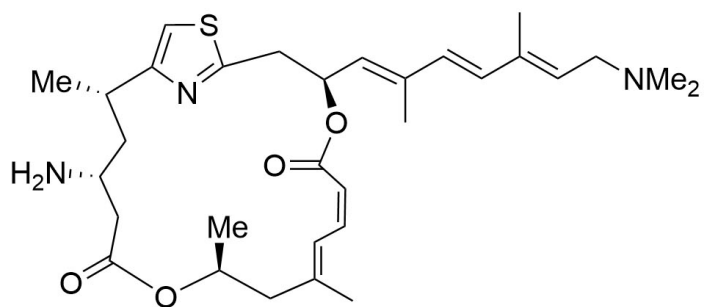
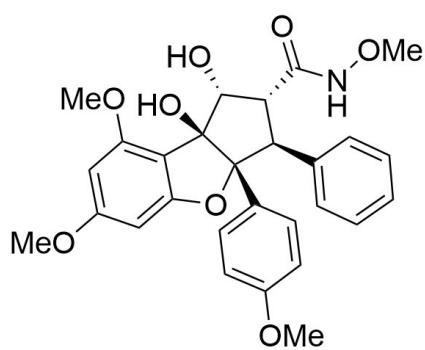


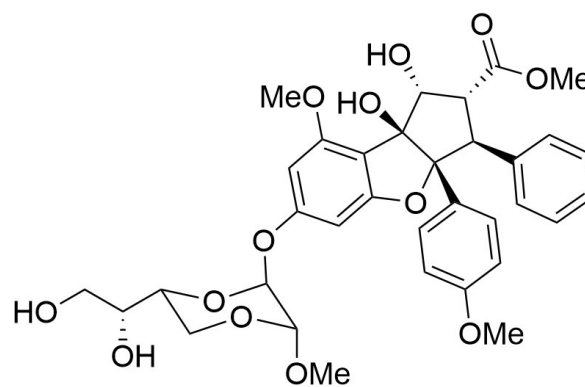
RocA



PatA



CR-1-31B

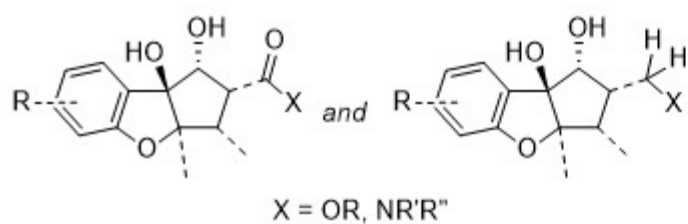


silvestrol

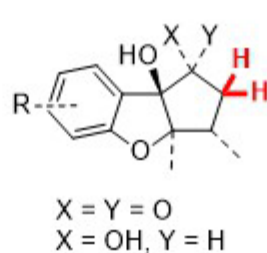
Figure S1. Chemical structure of rocaglates (RocA, CR-1-31B, and silvestrol) and pateamine A used in this study.

Cyclopenta[*b*]benzofurans

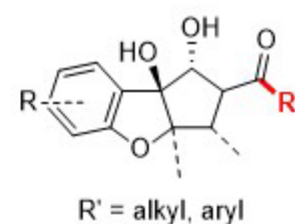
Standard rocaglate



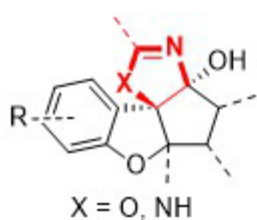
Rocaglaol



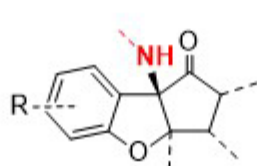
Rocaglate ketone



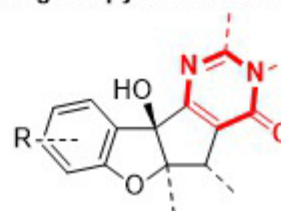
Amidino rocaglate (ADR)



C8b amino rocaglate

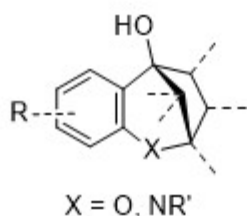


Rocaglate pyrimidinone (RP)



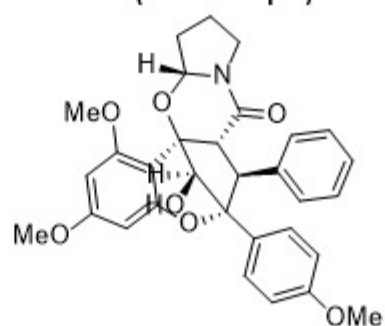
Cyclopenta[*b,c*]benzopyrans

Aglain



Nonstandard rocaglate

(one example)



Cyclopenta[*b*]indoles

Aza-rocaglate

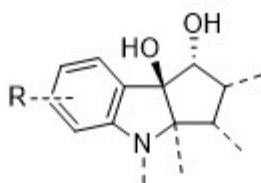
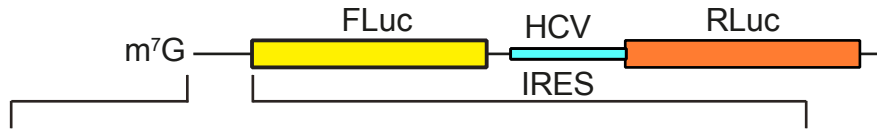


Figure S2. Summary of rocaglate scaffolds and subclasses used in Fig. 2.

a

m^7Gppp GUCAGAAUUAACCGUGUGUUCACUAGCAACCUCAU**AUG**

(NMD)FF/HCV-IRES/Ren

4.04/4.06 5' Leader
Region

m^7Gppp GAGAGAGAGAGAGAGAGAGUGUGUUCACUAGCAACCUCAU**AUG**

(AG)FF/HCV-IRES/Ren

m^7Gppp UCUCUCUCUCUCUCUCUCUCUCUCGUGUGUUCACUAGCAACCUCAU**AUG**

(UC)FF/HCV-IRES/Ren

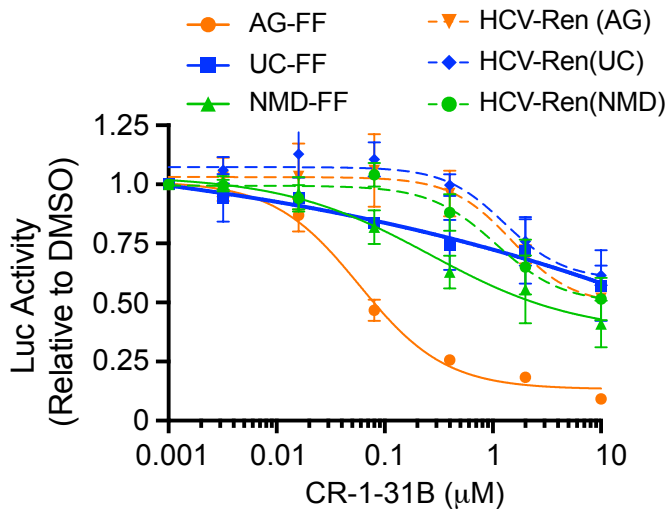
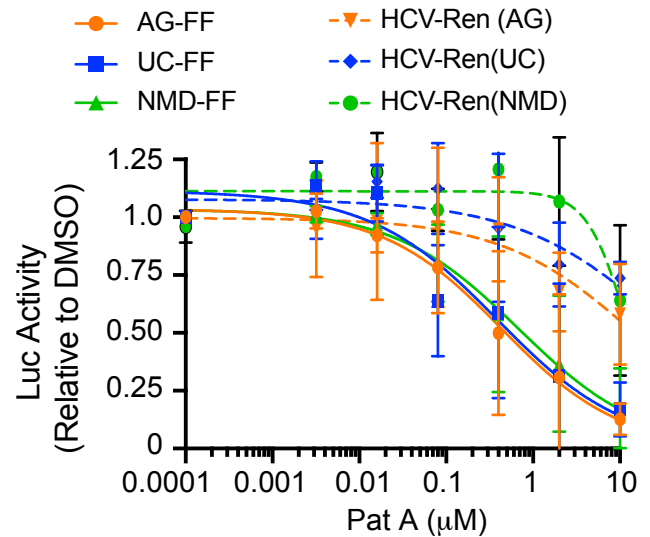
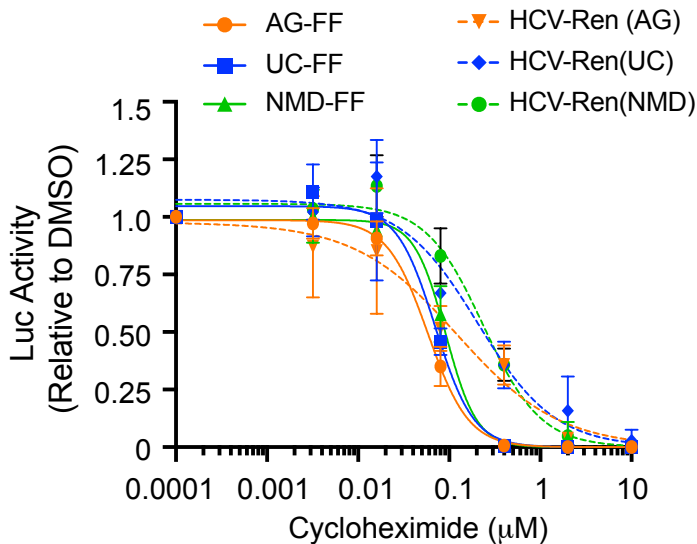
b**c****d**

Figure S3. Assessing mRNA sensitivity towards CR-1-31B, PatA, or cycloheximide. **a.** Reporter constructs used to assess rocaglate-responsiveness of the indicated 5' leader regions. The nucleotides underlined in (NMD)FF/HCV-IRES/Ren and labelled "4.04/4.06 5' Leader Region" are the nucleotides comprising the 5' leader region of FF-4.04 and FF-4.06 reporters in Fig. 4. **b-d.** Messenger RNA translational response obtained in Krebs-2 extracts towards CR-1-31B (**b**), PatA (**c**), or cycloheximide (**d**). $n = 3 \pm SD$.