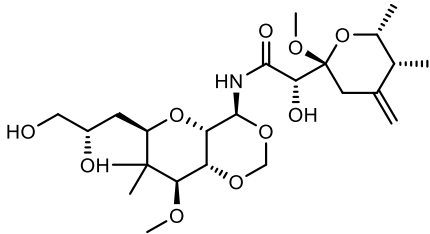
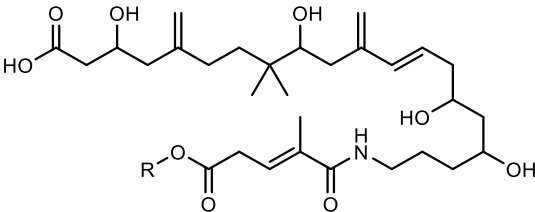
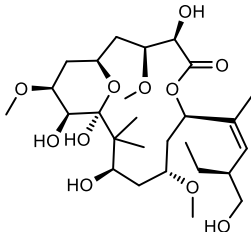
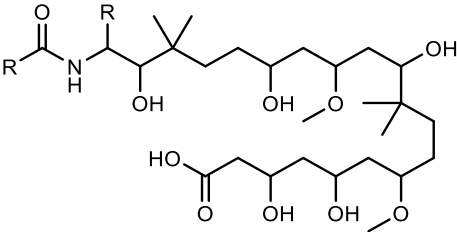
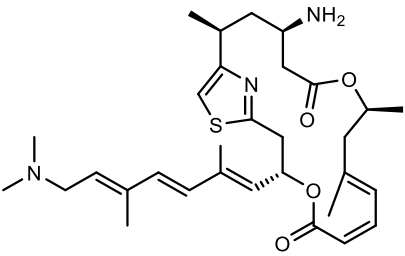
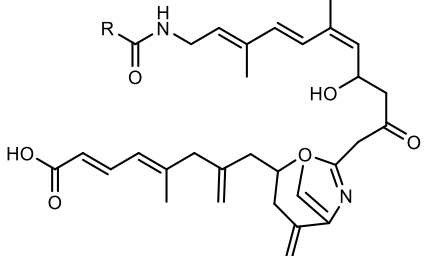
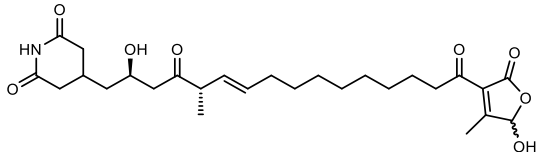
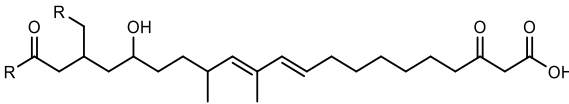
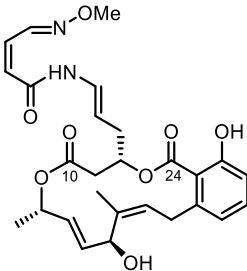
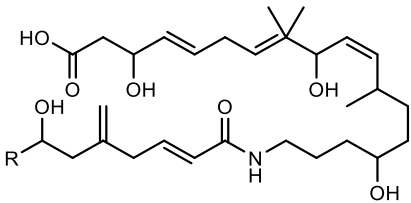


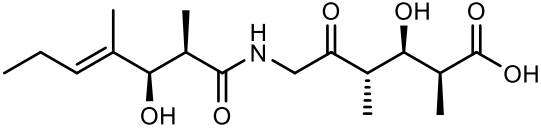
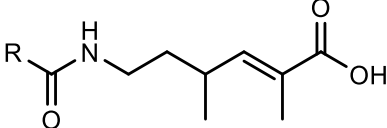
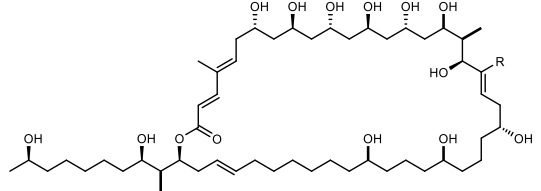
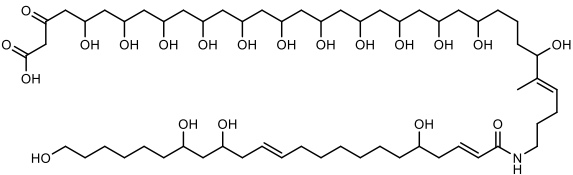
Compound	TransATor	TransPACT
 Mycalamide A	 9/10	8/8; 2 not assigned
KS1: GNAT starter	KS1: GNAT starter	KS1: GNAT starter
KS2: α -Me β -OH	KS2: β -D-OH	KS2: not assigned
KS3: exomethyl/exoester	KS3: exomethyl/exoester	KS3: exomethyl/reduced β -Me
KS4: non-elongating (hemiacetale)	KS4: non-elongating (hemiacetale)	KS4: non-elongating (hemiacetale/ β -OH)
KS5: amino acid (Gly)	KS5: amino acid (Gly)	KS5: amino acids
KS6: β -D-OH	KS6: β -D-OH	KS6: not assigned
KS7: α -(di)Me β -OH	KS7: α -(di)Me β -OH	KS7: α -Me β -L-OH
KS8: pyran	KS8: pyran, furan	KS8: pyran/furan
KS9: β -L-OH	KS9: β -L-OH	KS9: β -L-OH
KS10: oxygen insertion	KS10: oxidative rearrangement	KS10: oxygen insertion
KS11: unclear	KS11: reduced	KS11: reduced/shifted double bond
KS12: unclear	KS12: double bond (<i>E</i> -configured)	KS12: double bond (<i>E</i> -configured)

KS13: unclear	KS13: non-elongating (double bond)	KS13: non-elongating (double bond)
		
Peloruside A	11/13	11/13
KS1: starter AL	KS1: amino acids	KS1: amino acids
KS2: α -Me β -OH	KS2: α -L-(di)Me β -OH	KS2: α -Me β -L-OH
KS3: non-elongating (α -Me β -AcO)	KS3: non-elongating	KS3: non-elongating (double bond)
KS4: non-elongating (α -Me double bond)	KS4: double bond (<i>E</i> -configured)	KS4: double bond (<i>E</i> -configured)
KS5: β -OH	KS5: β -D-OH	KS5: β -D-OH
KS6: non-elongating (β -OH)	KS6: non-elongating (β -D-OH)	KS6: non-elongating (β -OH)
KS7: β -OMe	KS7: β -OMe	KS7: β -OMe
KS8: α -(di)Me β -OH	KS8: α -L-(di)Me β -OH	KS8: α -Me β -L-OH
KS9: keto	KS9: completely reduced	KS9: reduced/shifted double bond
KS10: non-elongating (β -OH)	KS10: non-elongating (β -L-OH)	KS10: non-elongating (β -L-OH)

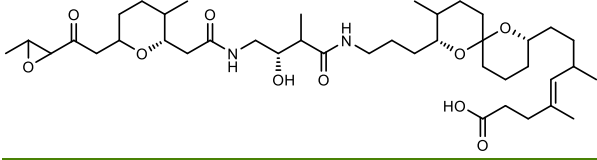
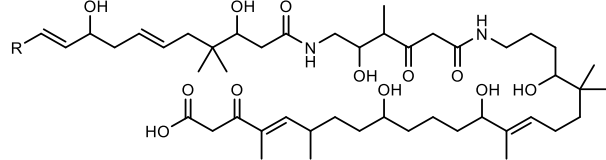
KS11: β -OMe KS12: β -OH KS13: non-elongating (β -OH)	KS11: β -OMe KS12: β -D-OH KS13: non-elongating (β -OH)	KS11: β -OMe KS12: β -D-OH KS13: non-elongating (hemiacetal/ β -OH)
 Pateamine A	 12/14	9/12; 2 not assigned
KS1: amino acid KS2: α -Me double bond KS3: double bond KS4: β -Me double bond KS5: β -OH KS6: non-elongating KS7: thiazole KS8: β -Me KS9: β -NH ₂ KS10: acetyl starter	KS1: amino acid (Gly) KS2: α -Me double bond KS3: double bond (<i>E</i> -configured) KS4: β -OMe or β -Me double bond KS5: β -D-OH (some with α -L-Me) KS6: non-elongating (oxazole/thiazole) KS7: amino acids (oxa/thia) KS8: β -OMe or β -Me double bond KS9: pyran/furan rings KS10: acetyl starter	KS1: amino acid (Gly) KS2: α -Me double bond (<i>E</i> -configured) KS3: double bond (<i>E</i> -configured) KS4: β -Me double bond (<i>E</i> -configured) KS5: not assigned KS6: non-elongating (oxazole/thiazole) KS7: oxazole/thiazole KS8: exomethyl/reduced β -Me KS9: β -OH/keto KS10: acetyl starter

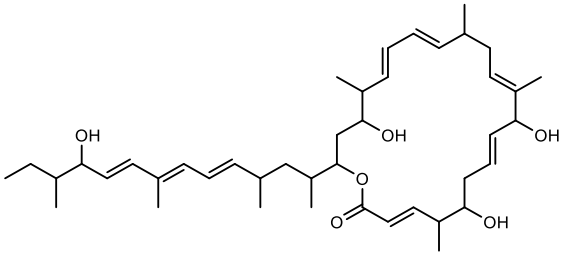
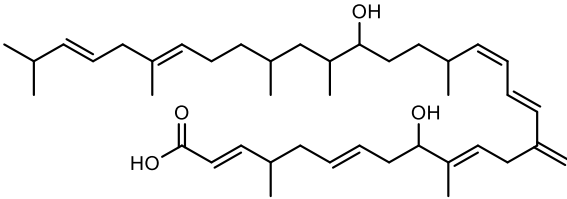
KS11: β -Me KS12: β -Me double bond KS13: non-elongating (β -Me double bond) KS14: double bond	KS11: exomethyl/exoester KS12: β -OMe or β -Me double bond KS13: non-elongating (bimodule β -D-OH) KS14: double bond (Z-configured)	KS11: not assigned KS12: β -Me double bond (<i>E</i> -configured) KS13: non-elongating (bimodule β -OH) KS14: double bond (Z-configured)
 Gladiofungin A KS1: starter AMT KS2: double bond KS3: glutarimide KS4: β -OH KS5: α -Me keto KS6: α -Me double bond KS7: double bond	 8/10 KS1: unusual starter (AMT/Succinate) KS2: non-elongating (double bond) KS3: vinylogous chain branching (including glutarimides) KS4: β -D-OH KS5: α -Me reduced/keto/D-OH KS6: α -Me double bond KS7: double bond (mostly <i>E</i> -configured) KS8: completely reduced	7/9; 1 not assigned KS1: unusual starter (AMT) KS2: non-elongating (double bond before branching) KS3: vinylogous chain branching (including glutarimides) KS4: not assigned KS5: α -Me reduced/ β -keto/ β -OH KS6: α -Me double bond (<i>E</i> -configured) KS7: double bond (<i>E</i> -configured) KS8: reduced/shifted double bond

KS8: completely reduced KS9: completely reduced KS10: keto	KS9: completely reduced KS10: completely reduced	KS9: reduced/shifted double bond KS10: reduced/shifted double bond
 Lobatamide A	 7/13	7/11; 2 not assigned
KS1: non-elongating (amino acid)	KS1: non-elongating (α -Me completely reduced or shifted double bond)	KS1: non-elongating
KS2: non-elongating (oxime)	KS2: starters or β -OH	KS2: non-elongating (reduced/ β -OH)
KS3: methylated oxime	KS3: exomethyl/exoester	KS3: exomethyl/reduced β -Me
KS4: non-elongating (β -OH)	KS4: non-elongating (bimodule β -D-OH)	KS4: non-elongating (bimodule β -OH)
KS5: amino acids (Gly)	KS5: amino acids	KS5: amino acids
KS6: shifted double bond	KS6: completely reduced	KS6: reduced/shifted double bond
KS7: β -OH	KS7: β -L-OH	KS7: not assigned
KS8: α -Me and oxygen insertion (BVMO)	KS8: α -Me reduced/keto/D-OH	KS8: α -Me reduced/ β -keto/ β -OH
KS9: double bond	KS9: double bond (<i>E</i> -configured)	KS9: double bond (<i>E</i> -configured)

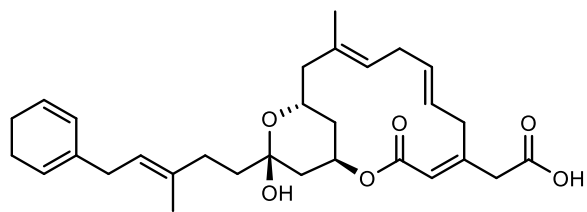
KS10: α-Me β-OH KS11: shifted double bond KS12: β-keto (iterative) KS13: β-OH	KS10: α-L-(di)Me β-OH KS11: shifted double bond (some with α-Me) KS12: β-keto or double bond KS13: <i>cis</i>-AT PKS	KS10: α-Me β-L-OH KS11: shifted double bond KS12: β-keto KS13: not assigned
 Alpiniamide A KS1: amino acid (Gly) KS2: α-Me keto KS3: non-elongating (α-Me β-OH)	 3/3 KS1: amino acids KS2: α-Me reduced/keto/D-OH KS3: non-elongating (α-Me completely reduced or double bond)	2/2; 1 not assigned KS1: not assigned KS2: α-Me reduced/β-keto/β-OH KS3: non-elongating
 Lacunalides	 22/25	16/18; 7 not assigned

KS1: acetyl starter	KS1: various starters	KS1: acetyl/aromatic starter
KS2: β -OH	KS2: β -D-OH (some with α -L-Me)	KS2: β -OH/double bond (<i>E</i> -configure)
KS3: completely reduced	KS3: completely reduced	KS3: reduced/shifted double bond
KS4: completely reduced	KS4: completely reduced	KS4: reduced/shifted double bond
KS5: α -Me β -OH	KS5: β -D-OH (some with α -L-Me)	KS5: α -Me β -OH
KS6: β -OH	KS6: β -D-OH (some with α -L-Me)	KS6: α -Me β -OH
KS7: <i>E</i> -double bond	KS7: double bond (mostly <i>E</i> -configured)	KS7: mainly double bond (<i>E</i> -configured)
KS8: completely reduced	KS8: completely reduced	KS8: reduced/shifted double bond
KS9: completely reduced	KS9: completely reduced	KS9: reduced/shifted double bond
KS10: completely reduced	KS10: completely reduced	KS10: reduced/shifted double bond
KS11: β -OH	KS11: β -D-OH	KS11: β -OH/double bond (<i>E</i> -configure)
KS12: completely reduced	KS12: completely reduced	KS12: reduced/shifted double bond
KS13: β -OH	KS13: β -D-OH (some with α -L-Me)	KS13: not assigned
KS14: completely reduced	KS14: completely reduced	KS14: reduced/shifted double bond
KS15: β -OH	KS15: β -D-OH	KS15: not assigned
KS16: α -Me <i>E</i> -double bond	KS16: β -D-OH (some with α -L-Me)	KS16: not assigned
KS17: α -Me β -OH	KS17: β -D-OH (some with α -L-Me)	KS17: not assigned
KS18: β -OH	KS18: β -L-OH	KS18: β -L-OH
KS19: β -OH	KS19: β -D-OH (some with α -L-Me)	KS19: β -D-OH

KS20: β -OH KS21: β -OH KS22: β -OH KS23: β -OH KS24: α -Me <i>E</i> -double bond KS25: non-elongating (α -Me <i>E</i> -double bond)	KS20: β -L-OH KS21: β -D-OH KS22: β -L-OH KS23: β -D-OH (some with α -L-Me) KS24: β -D-OH (some with α -L-Me) KS25: β -D-OH	KS20: β -L-OH KS21: not assigned KS22: β -L-OH KS23: not assigned KS24: not assigned KS25: non-elongating (reduced/ β -OH)
 Lagriamide	 15/18	 12/15; 3 not assigned
KS1: GNAT starter KS2: double bond KS3: β -OH KS4: double bond KS5: α -Me reduced KS6: non-elongating (β -OH) KS7: amino acid (Gly)	KS1: <i>cis</i> -AT PKS KS2: double bond (mostly <i>E</i> -configured) KS3: β -L-OH KS4: double bond (mostly <i>E</i> -configured) KS5: α -Me KS6: non-elongating (double bond) KS7: amino acids	KS1: <i>cis</i> -AT PKS-like KS2: double bond (<i>E</i> -configured) KS3: β -L-OH KS4: double bond (<i>E</i> -configured) KS5: α -Me reduced/ β -keto/ β -OH KS6: non-elongating (double bond) KS7: not assigned

KS8: α-Me β-OH A: Gly KS9: amino acid (Gly) KS10: completely reduced KS11: α-Me β-OH KS12: completely reduced KS13: β-OH KS14: β-OH KS15: completely reduced KS16: β-OH KS17: α-Me double bond KS18: non-elongating (reduced)	KS8: α-L-Me β-OH KS9: amino acids KS10: completely reduced KS11: α-L-(di)Me β-OH KS12: completely reduced KS13: α-Me double bond KS14: β-D-OH KS15: completely reduced KS16: β-L-OH KS17: α-Me reduced/keto/D-OH KS18: α-Me double bond	KS8: α- Me β-L-OH KS9: not assigned KS10: reduced/shifted double bond KS11: α-Me β-L-OH KS12: reduced/shifted double bond KS13: α-Me double bond (<i>E</i>-configured) KS14: not assigned KS15: reduced/shifted double bond KS16: β-L-OH KS17: α-Me reduced/β-keto/β-OH KS18: α-Me double bond (<i>E</i>-configured)
 Macrobrevin KS1: starter	 17/20 KS1: various starters	17/20 KS1: acetyl/aromatic starter

KS2: α -Me	KS2: α -Me reduced/keto/D-OH	KS2: α -Me reduced/ β -keto/ β -OH
KS3: β -OH	KS3: double bond (mostly <i>E</i> -configured)	KS3: mainly double bond (<i>E</i> -configured)
KS4: α -Me double bond	KS4: α -Me reduced/keto/D-OH	KS4: α -Me reduced/ β -keto/ β -OH
KS5: non-elongating (double bond)	KS5: non-elongating (mostly α -Me double bond)	KS5: non-elongating (α -Me double bond (<i>E</i> -configured))
KS6: shifted double bond	KS6: shifted double bond (some with α -Me)	KS6: shifted double bond
KS7: α -Me shifted double bond	KS7: α -Me reduced/keto/D-OH	KS7: α -Me reduced/ β -keto/ β -OH
KS8: α -Me	KS8: α -Me reduced/keto/D-OH	KS8: α -Me reduced/ β -keto/ β -OH
KS9: β -OH	KS9: β -D-OH (some with α -L-Me)	KS9: β -D-OH
KS10: α -Me β -OH	KS10: α -Me reduced/keto/D-OH	KS10: α -Me reduced/ β -keto/ β -OH
KS11: double bond	KS11: double bond (mostly <i>E</i> -configured)	KS11: mainly double bond (<i>E</i> -configured)
KS12: double bond	KS12: double bond (mostly <i>E</i> -configured)	KS12: mainly double bond (<i>E</i> -configured)
KS13: β -Me	KS13: <i>cis</i> -AT PKS	KS13: <i>cis</i> -AT PKS-like
KS14: β -Me	KS14: exomethyl/exoester	KS14: exomethyl/reduced β -Me
KS15: α -Me double bond	KS15: α -Me double bond (<i>E</i> -configured)	KS15: α -Me double bond (<i>E</i> -configured)
KS16: β -OH	KS16: β -L-OH	KS16: β -L-OH
KS17: non-elongating (β -OH)	KS17: non-elongating (bimodule β -D-OH)	KS17: non-elongating (bimodule β -OH)
KS18: shifted double bond	KS18: double bond (<i>Z</i> -configured)	KS18: double bond (<i>Z</i> -configured)
KS19: α -Me β -OH	KS19: α -Me reduced/keto/D-OH	KS19: α -Me reduced/ β -keto/ β -OH
KS20: non-elongating (double bond)	KS20: non-elongating (double bond)	KS20: non-elongating (double bond)



Ripostatin

KS1: *cis*-AT PKS (aromatic starter)

KS2: *cis*-AT PKS

KS3: completely reduced

KS4: keto

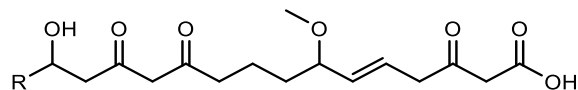
KS5: β -OH

KS6: β -OH

KS7: β -Me double bond

KS8: completely reduced

KS9: shifted double bond



8/9

KS1: *cis*-AT PKS

KS2: *cis*-AT PKS

KS3: *cis*-AT PKS

KS4: β -D-OH or β -keto

KS5: β -D-OH or β -keto

KS6: various specificities

KS7: β -OMe or β -Me double bond

KS8: bimodule (β -D-OH)

KS9: shifted double bond (some with α -Me)

5/6; 3 not assigned

KS1: *cis*-AT PKS-like

KS2: not assigned

KS3: not assigned

KS4: β -OH/keto

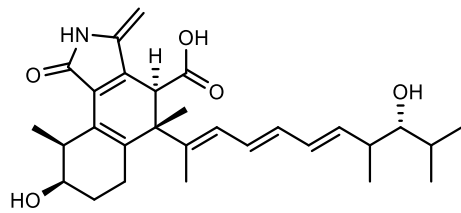
KS5: β -OH/keto

KS6: β -OH/keto

KS7: not assigned

KS8: non-elongating (bimodule β -OH)

KS9: shifted double bond



Pyxipyrrolone A

KS1: starter

KS2: starter

KS3: skipped module

KS4: α -Me β -OH

KS5: unknown

KS6: double bond

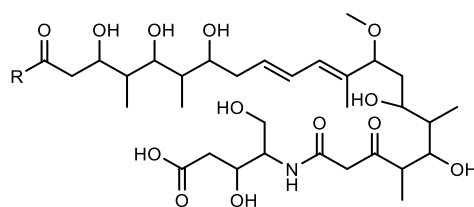
KS7: α -Me double bond

KS8: β -branching

KS9: double bond

KS10: α -Me keto

KS11: amino acid (Ser)



6/9

KS1: acetyl starter

KS2: β -D-OH or β -keto

KS3: α -L-Me reduced or OH

KS4: α -L-Me reduced or OH

KS5: β -D-OH

KS6: double bond (*E*-configured)

KS7: α -Me double bond

KS8: β -OMe or β -Me double bond

KS9: α -L-Me reduced or OH

KS10: α -Me shifted double bond or OH

KS11: amino acids

5/9, 1 not assigned, 1 new functionality

KS1: acetyl starter

KS2: β -OH/keto

KS3: reduced α -Me/shifted double bond α -Me

KS4: β -keto

KS5: not assigned

KS6: double bond

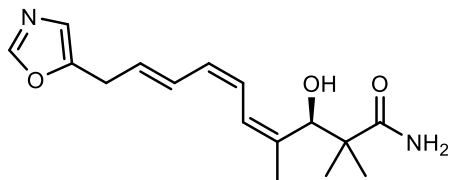
KS7: α -Me double bond (*E*-configured)

KS8: β -Me

KS9: reduced α -Me/shifted double bond α -Me

KS10: α -Me β -OH

KS11: amino acids



Phthoxazolin

KS1: Gly

KS2: keto

KS3: double bond

KS4: double bond

KS5: α -Me double bond

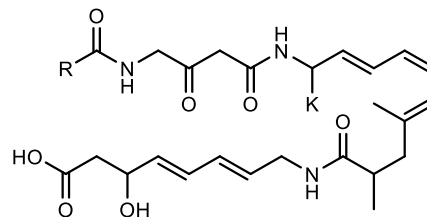
KS6: amino acid

KS7: double bond

KS8: non-elongating (β -OH)

KS9: double bond

KS10: non-elongating (double bond)



9/10

KS1: amino acids

KS2: amino acids

KS3: double bond

KS4: double bond

KS5: α -Me double bond

KS6: amino acids (Gly)

KS7: double bond (*E*-configured)

KS8: non-elongating (bimodule β -D-OH)

KS9: double bond (mostly *E*-configured)

KS10: non-elongating (double bond)

Total: 127/154 (82.5%)

9/10

KS1: amino acids

KS2: amino acids

KS3: double bond

KS4: double bond (*Z*-configured)

KS5: α -Me double bond (*E*-configured)

KS6: amino acids (Gly)

KS7: double bond

KS8: non-elongating (bimodule β -OH)

KS9: double bond (*E*-configured)

KS10: non-elongating (double bond)

108/133 (81.2%)