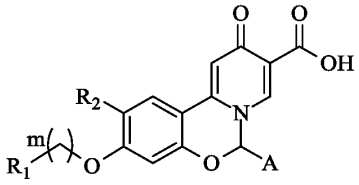
权利要求

1.式（I）化合物或其药学上可接受的盐，



（I）

其中，

R_1 选自 H、OH、CN、NH_2，或者选自任选被 1、2 或 3 个 R 取代的：C_{1-5} 烷基、C_{1-5} 杂烷基、C_{2-5} 炔基、C_{3-6} 环烷基和 3~6 元杂环烷基；

R_2 选自 H、卤素，或者选自任选被 1、2 或 3 个 R 取代的：C_{1-3} 烷基和 C_{1-3} 杂烷基；

m 选自 0、1、2、3、4 和 5；

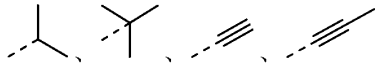
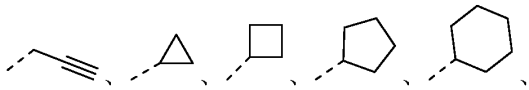
A 选自任选被 1、2 或 3 个 R 取代的：苯基或 5~6 元杂芳基；

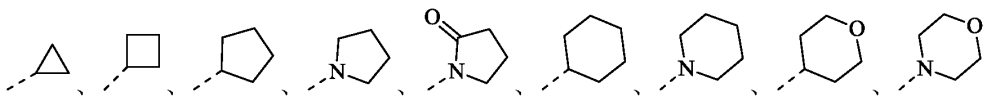
R 选自 H、卤素、OH、CN、NH_2、=O、CH_3、CH_3CH_2、CH_3O、CF_3、CHF_2、CH_2F；

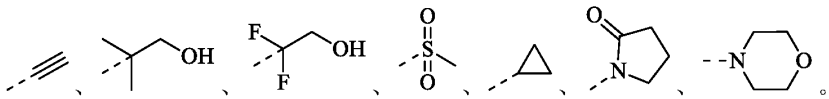
所述 C_{1-5} 杂烷基、3~6 元杂环烷基、C_{1-3} 杂烷基、5~6 元杂芳基之“杂”，分别独立地选自：N、-O-、=O、-S-、-NH-、-(C=O)-、-(S=O)-、$-(S=O)_2-$；

以上任何一种情况下，杂原子或杂原子团的数目分别独立地选自 1、2 或 3。

2.根据权利要求 1 所述的化合物或其药学上可接受的盐，其中，R 选自 H、F、Cl、Br、OH、CH_3、CH_3O、CF_3、CHF_2、CH_2F。

3.根据权利要求 1 或 2 所述的化合物或其药学上可接受的盐，其中，R_1 选自 H、OH、CN、NH_2，或者选自任选被 1、2 或 3 个 R 取代的：CH_3、CH_3CH_2、$CH_3CH_2CH_2$、$CH_3CH_2CH_2CH_2$、CH_3O、CH_3CH_2O、CH_3S、$CH_3S(=O)$、$CH_3S(=O)_2$、CH_3SCH_2、CH_3CH_2S、CH_3NH、  、  、吡咯烷基、哌啶基、四氢吡喃基、吗啉基、2-吡咯烷酮基、3-吡咯烷酮基。

4.根据权利要求 3 所述化合物或其药学上可接受的盐，其中，R_1 选自 H、OH、CN、NH_2，或者选自任选被 1、2 或 3 个 R 取代的：CH_3、CH_3CH_2、$CH_3CH_2CH_2$、$CH_3CH_2CH_2CH_2$、CH_3O、CH_3CH_2O、CH_3S、$CH_3S(=O)$、$CH_3S(=O)_2$、CH_3SCH_2、CH_3CH_2S、CH_3NH、 、  。

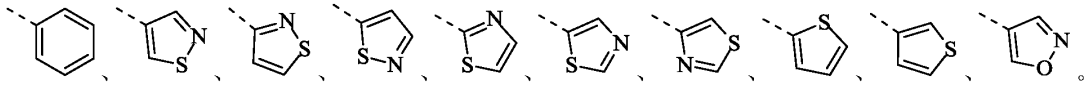
5.根据权利要求 4 所述的化合物或其药学上可接受的盐，其中，R_1 选自：H、OH、CH_3、CHF_2、CH_3O、  。

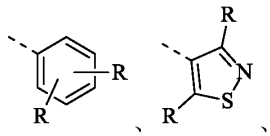
6.根据权利要求 1 或 2 所述的化合物或其药学上可接受的盐，其中，R_2 选自 H、F、Cl、Br，或者选自任选被 1、2 或 3 个 R 取代的：CH_3、CH_3CH_2、CH_3O、CH_3CH_2O、 。

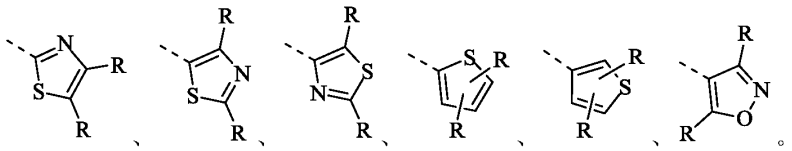
7.根据权利要求 6 所述的化合物或其药学上可接受的盐，其中，R_2 选自 Cl 和 CH_3O。

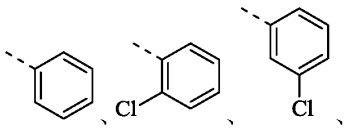
8.根据权利要求 1 或 2 所述的化合物或其药学上可接受的盐，其中，A 选自任选被 1、2 或 3 个 R 取代的：苯基、噻吩基、噻唑基、异噻唑基、恶唑基、异恶唑基。

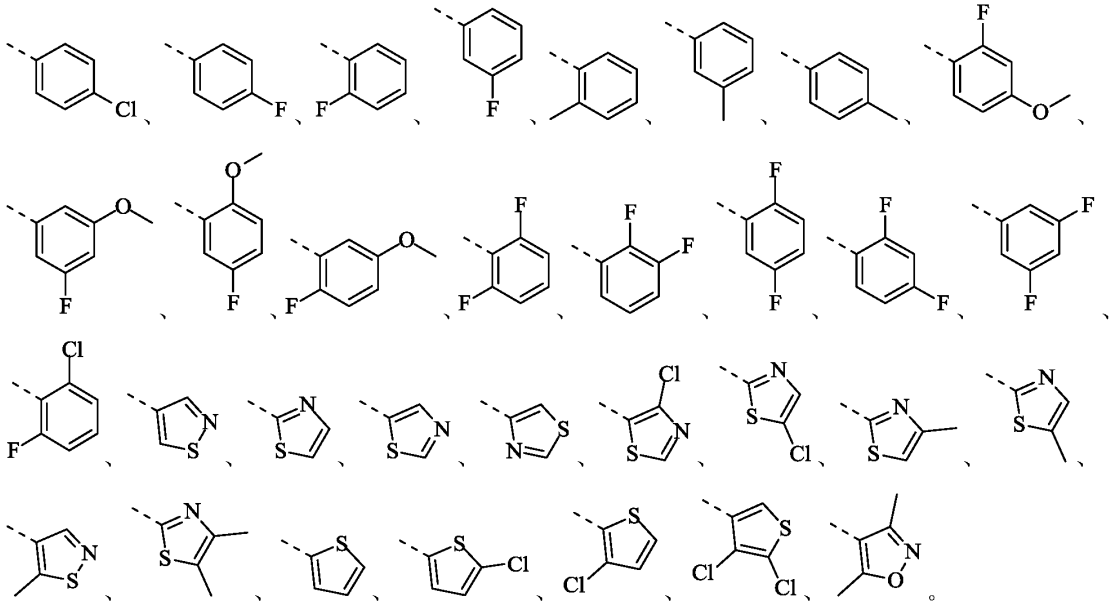
9.根据权利要求 8 所述的化合物或其药学上可接受的盐，其中，A 选自任选被 1、2 或 3 个 R 取代的：



10.根据权利要求 9 所述的化合物或其药学上可接受的盐，其中，A 选自： 



11.根据权利要求 10 所述的化合物或其药学上可接受的盐，其中，A 选自： 



12.根据权利要求 1 或 2 所述的化合物或其药学上可接受的盐，其中，m 为 3。

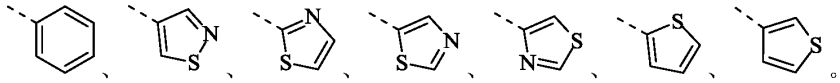
13.根据权利要求 12 所述的化合物或其药学上可接受的盐，其中，R_2 选自 Cl 和 CH_3O。

14.根据权利要求 13 所述的化合物或其药学上可接受的盐，其中，R_1 为 CH_3O。

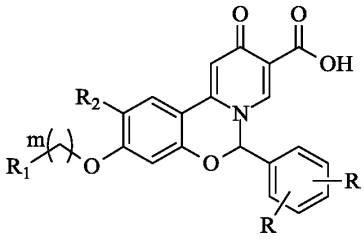
15.根据权利要求 1 或 2 所述的化合物或其药学上可接受的盐，其中，m 为 1。

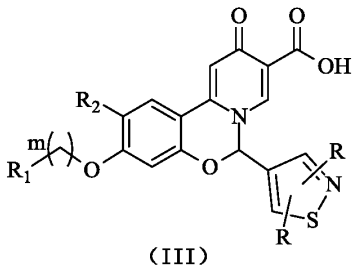
16.根据权利要求 15 所述的化合物或其药学上可接受的盐，其中，R_2 为 Cl。

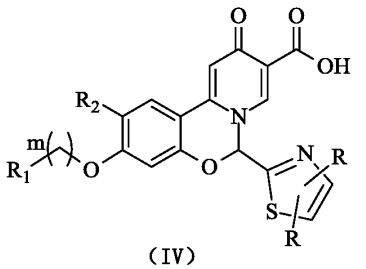
17.根据权利要求 16 所述的化合物或其药学上可接受的盐，其中，R_1 为 。

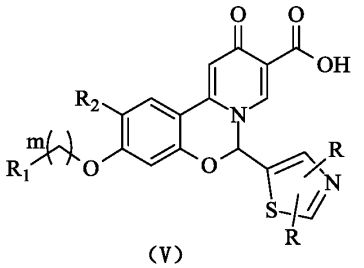
18.根据权利要求 14 或 17 所述的化合物或其药学上可接受的盐，其中，A 选自任选被 1、2 或 3 个 R 取代的：  。

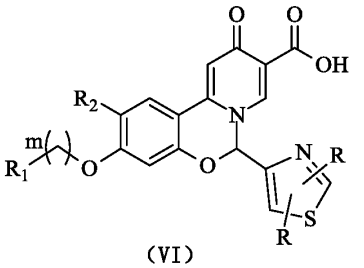
19.根据权利要求 1~18 任意一项所述化合物或其药学上可接受的盐，其选自：

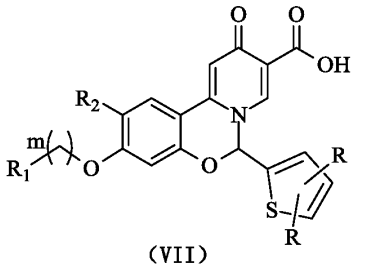

(II)、

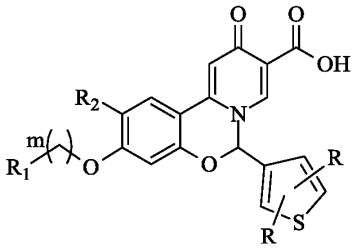

(III)、

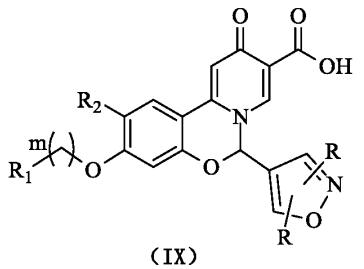

(IV)、


(V)、


(VI)、


(VII)、

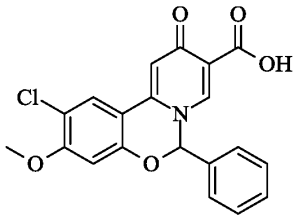

(VIII)、

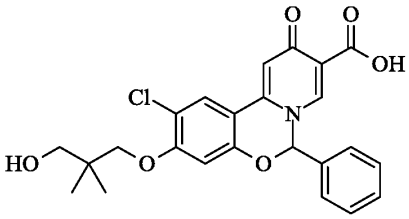

(IX)，

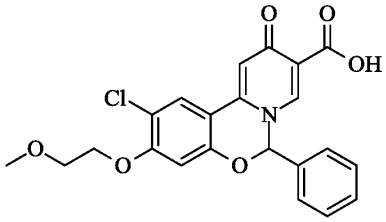
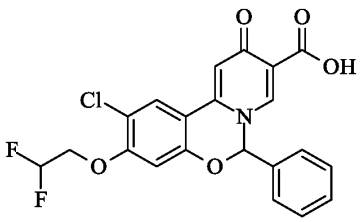
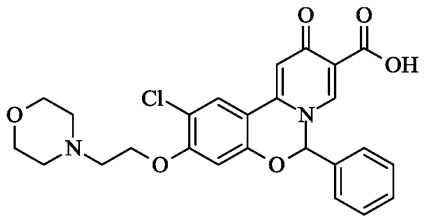
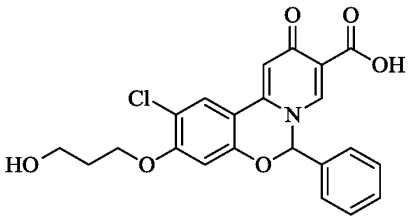
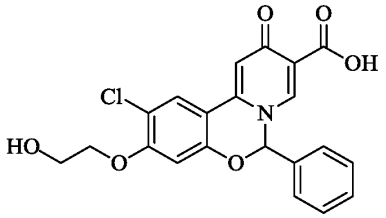
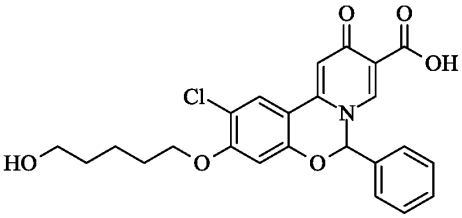
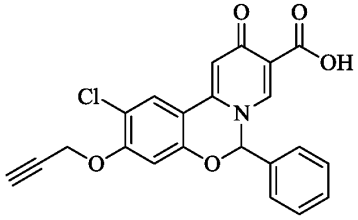
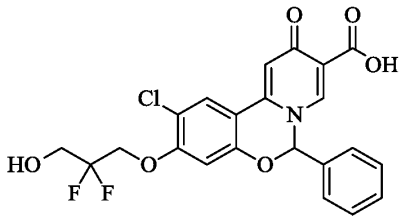
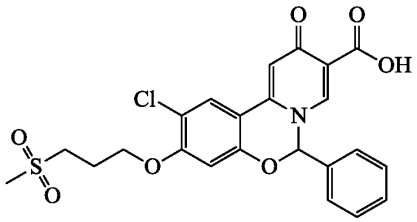
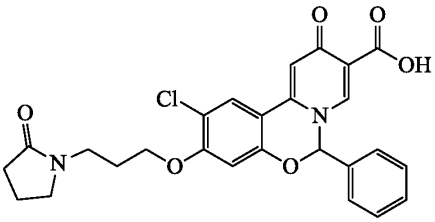
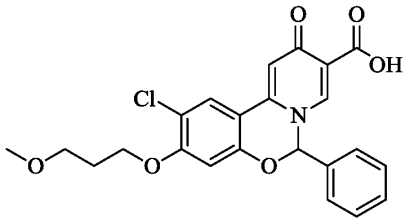
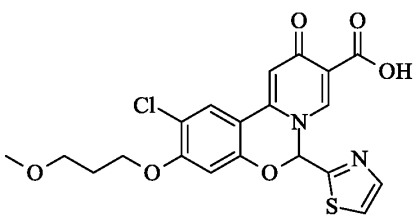
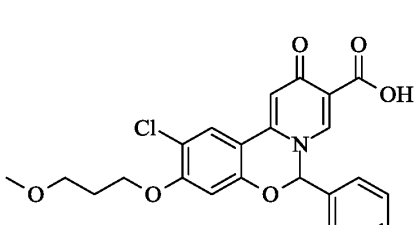
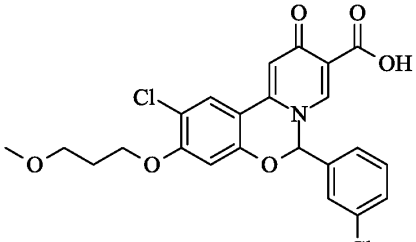
其中，

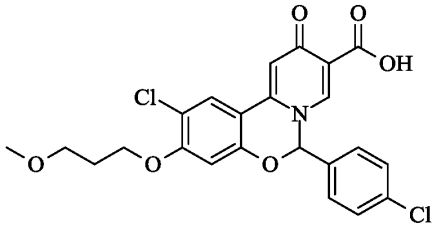
R_1、R_2、A、R、m 如权利要求 1~18 所定义。

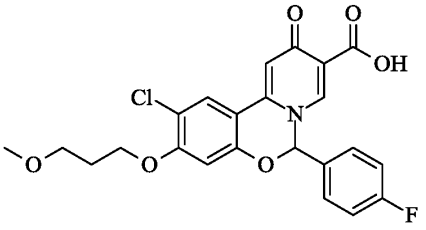
20.化合物或其药学上可接受的盐，其选自

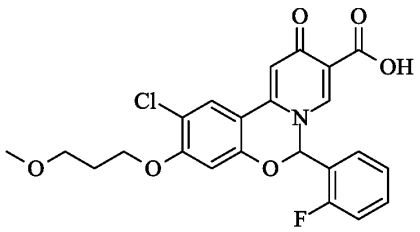


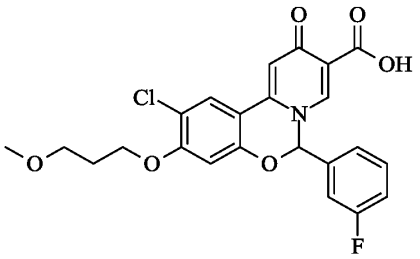


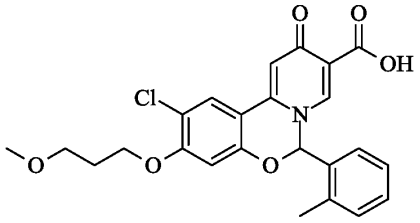















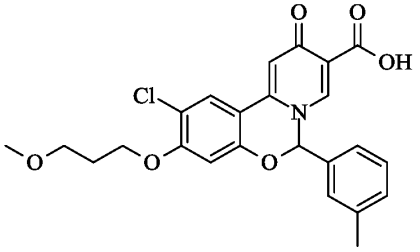


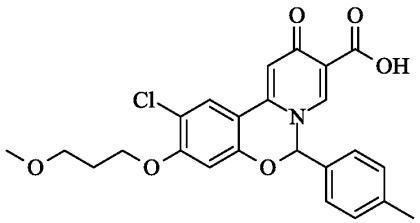


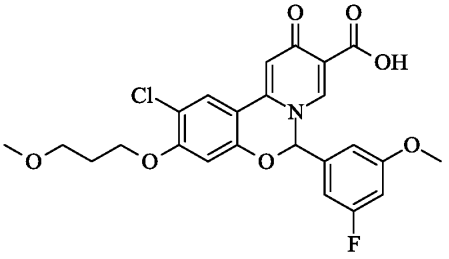


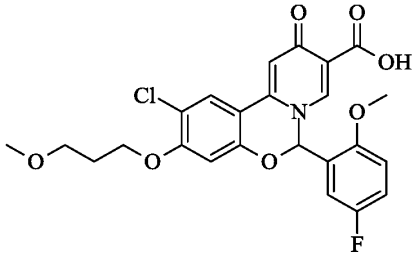


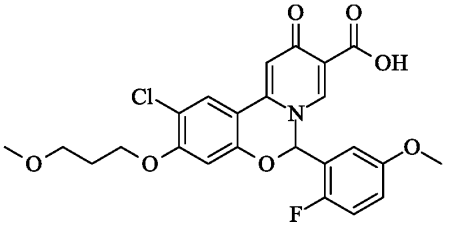


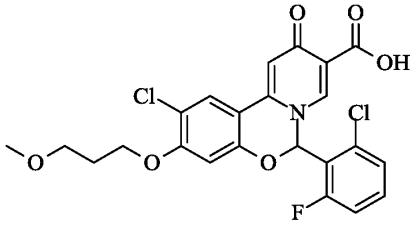


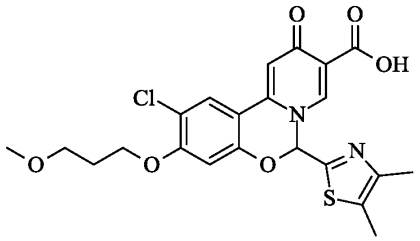












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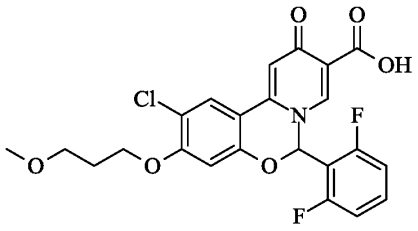

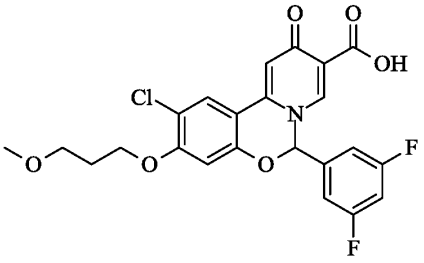

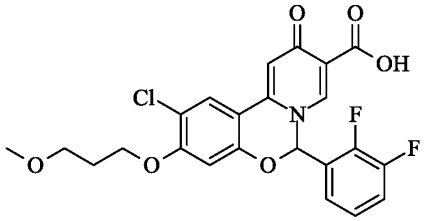

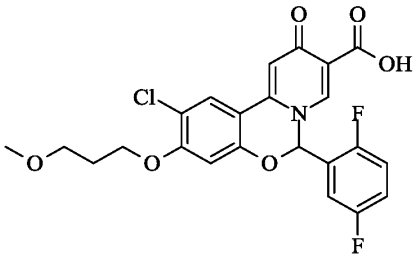

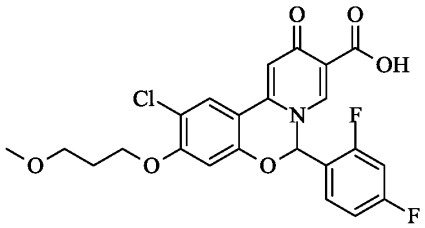

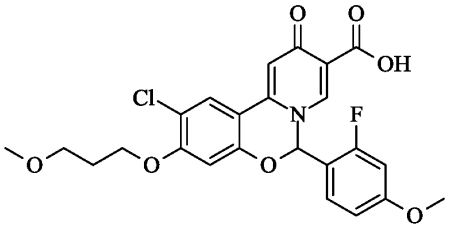

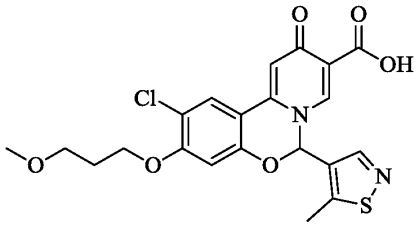

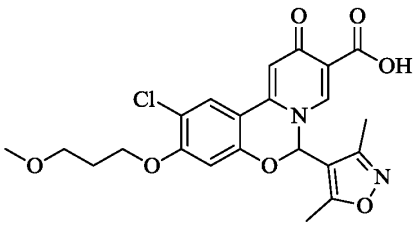

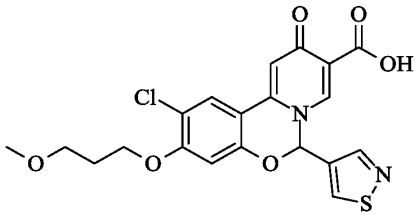

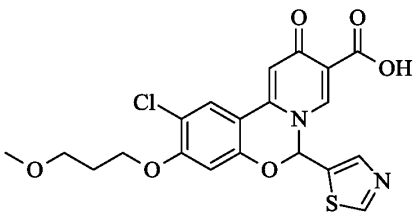

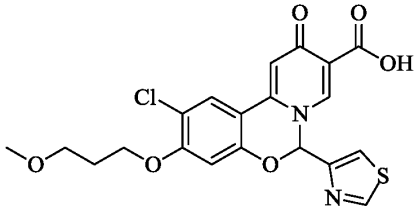

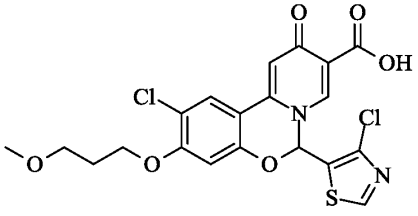

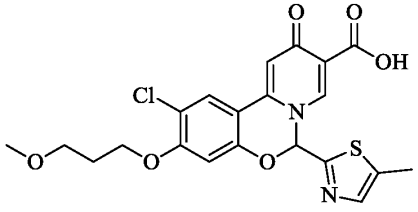

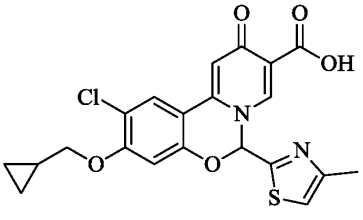

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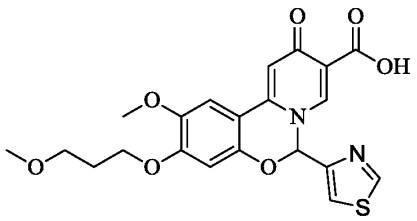
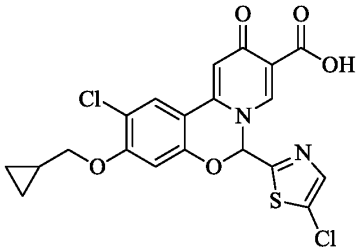
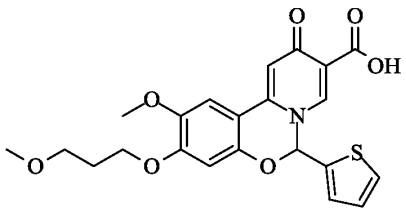
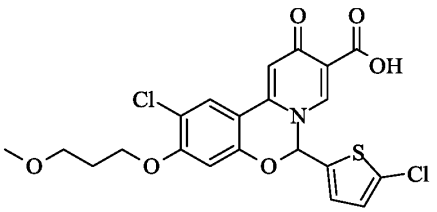
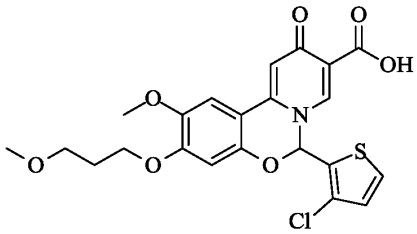
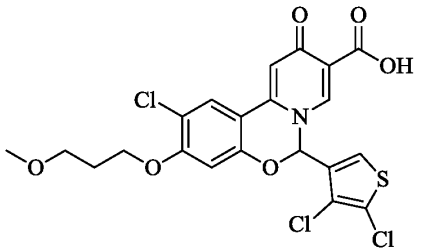
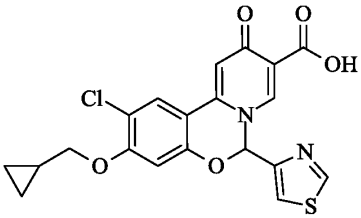
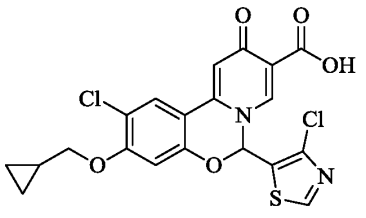
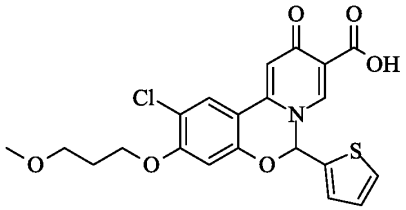

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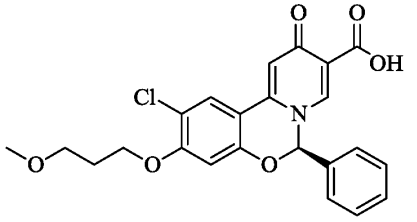
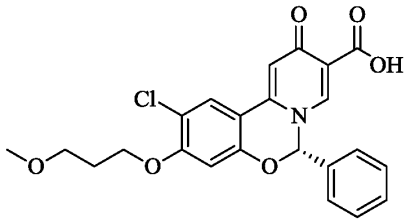
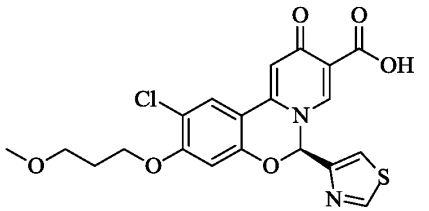
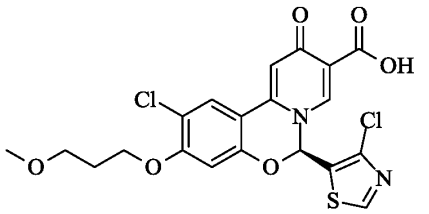
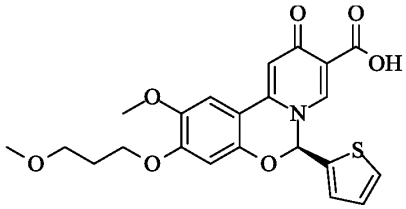
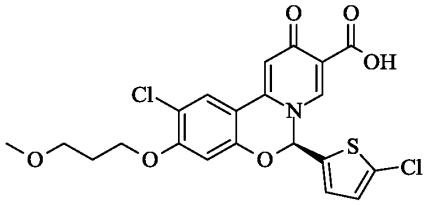
21.根据权利要求 20 所述的化合物或其药学上可接受的盐，其选自

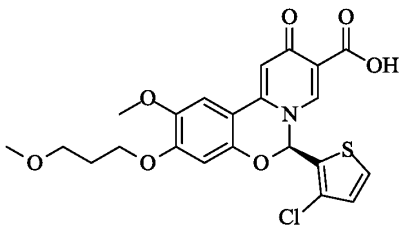



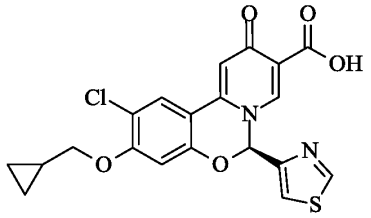


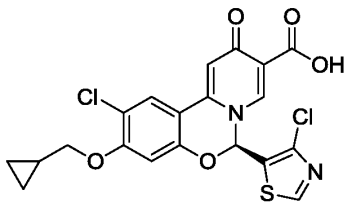


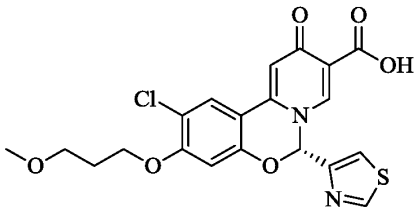


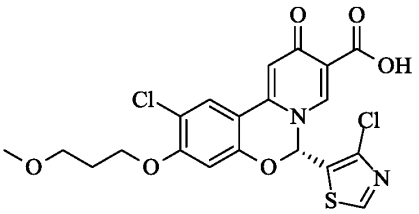


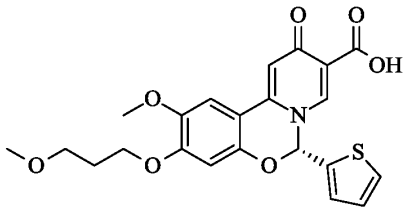


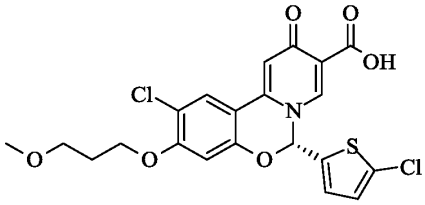


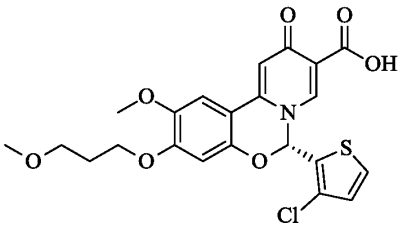


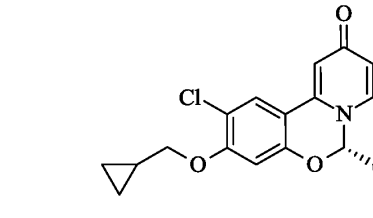


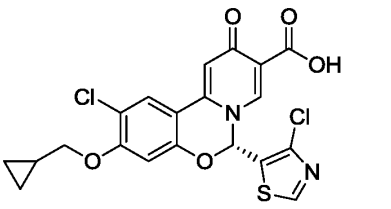


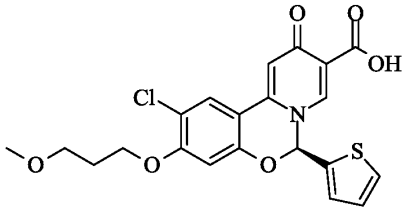


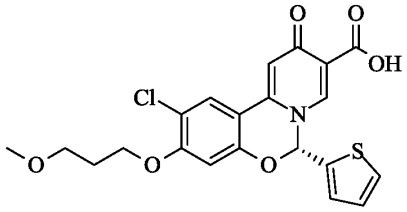












22.一种药物组合物，其含有治疗有效量的根据权利要求 1～21 任意一项所述的化合物或其药学上可接受的盐和药学上可接受的载体。

23.根据权利要求 1～21 任意一项所述的化合物或其药学上可接受的盐或根据权利要求 22 所述的药物组合物在制备治疗乙型肝炎药物中的应用。