403**), (10*E*)-12-acetoxy-10-cycloneren-3,7-diol (**404**), cyclonerodiol (**405**), cyclonerodiol oxide (**406**) and epicyclonerodiol oxide (**407**), ophioceric acid (**408**), *ent*-trichoacorenol (**409**) and trichoacorenol (**410**).	[132]

Table S6. The examples of nicotinamide affecting production of fungal secondary metabolites.

Fungal Species	Concentration of nicotinamide	Compounds Induced/Enhanced/Decreased	Ref.
Chaetomium cancroideum	50 μM	Enhanced production of five polyketides included chaetophenols B (**293**) and C (**294**), chaetophenol G (**411**), and cancrolides A (**412**) and B (**413**).	[134]
C. mollipilium	100 μM	Induced production of new polyketides mollipilin A–E (**414**–**418**), along with two known compounds mollipilin F (**419**) and aureonitol (**420**).	[135]
Eupenicillium sp. LG41	1.5 mg/L	Induced production of two decalin-containing compounds eupenicinicols C (**421**) and D (**422**) along with their biosynthetic precursors, eujavanicol A (**423**) and eupenicinicol A (**424**).	[136]
Fusarium graminearum	500 μg/mL	Decreased production of ergosterol peroxide (**382**) and deoxynivalenol (**425**).	[137]
Graphiopsis chlorocephala	10 μM	Induced production of benzophenones cephalanones A–F (**426**–**431**) and 2-(2,6-dihydroxy-4-methylbenzoyl)-6-hydroxybenzoic acid (**432**).	[138]
Penicillium brasilianum	100 μM	Decreased production of brasiliamide A (**261**), verruculogen TR2 (**262**), and penicillic acid (**162**).	[27]
P. brevicompactum	100 μM	Induced production of phenolic metabolites: *p*-hydroxybenzaldehyde (**359**), phenyl acetic acid (**360**), *p*-anisic acid (**433**), *p*-anisic acid methyl ester (**434**), benzyl anisate (**435**), syringic acid (**436**), sinapic acid (**437**), acetosyringone (**438**), and gentisaldehyde (**439**).	[129]

Table S7. The examples of other histone deacetylase modifiers affecting production of fungal secondary metabolites.

Modifier and Its Concentration	Fungal Species	Compounds Induced/Enhanced/Decreased	Ref.
Dihydrocoumarin, 5 mM	*Monascus ruber* M7	Increased production of monasfluol B (**452**), acetyl-monasfluol B (**453**) and azaphilone C (**454**). Decreased production of citrinin (**455**).	[45]
Entinostat, 500 μM	*Hypomyces* sp. CLG4	Induced production of (3*R*)-6-hydroxymellein (**154**), (3*R*)-6-methoxymellein (**157**), 6-demethylkigelin (**456**), (3*R*)-6,7-dimethoxymellein (**457**), pyrolin (**458**), and terrain (**459**).	[141]
2-Hexyl-4-pentynoic acid, 37.5 mg/L	*Aspergillus versicolor*	Increased production of diorcinol (**53**), curvularin (**460**), and cyclo-(L-Trp-L-Phe) (**461**).	[48]
Octanoylhydroxamic acid, 500 μM	*Drechslera* sp.	Increased production of benzophenone (**366**).	[40]
Quercetin, 100 μM	*Aspergillus amstelodami* VR177L	Induced production of vinblastine (**462**).	[142]
Quercetin, 100 μM	*Penicillium concavoradulozum* VE89L	Induced production of vinblastine (**462**).	[142]

Table S8. The examples of two types of chemical epigenetic modifiers affecting production of fungal secondary metabolites.

Fungal Species	Modifier ant Its Concentration	Compounds Induced/Enhanced/Decreased	Ref.
Alternaria sp.	5-Aza (250 μM) + SAHA (500 μM)	Induced production of alternariol (**26**), alternariol-5-*O*-methyl ether (**27**), 3′-hydroxyalternariol-5-*O*-methyl ether (**28**), altenusin (**29**), tenuazonic acid (**30**), and altertoxin II (**31**).	[51]
Aspergillus sp. SCSIOW2	5-Aza (1 mM) + SBHA (1 mM)	Induced production of three new eremophilane-type sesquiterpenes, dihydrobipolaroxin B (**487**), dihydrobipolaroxin C (**488**), and dihydrobipolaroxin D (**489**), along with one known analogue, dihydrobipolaroxin (**490**).	[146]
Aspergillus sp. SCSIOW3	5-Aza (1 mM) + SBHA (1 mM)	Induced production of one new diphenylether-*O*-glycoside namely diorcinol 3-*O*-*α*-D-ribofuranoside (**491**), along with seven known compounds (7*S*)-sydonic acid (**33**), (*S*)-sydowic acid (**37**), diorcinal (**492**), 3,3′-dihydroxy-5,5′-dimethyldibenzofuran (**493**), cordyol (**494**), gibellulin B (**495**), and cyclo-(L-Trp-L-Phe) (**496**).	[147]
Aspergillus clavatus	GlcNAc (0.5 μM) + NaBut (9 μM)	Increased production of pseurotin A (**40**).	[25]
Aspergillus fumigatus	5-Aza (500 μM) + SBHA (500 μM)	Induced production of ten alkaloids: 3-dehydroxymethylbisdethio-3,10a-bis(methylthio) gliotoxin (**497**), bisdethiobis (methylthio) gliotoxin (**498**), fumitremorgin C (**499**), fumiquinazoline J (**500**), pyripyropene A (**501**), chaetominine (**502**), fumigaclavine A (**503**), 9-deacetoxyfumigaclavine C (**504**), fumigaclavine C (**505**), and 3-hydroxyacetyl indole (**506**); six polyketides: helvolinic acid (**507**), rhizoctonic acid (**508**), monomethylsulochrin (**509**), 3-hydroxy-1,6-dimethoxy-8-methyl 9*H*-xanthen-9-one (**510**), questin (**511**) and 6-hydroxy-8-methoxy-3-methylisocoumarin (**512**); and three benzene derivatives: circinoporic acid (**513**), koaburaside (**514**), and methyl shikimate (**515**).	[148]
Aspergillus versicolor	5-Aza (100 μM) + SAHA (100 μM)	Induced production of two new nucleoside derivatives, kipukasins K (**516**) and L (**517**), and one new bisabolane sesquiterpene, aspergillusene E (**518**), along with four known nucleoside derivatives, kipukasin I (**519**), kipukasin H (**520**), kipukasin D (**521**), and kipukasin E (**522**), and ten known bisabolane sesquiterpenes, (7*R*)-hydroxysydonic acid (**32**), (7*S*)-sydonic acid (**33**), (*E*)-5-(hydroxymethyl)-2-(6′-methylhept-2′-en-2′-yl)phenol (**523**), (*Z*)-5-(hydroxymethyl)-2-(6′-methylhept-2′-en-2′-yl)phenol (**524**), 7-deoxy-7,14-didehydrosydonol (**525**), (7*R*)-sydonol (**526**), (7*R*)-methoxysydonol (**527**), (7S)-sydonol (**47**), (7S)-methoxysydonol (**528**), and aspergiterpenoid A (**529**).	[149]
Eutypella sp.	5-Aza (1 mM) + SBHA (1 mM)	Induced production of 21 sesquiterpenes including 17 undescribed eutypeterpenes A-Q (**530–546**), four known sesquiterpenes: xylariterpenoids A (**547**) and B (**548**),	[150]

		eudesma-3-en-11,15-diol (**549**), and eudesma-4-en-11,15-diol (**550**).	
Gibellula formosana	SBHA (1 mM) + RG-108 (1 mM)	Induced production of two new highly oxidized ergosterols, formosterols A (**551**) and B (**552**), and five new isariotin analogs, 12′-*O*-acetylisariotin A (**553**), 1-*epi*-isariotin A (**554**), and isariotins K–M (**555**–**557**), together with six known compounds isariotin A (**341**), formosterol C (**558**), isariotin C (**559**), isariotin E (**560**), TK-57-164A (**561**), and beauvericin (**562**).	[38]
Isaria tenuipes	SBHA (500 μM) + RG–108 (500 μM)	Induced production of a novel polyketide tenuipyrone (**563**) along with two plausible precusors cephalosporolides B (**564**) and F (**565**) of tenuipyrone (**563**).	[151]
Leucostoma persoonii	5-Aza (50 μM) + NaBut (100 μM)	Induced production of cytosporones B (**346**), C (**378**), E (**379**) and R (**380**).	[128]
Muscodor yucatanensis Ni30	5-Aza (50 μM) + SAHA (50 μM)	Enhanced production of ergosterol (**104**) and xylaguaianol C (**105**).	[69]
Pestalotiopsis acaciae	5-Aza (500 μM) + SAHA (500 μM)	Induced production of three novel aromatic compounds: 20-hydroxy-6′-hydroxymethyl-4′-methylphenyl-2,6-dihydro xy-3-(2-isopentenyl)benzoate (**566**), 4,6-dihydroxy-7-hydroxymethyl-3-methylcoumarin (**567**) and 4,6-dihydroxy-3,7-dimethylcoumarin (**568**).	[152]
Ustilago maydis	5-Aza (500 μM) + SBHA (500 μM)	Induced production of ustilagic acids B (**569**) and C (**570**).	[153]
Xylaria psidii	5-Aza (5 μM) + SAHA (10 μM)	Increased production of resveratrol (**132**).	[75]