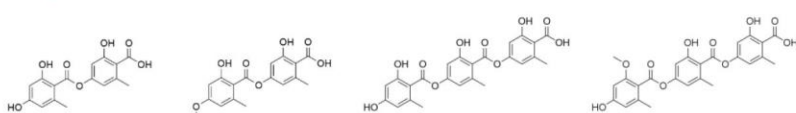


1. Depsides, derived from orsellinic acid



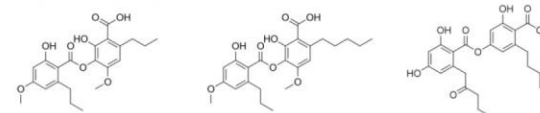
lecanoric acid

evernic acid

gyrophoric acid

umbilicic acid

2. Depsides (alkyl-substituted), derived from orsellinic acid

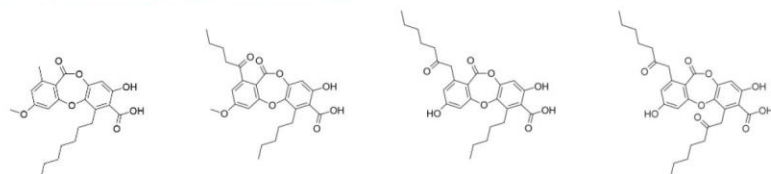


sekikaic acid
(meta)

homosekikaic acid
(meta)

olivetoric acid

3. Depsidones (alkyl-substituted), derived from orsellinic acid



grayanic acid

lobaric acid

physodic acid

aletronic acid

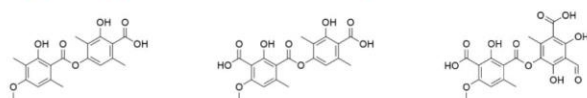
4. Depsides (related to atranorin), derived from 3MOA



atranorin

chloroatranorin

5. Depsides (related to barbatic acid), derived from 3MOA

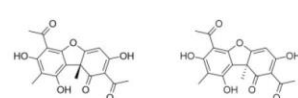


barbatic acid

squamatic acid

thamnolic acid
(meta)

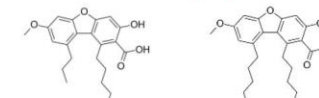
7. Dibenzofurans



(+)-usnic acid

(-)-usnic acid

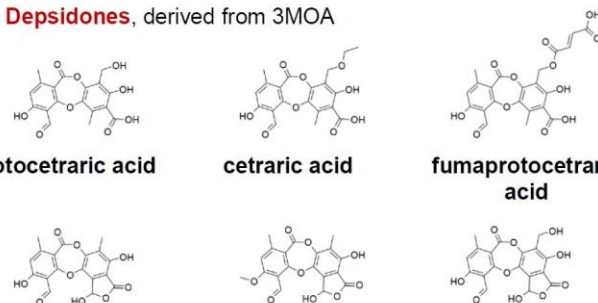
8. Dibenzofurans (alkyl-substituted)



didymic acid

condidymic acid

6. Depsidones, derived from 3MOA



protocetraric acid

cetraric acid

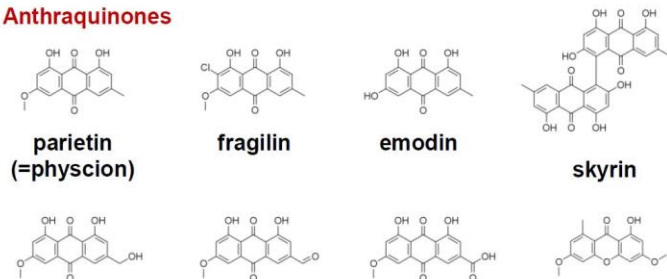
fumaprotocetraric
acid

norstictic acid

stictic acid

salazinic acid

9. Anthraquinones



parietin
(=phycion)

fragilin

emodin

skyrin

fallacinol
(=teloschistin)

fallacinal

parietinic
acid

lichexanthone

Fig. S1. Chemical structures of cortical and medullary substances of lichens. Lichen substances reported in the 30 genome-sequenced species are grouped by nine chemical groups, based on the chemical structures (Also, see Table S1). 3MOA, 3-methylorsellinic acid.