or a pharmaceutically acceptable salt thereof, wherein:

Z is CH or N;

X is a covalent bond or -NH-;

R^1 is pyrazolyl, pyridinyl, pyrazinyl, or pyrimidinyl; each of which is substituted by q instances of R^C; wherein each R^C is independently halogen, –CN, –OR, $-S(O)_2R$, $–C(O)NR_2$, or each instance of R^C is independently an optionally substituted group selected from C_{1-6} aliphatic; a 5-10 membered saturated or partially unsaturated bridged bicyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 6-12 membered saturated or partially unsaturated spirocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 3-7 membered saturated or partially unsaturated monocyclic carbocyclic ring; and a 3-7 membered saturated or partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, phosphorous, silicon and sulfur; or two R^C groups together with the atoms to which each is attached, forms a 5-6 membered aryl ring, a 3-7 membered partially unsaturated monocyclic carbocyclic ring, or a 3-7 membered partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, phosphorous, silicon and sulfur; wherein each instance of R^C is independently optionally substituted by r instances of R and s instances of R^D;

R^2 is a 9-membered fused bicyclic ring having 1-3 nitrogen atoms; each of which is substituted by each of which is substituted by q instances of R^C; wherein each R^C is independently halogen, –CN, –OR,$–C(O)NR_2$, $-NR_2$; or each instance of R^C is independently an optionally substituted group selected from C_{1-6} aliphatic; phenyl; a 3-7 membered saturated or partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, phosphorous, silicon and sulfur; and a 6-11 membered saturated or partially unsaturated fused, bridged, or spiro bicyclic heterocyclic ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; wherein each instance of R^C is independently optionally substituted by r instances of R and s instances of R^D;

each instance of R^D is independently oxo, halogen, –CN, $–NO_2$, –OR, -SR, $-NR_2$, $-S(O)_2R$, $-S(O)_2NR_2$, -S(O)R, $-S(O)NR_2$, -C(O)R, -C(O)OR, $–C(O)NR_2$, -C(O)N(R)OR, -OC(O)R, $-OC(O)NR_2$, -N(R)C(O)OR, -N(R)C(O)R, $-N(R)C(O)NR_2$, $-N(R)C(NR)NR_2$, $–N(R)NR_2$, $-N(R)S(O)_2NR_2$, $–N(R)S(O)_2R$, $–N=S(O)R_2$, –S(NR)(O)R, –N(R)S(O)R, –N(R)CN, $–P(O)(R)NR_2$, –P(O)(R)OR or $–P(O)R_2$;

each R is independently hydrogen, -CN, halogen, or an optionally substituted group selected from C_{1-6} aliphatic; phenyl; naphthyl; a 3-7 membered saturated or partially unsaturated monocyclic carbocyclic ring; a 3-7 membered saturated or partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 5-6 membered monocyclic heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; an 8-10 membered bicyclic heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 7-12 membered saturated or partially unsaturated bicyclic heterocyclic ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 5-8 membered saturated or partially unsaturated bridged bicyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 6-10 membered saturated or partially unsaturated spirocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; and a 6-11 membered saturated or partially unsaturated bicyclic carbocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, and sulfur; or:

two R groups on the same nitrogen are taken together with the nitrogen to form an optionally substituted 4-7 membered monocyclic saturated, partially unsaturated, or heteroaryl ring having, in addition to the nitrogen, 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; an 8-10 membered bicyclic heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 7-12 membered saturated or

partially unsaturated bicyclic heterocyclic ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur;

m is 0;

each q is independently 0, 1, 2, 3, or 4;

each r is independently 0, 1, 2, 3, or 4; and

each s is independently 0, 1, 2, 3, or 4.

[0008b] In another aspect of the present disclosure, there is provided a pharmaceutical composition comprising a compound disclosed herein, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

[0008c] In a further aspect of the present disclosure, there is provided a compound disclosed herein, or the pharmaceutical composition disclosed herein, for use as a medicament.

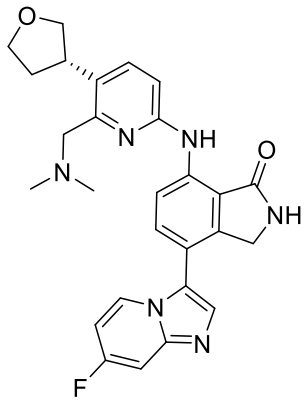
[0008d] In another aspect of the present disclosure, there is provided an *in vivo* or *ex vivo* method of inhibiting HPK1 in a biological sample comprising contacting the sample with the compound disclosed herein, or a pharmaceutically acceptable salt thereof, or the pharmaceutical composition disclosed herein.

[0008e] In a further aspect of the present disclosure, there is provided a use of a disclosed herein, or a pharmaceutically acceptable salt thereof, or the pharmaceutical composition disclosed herein, in the manufacture of a medicament for treating a HPK1-mediated disorder, disease, or condition.

[0008f] In another aspect of the present disclosure, there is provided a use of a compound disclosed herein, or a pharmaceutically acceptable salt thereof, or the pharmaceutical composition disclosed herein, in the manufacture of a medicament for increasing the efficacy of vaccination in a patient, wherein the compound, or a pharmaceutically acceptable salt thereof, or the pharmaceutical composition is to be administered as an adjuvant.

[0008g] In a further aspect of the present disclosure, there is provided a compound, wherein the compound is:

I-479



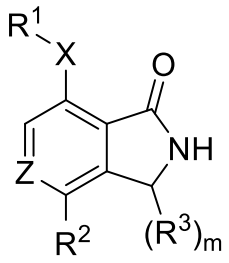
or pharmaceutically acceptable salt thereof.

[0008h] In another aspect of the present disclosure, there is provided a compound disclosed herein, or a pharmaceutical composition disclosed herein, for use in therapy.

DETAILED DESCRIPTION OF CERTAIN EMBODIMENTS

1. General Description of Certain Embodiments of the Invention:

[0009] In certain aspects, the present invention provides a compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein each of X, Z, R^1, R^2, R^3, and m, is as defined below and described in embodiments herein, both singly and in combination.

[0010] In some embodiments, the present invention provides a pharmaceutical composition comprising a compound of formula **I** and a pharmaceutically acceptable carrier, adjuvant, or diluent.

[0011] In some embodiments, the present invention provides a method of treating a HPK1-mediated disease, disorder, or condition comprising administering to a patient in need thereof, a compound of formula **I**, or a pharmaceutically acceptable salt thereof.

2. Compounds and Definitions:

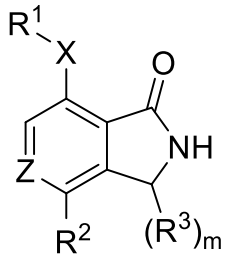
[0012] Compounds of the present invention include those described generally herein, and are further illustrated by the classes, subclasses, and species disclosed herein. As used herein, the following definitions shall apply unless otherwise indicated. For purposes of this invention, the chemical elements are identified in accordance with the Periodic Table of the Elements, CAS version, Handbook of Chemistry and Physics, 75th Ed. Additionally, general principles of organic chemistry are described in "Organic Chemistry", Thomas Sorrell, University Science Books, Sausalito: 1999, and "March's Advanced Organic Chemistry", 5th Ed., Ed.: Smith, M.B. and March, J., John Wiley & Sons, New York: 2001, the entire contents of which are hereby incorporated by reference.

[0013] The term "aliphatic" or "aliphatic group", as used herein, means a straight-chain (i.e., unbranched) or branched, substituted or unsubstituted hydrocarbon chain that is completely saturated or that contains one or more units of unsaturation, or a monocyclic hydrocarbon or bicyclic hydrocarbon that is completely saturated or that contains one or more units of unsaturation, but which is not aromatic (also referred to herein as "carbocycle," "cycloaliphatic" or "cycloalkyl"), that has a single point of attachment to the rest of the molecule. Unless otherwise

CLAIMS

We claim:

1. A compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

Z is CH or N;

X is a covalent bond or -NH-;

R^1 is pyrazolyl, pyridinyl, pyrazinyl, or pyrimidinyl; each of which is substituted by q instances of R^C; wherein each R^C is independently halogen, –CN, –OR, $-S(O)_2R$, $–C(O)NR_2$, or each instance of R^C is independently an optionally substituted group selected from C_{1-6} aliphatic; a 5-10 membered saturated or partially unsaturated bridged bicyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 6-12 membered saturated or partially unsaturated spirocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 3-7 membered saturated or partially unsaturated monocyclic carbocyclic ring; and a 3-7 membered saturated or partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, phosphorous, silicon and sulfur; or two R^C groups together with the atoms to which each is attached, forms a 5-6 membered aryl ring, a 3-7 membered partially unsaturated monocyclic carbocyclic ring, or a 3-7 membered partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, phosphorous, silicon and sulfur; wherein each instance of R^C is independently optionally substituted by r instances of R and s instances of R^D;

R^2 is a 9-membered fused bicyclic ring having 1-3 nitrogen atoms; each of which is substituted by each of which is substituted by q instances of R^C; wherein each R^C is independently halogen, –CN, –OR,–$C(O)NR_2$, $-NR_2$; or each instance of R^C is independently an optionally substituted group selected from C_{1-6} aliphatic; phenyl; a 3-7 membered saturated or partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, phosphorous, silicon and sulfur; and a 6-11 membered saturated or partially unsaturated fused, bridged, or spiro bicyclic heterocyclic

ring having 1-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; wherein each instance of R^C is independently optionally substituted by r instances of R and s instances of R^D;

each instance of R^D is independently oxo, halogen, –CN, $–NO_2$, –OR, -SR, $-NR_2$, $-S(O)_2R$, $-S(O)_2NR_2$, -S(O)R, $-S(O)NR_2$, -C(O)R, -C(O)OR, $–C(O)NR_2$, -C(O)N(R)OR, -OC(O)R, $-OC(O)NR_2$, -N(R)C(O)OR, -N(R)C(O)R, $-N(R)C(O)NR_2$, $-N(R)C(NR)NR_2$, $–N(R)NR_2$, $-N(R)S(O)_2NR_2$, $–N(R)S(O)_2R$, $–N=S(O)R_2$, –S(NR)(O)R, –N(R)S(O)R, –N(R)CN, $–P(O)(R)NR_2$, –P(O)(R)OR or $–P(O)R_2$;

each R is independently hydrogen, -CN, halogen, or an optionally substituted group selected from C_{1-6} aliphatic; phenyl; naphthyl; a 3-7 membered saturated or partially unsaturated monocyclic carbocyclic ring; a 3-7 membered saturated or partially unsaturated monocyclic heterocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 5-6 membered monocyclic heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; an 8-10 membered bicyclic heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 7-12 membered saturated or partially unsaturated bicyclic heterocyclic ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 5-8 membered saturated or partially unsaturated bridged bicyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; a 6-10 membered saturated or partially unsaturated spirocyclic ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; and a 6-11 membered saturated or partially unsaturated bicyclic carbocyclic ring having 1-2 heteroatoms independently selected from nitrogen, oxygen, and sulfur; or:

two R groups on the same nitrogen are taken together with the nitrogen to form an optionally substituted 4-7 membered monocyclic saturated, partially unsaturated, or heteroaryl ring having, in addition to the nitrogen, 0-3 heteroatoms independently selected from nitrogen, oxygen, and sulfur; an 8-10 membered bicyclic heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur; or a 7-12 membered saturated or partially unsaturated bicyclic heterocyclic ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, and sulfur;

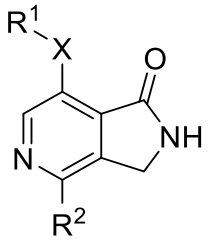
m is 0;

each q is independently 0, 1, 2, 3, or 4;

each r is independently 0, 1, 2, 3, or 4; and

each s is independently 0, 1, 2, 3, or 4.

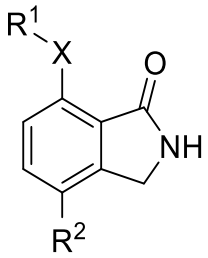
2. The compound of claim 1, wherein the compound is of formula **II**:



II

or a pharmaceutically acceptable salt thereof.

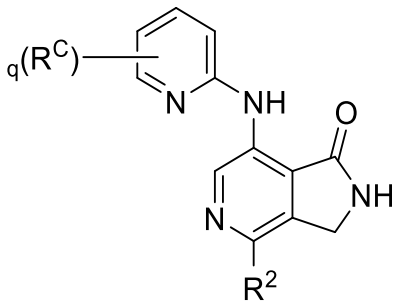
3. The compound of claim 1, wherein the compound is of formula **V**:



V

or a pharmaceutically acceptable salt thereof.

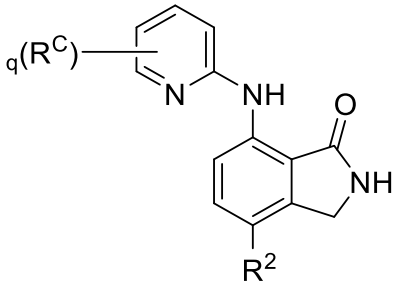
4. The compound of claim 2, wherein the compound is of formula **IV**:



IV

or a pharmaceutically acceptable salt thereof.

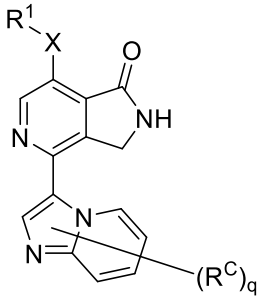
5. The compound of claim 3, wherein the compound is of formula **VII**:



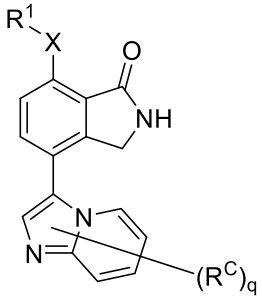
VII

or a pharmaceutically acceptable salt thereof.

6. The compound of claim 1, wherein the compound is any one of formulae **XI-a** or **XI-b**:



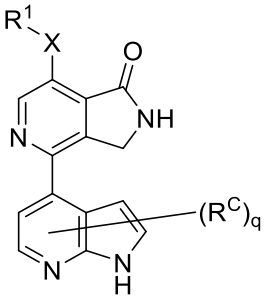
XI-a



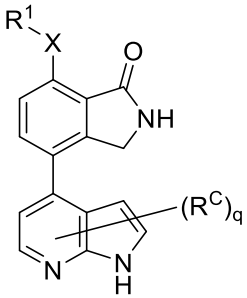
XI-b

or a pharmaceutically acceptable salt thereof.

7. The compound of claim 1, wherein the compound is any one of formulae **XIV-a** or **XIV-b**:



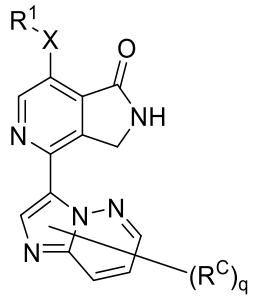
XIV-a



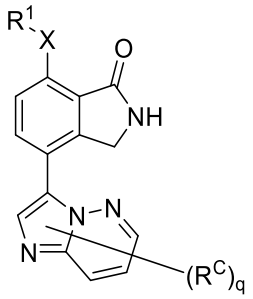
XIV-b

or a pharmaceutically acceptable salt thereof.

8. The compound of claim 1, wherein the compound is any one of formulae **XVII-a** or **XVII-b**:



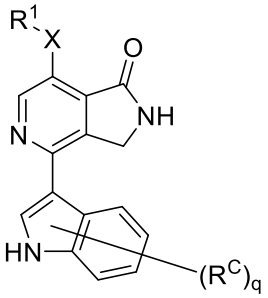
XVII-a



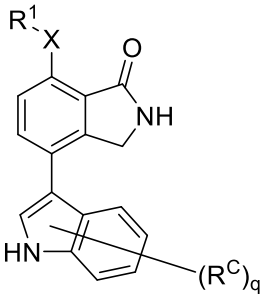
XVII-b

or a pharmaceutically acceptable salt thereof.

9. The compound of claim 1, wherein the compound is any one of formulae **XX-a** or **XX-b**:



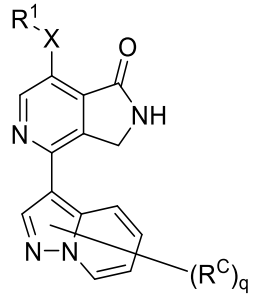
XX-a



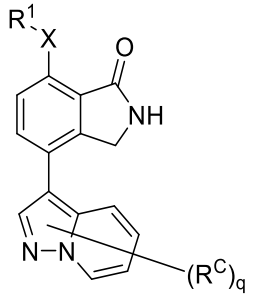
XX-b

or a pharmaceutically acceptable salt thereof.

10. The compound of claim 1, wherein the compound is any one of formulae **XXIII-a** or **XXIII-b**:



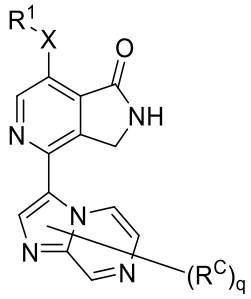
XXIII-a



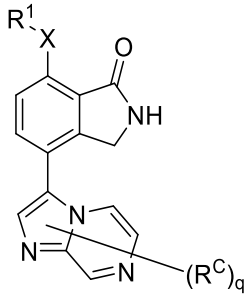
XXIII-b

or a pharmaceutically acceptable salt thereof.

11. The compound of claim 1, wherein the compound is any one of formulae **XXVI-a** or **XXVI-b**:



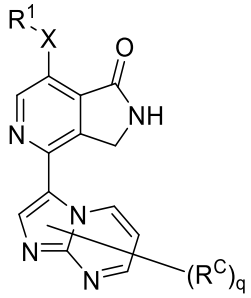
XXVI-a



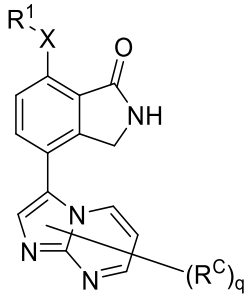
XXVI-b

or a pharmaceutically acceptable salt thereof.

12. The compound of claim 1, wherein the compound is any one of formulae **XXIX-a** or **XXIX-b**:



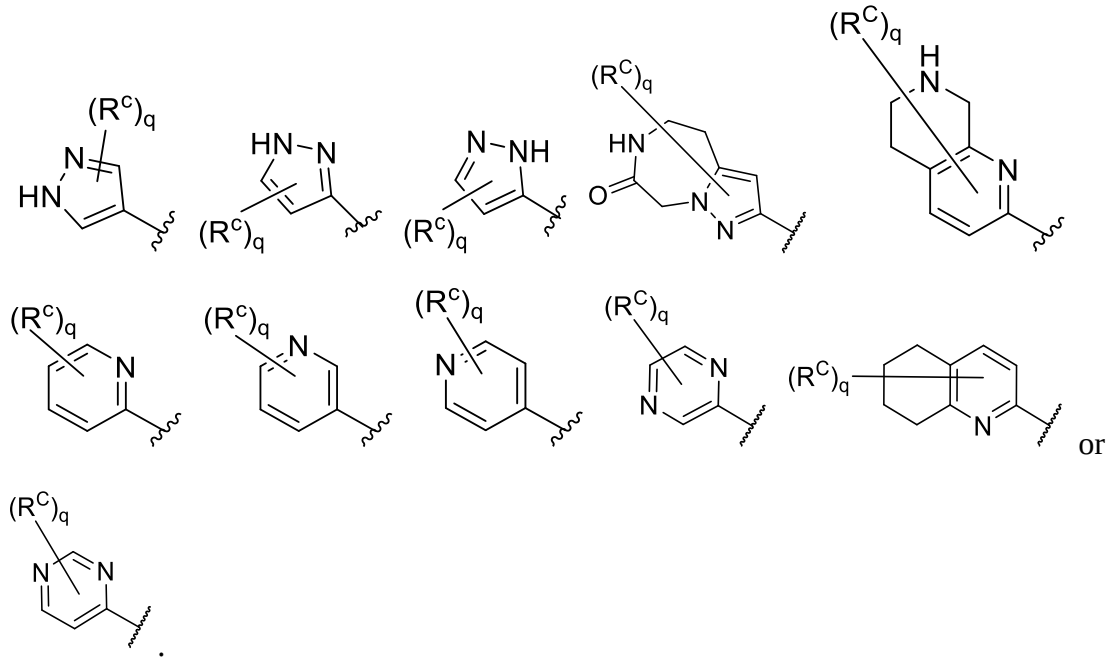
XXIX-a



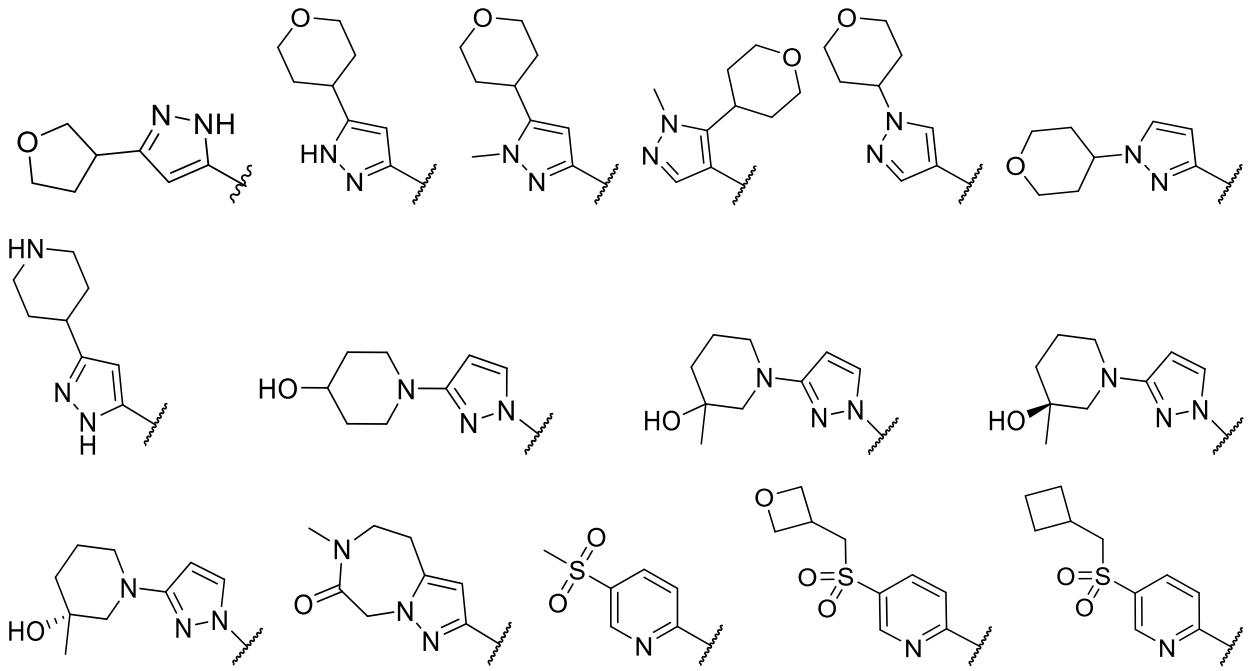
XXIX-b

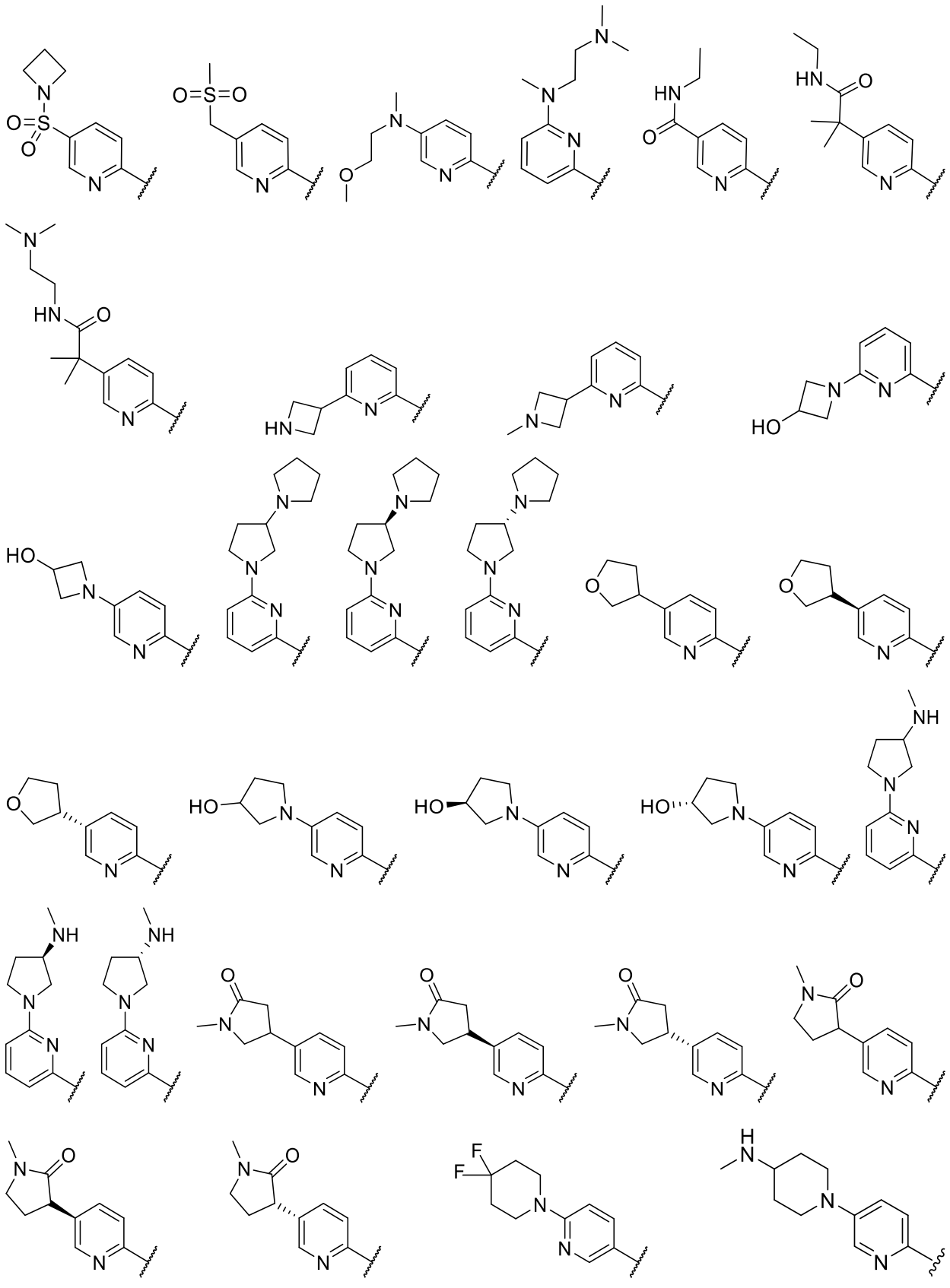
or a pharmaceutically acceptable salt thereof.

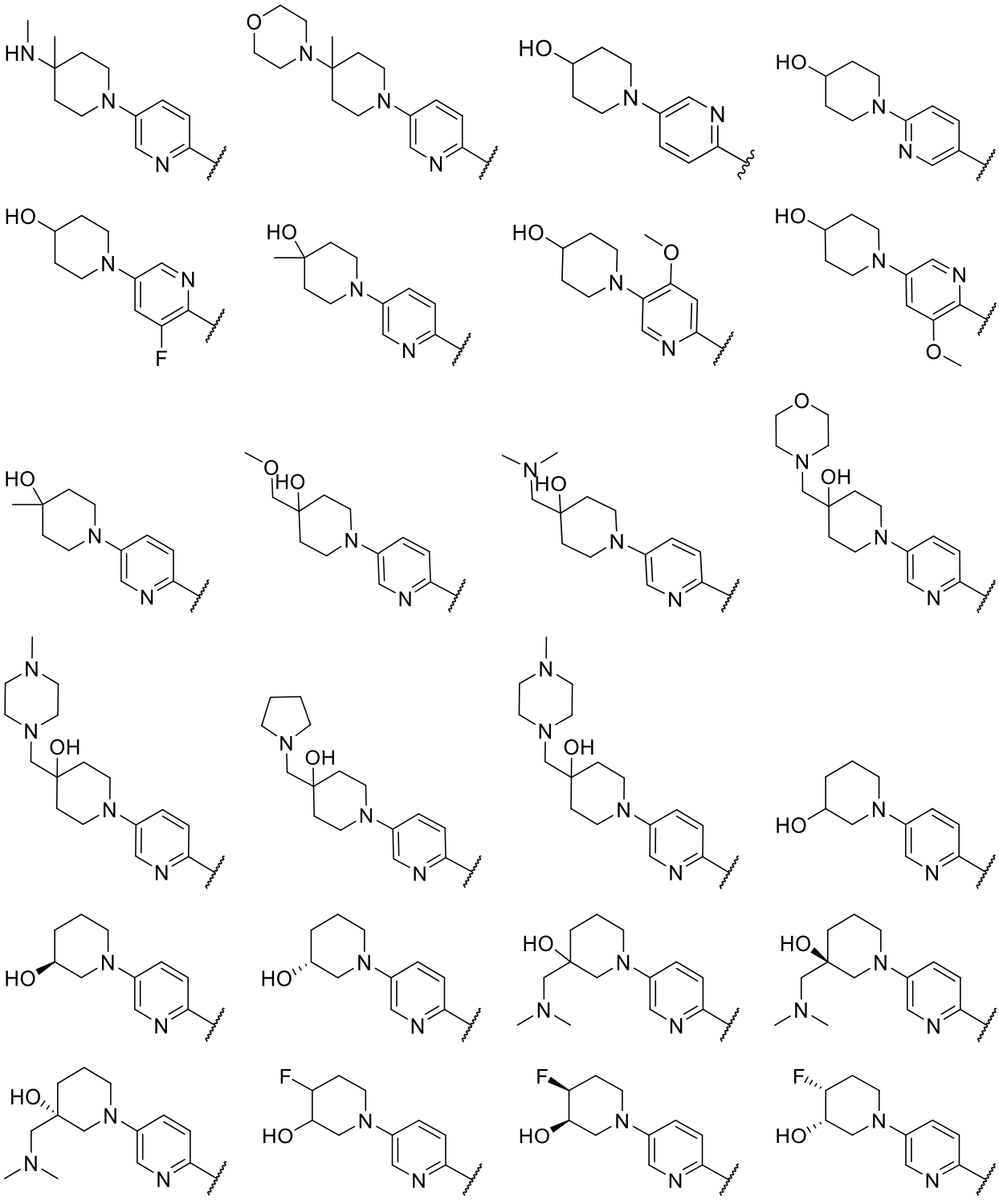
13. The compound of any one of claims 1-3 or 6-12, wherein R^1 is

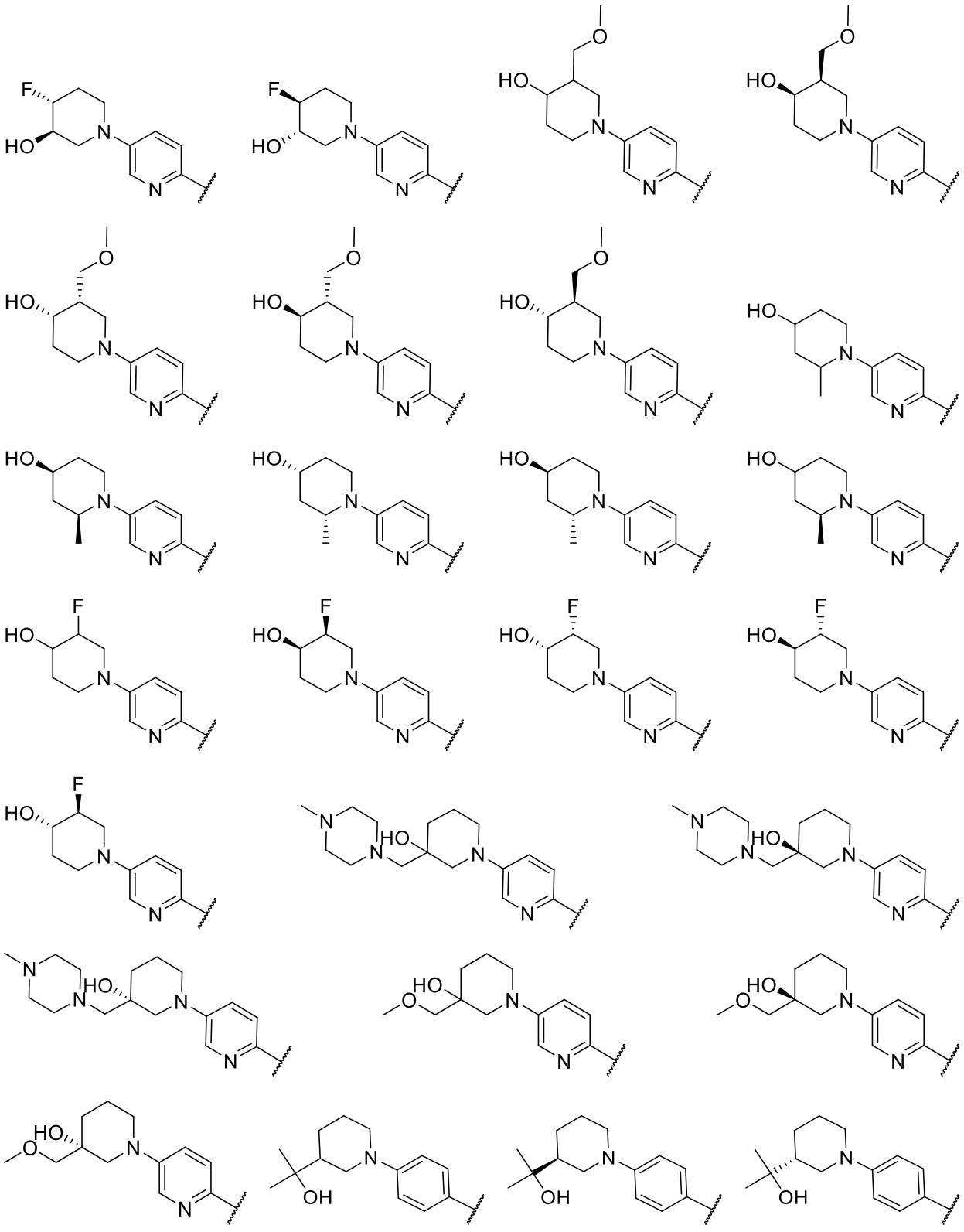


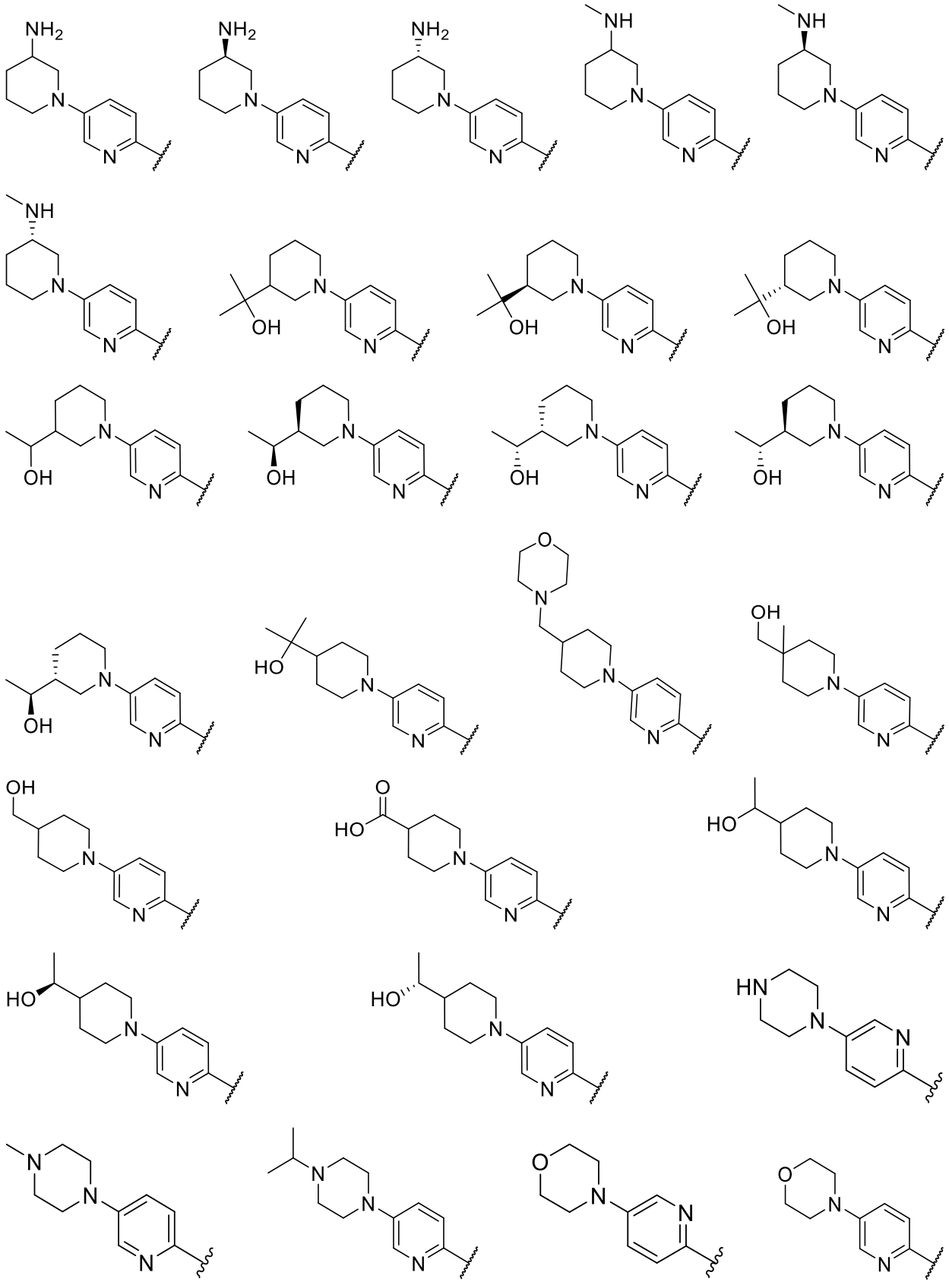
14. The compound of any one of claims 1-3 or 6-12, wherein R^1 is

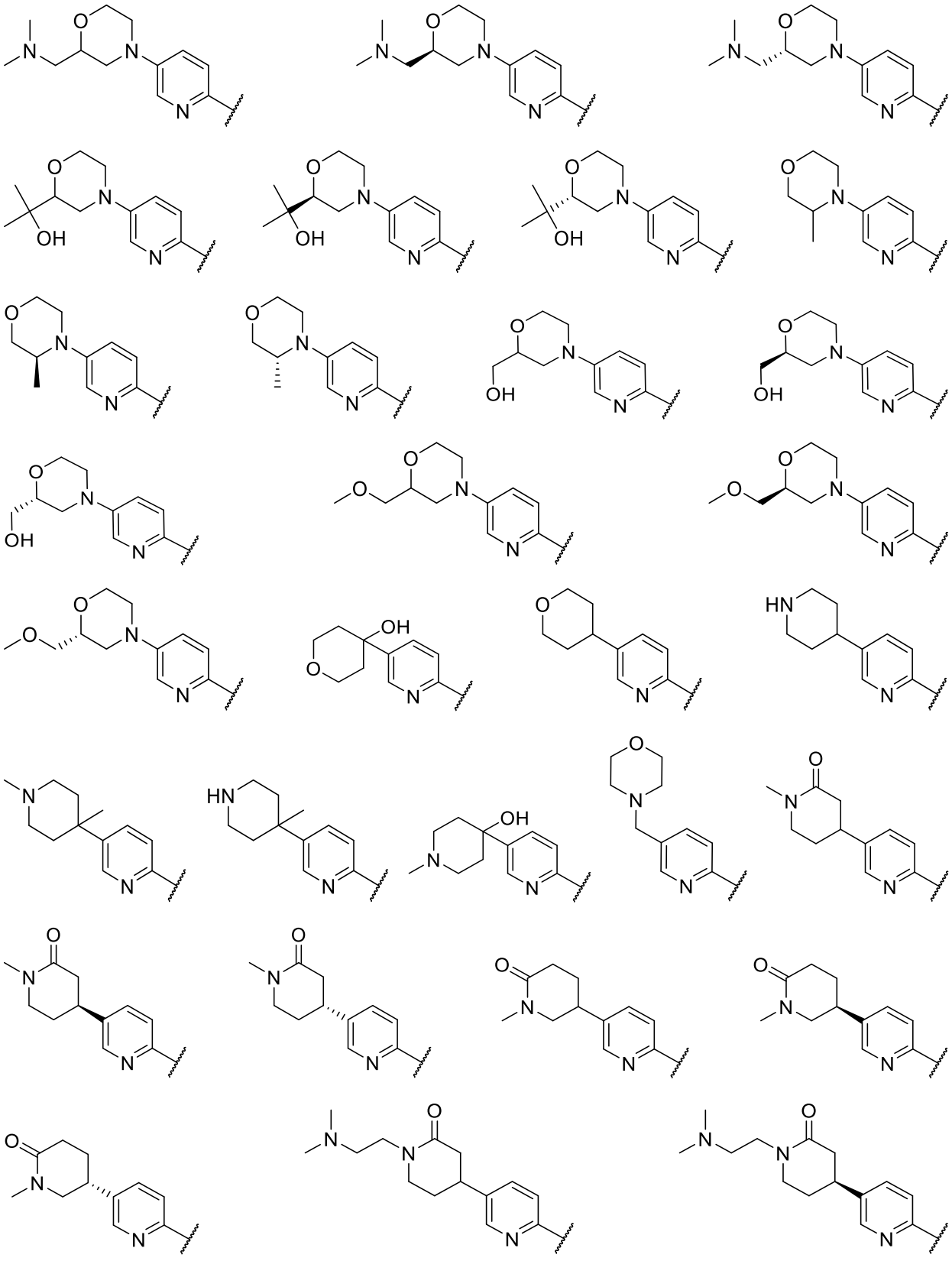


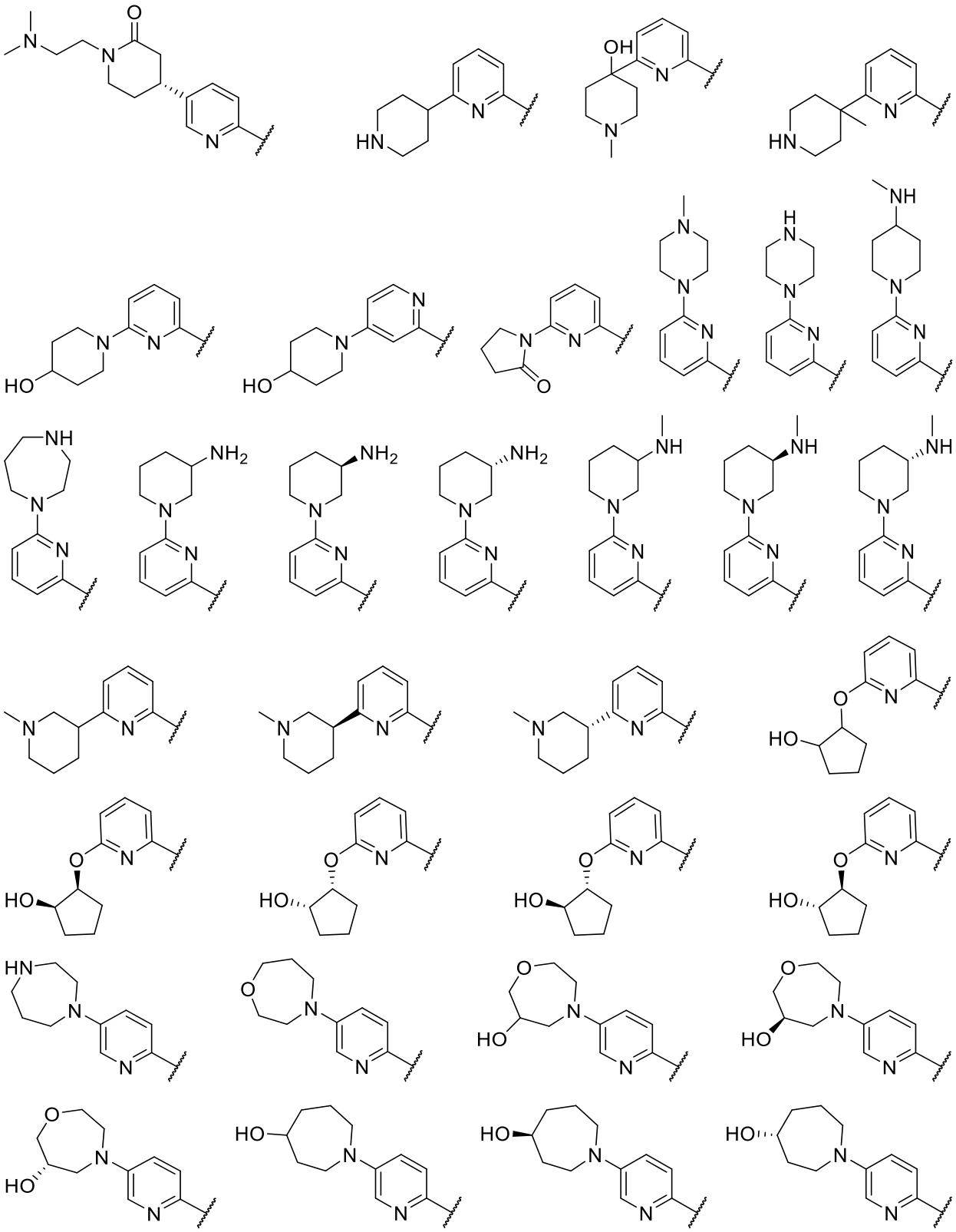


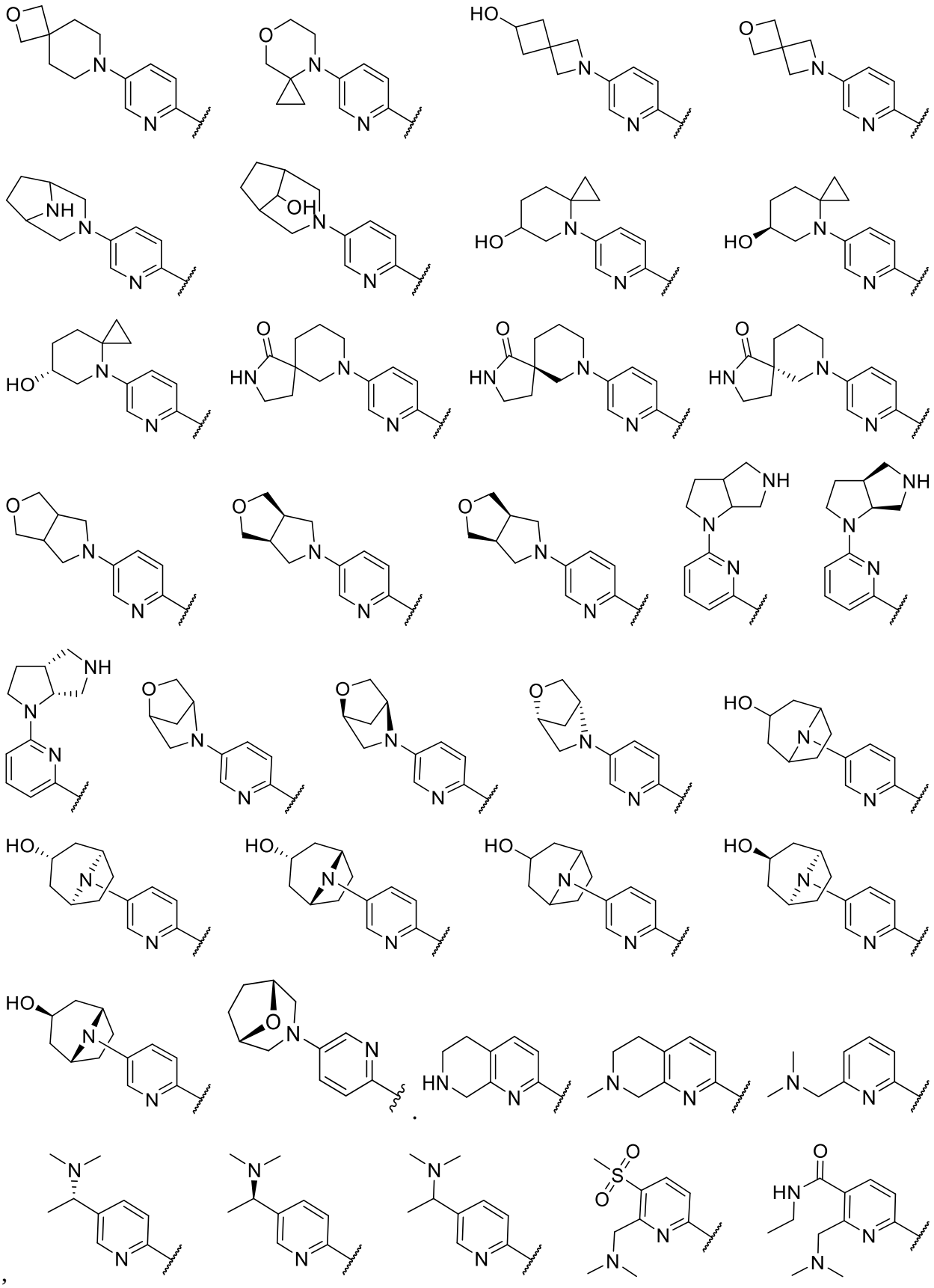


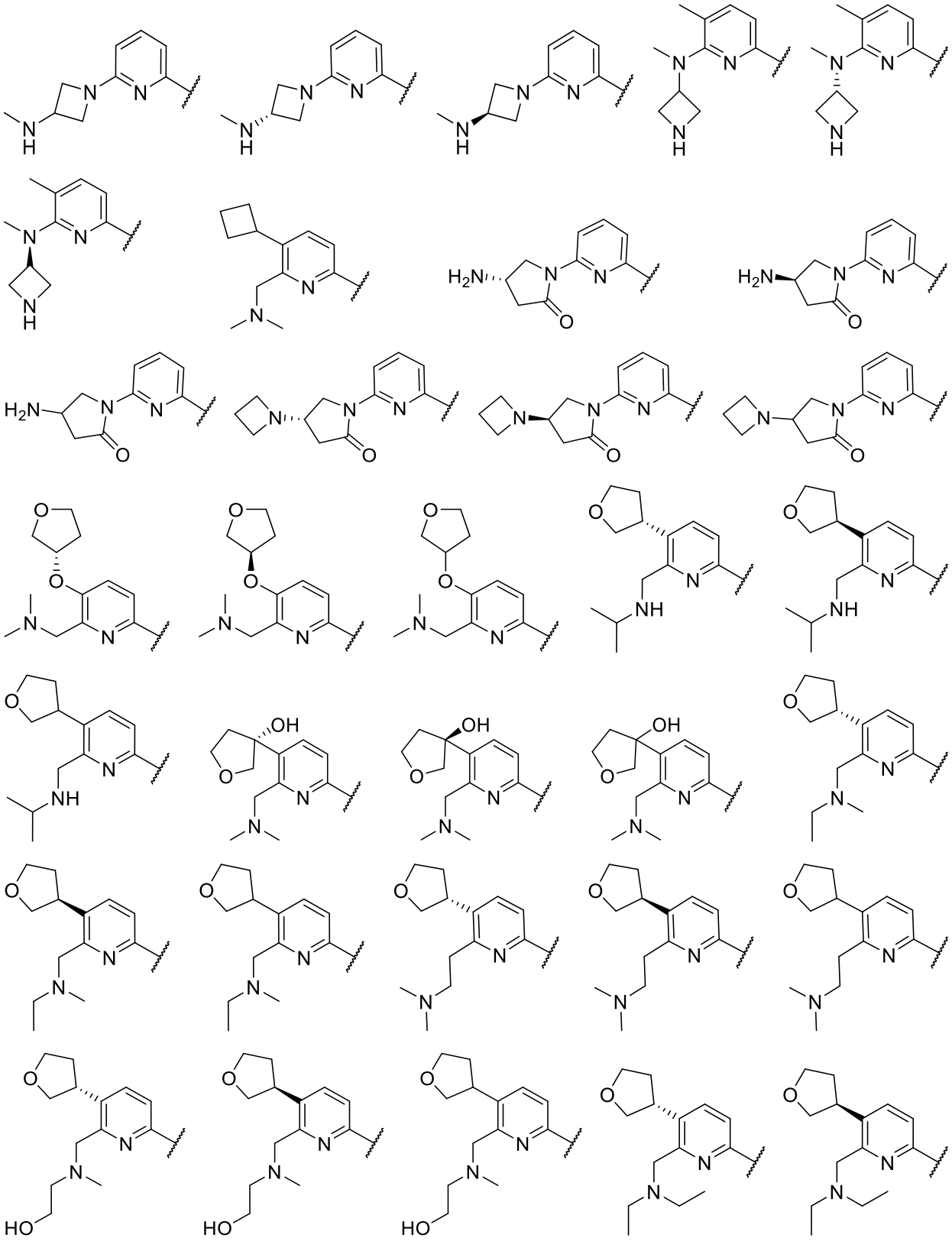


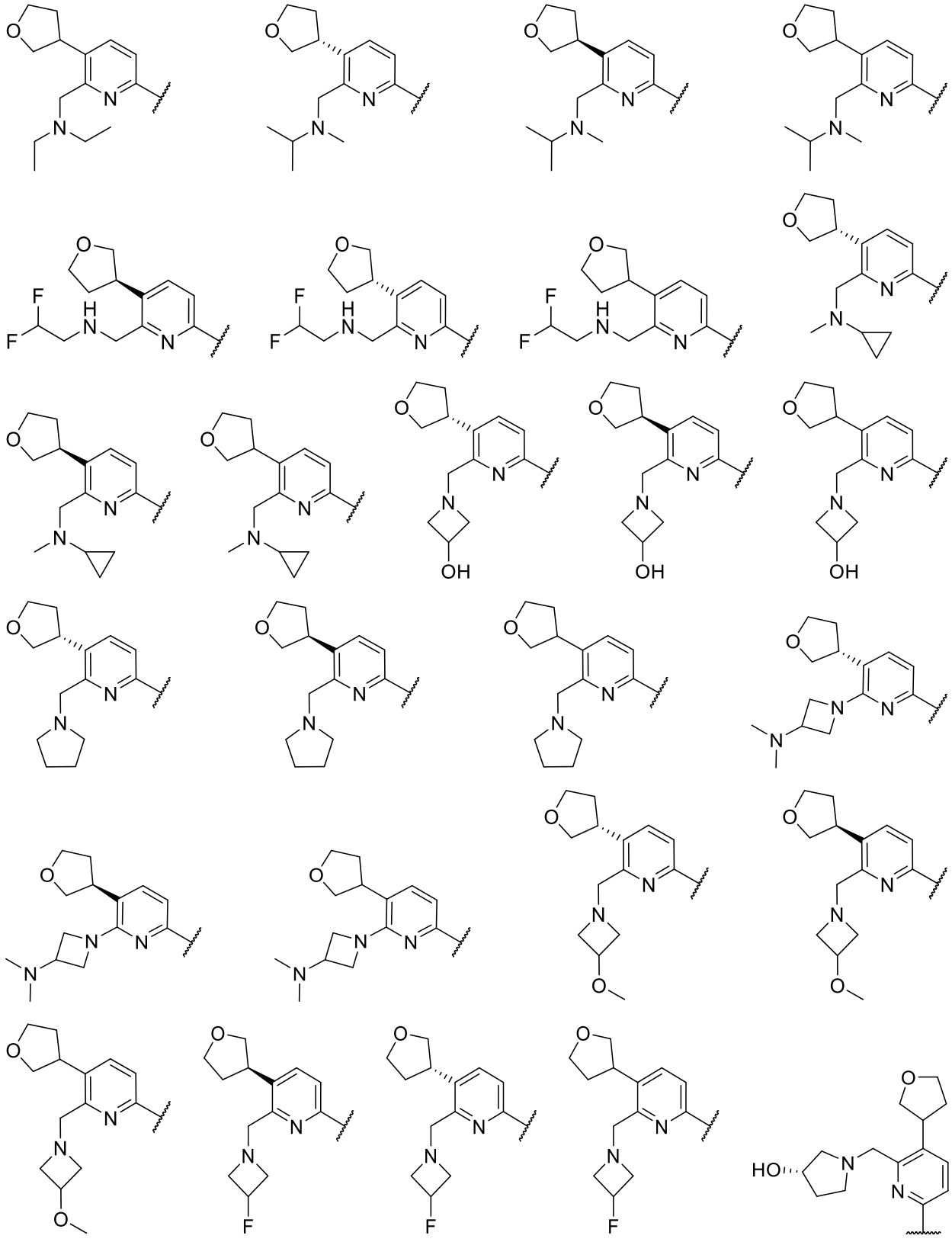


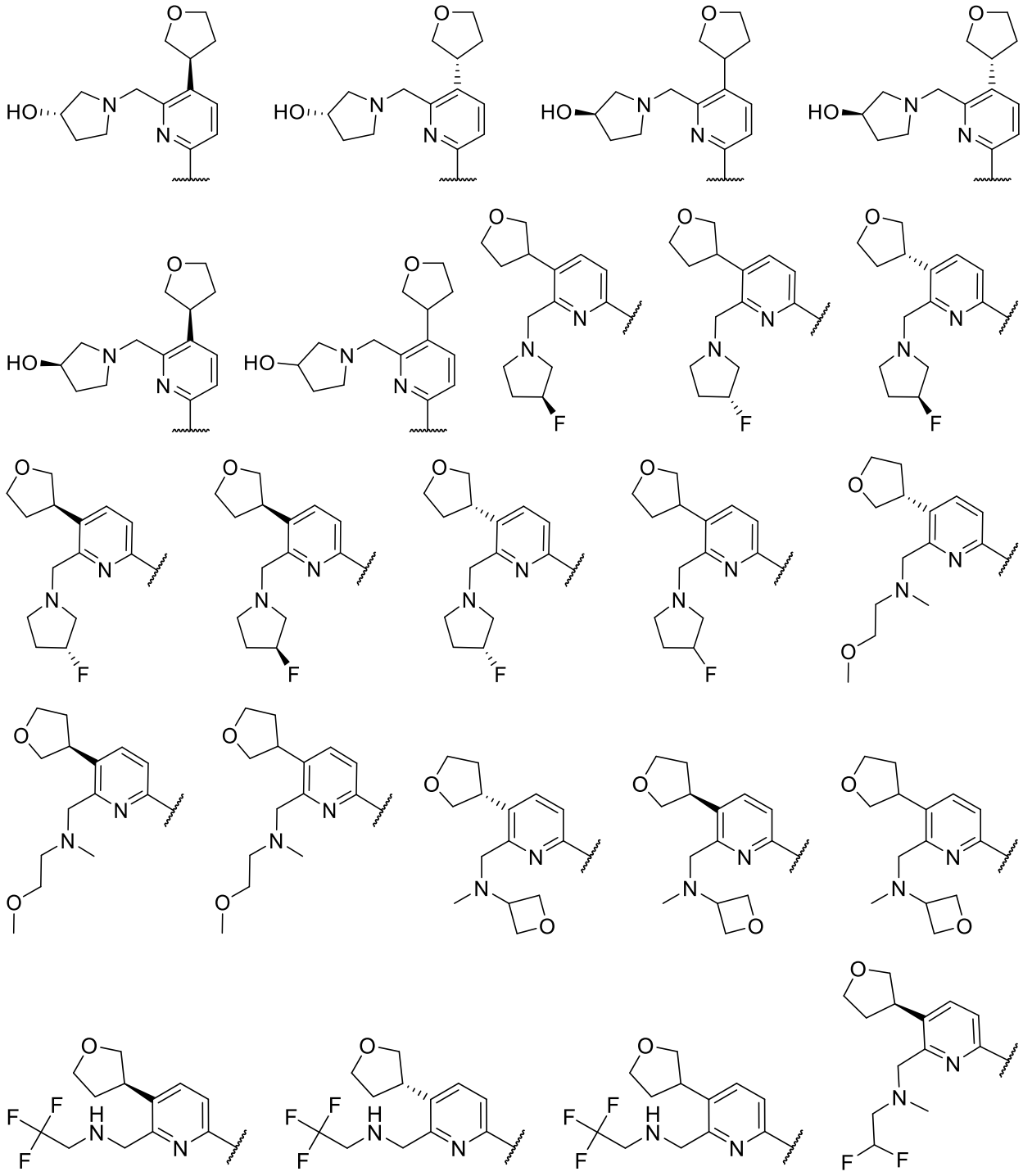


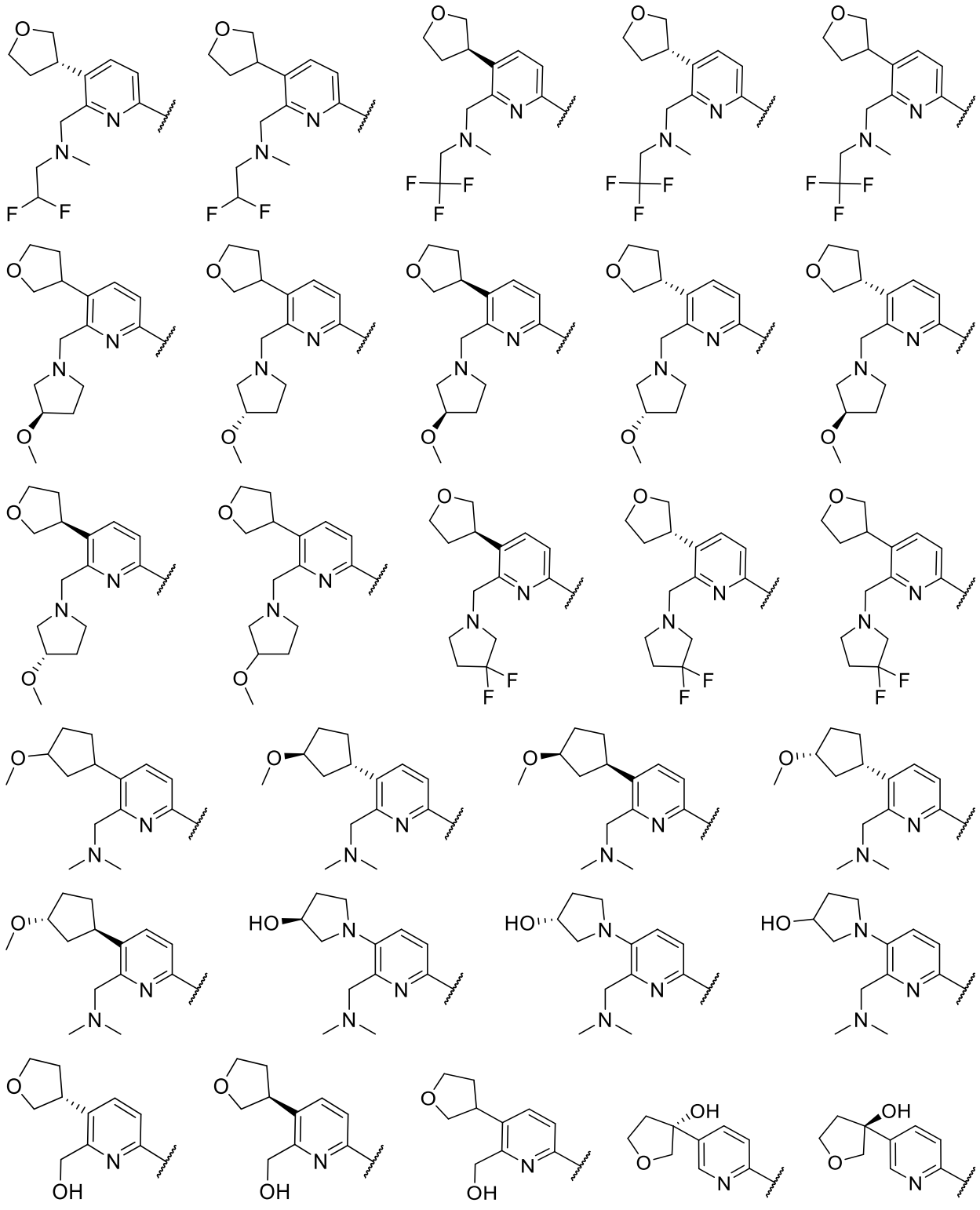


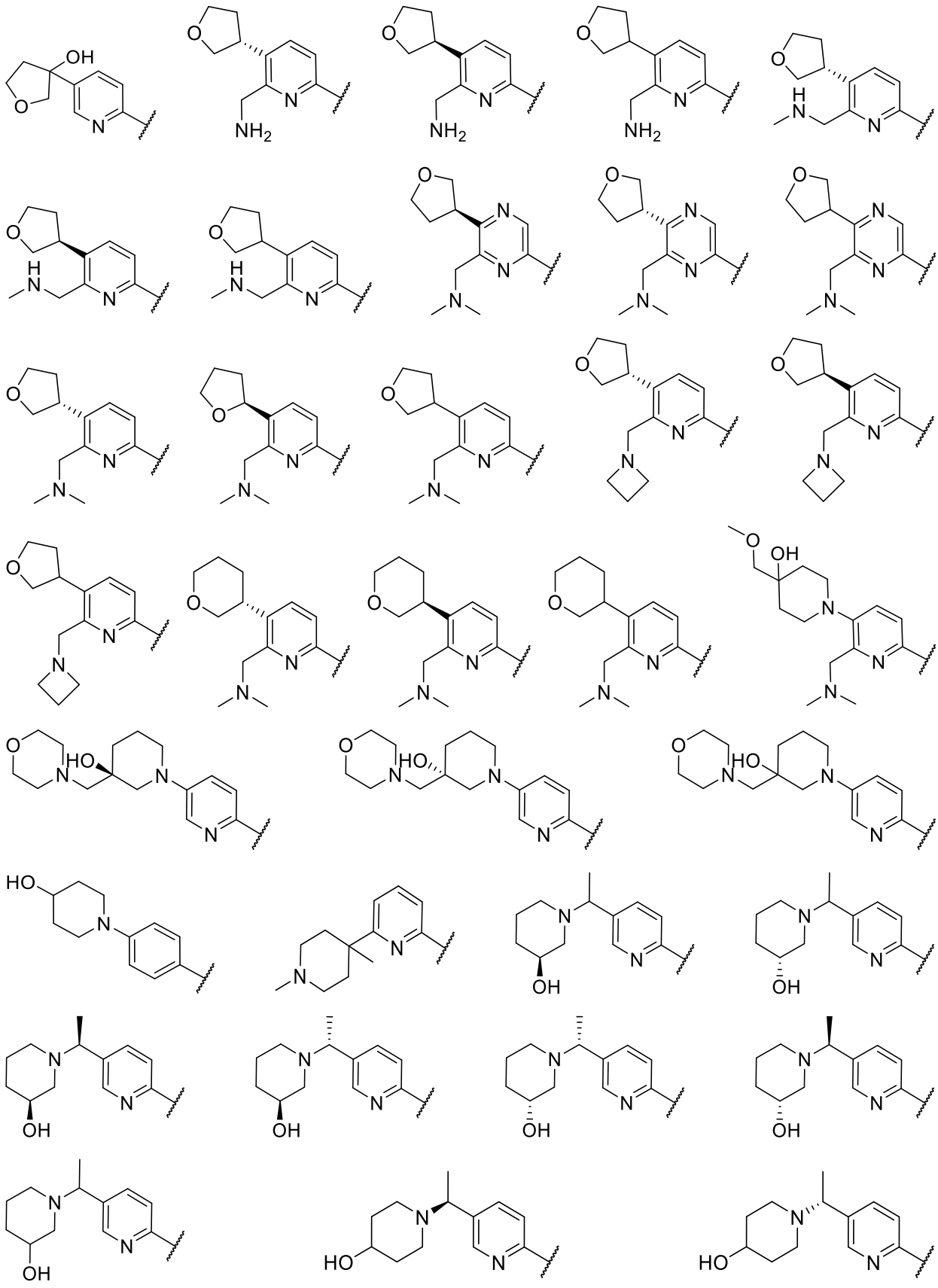


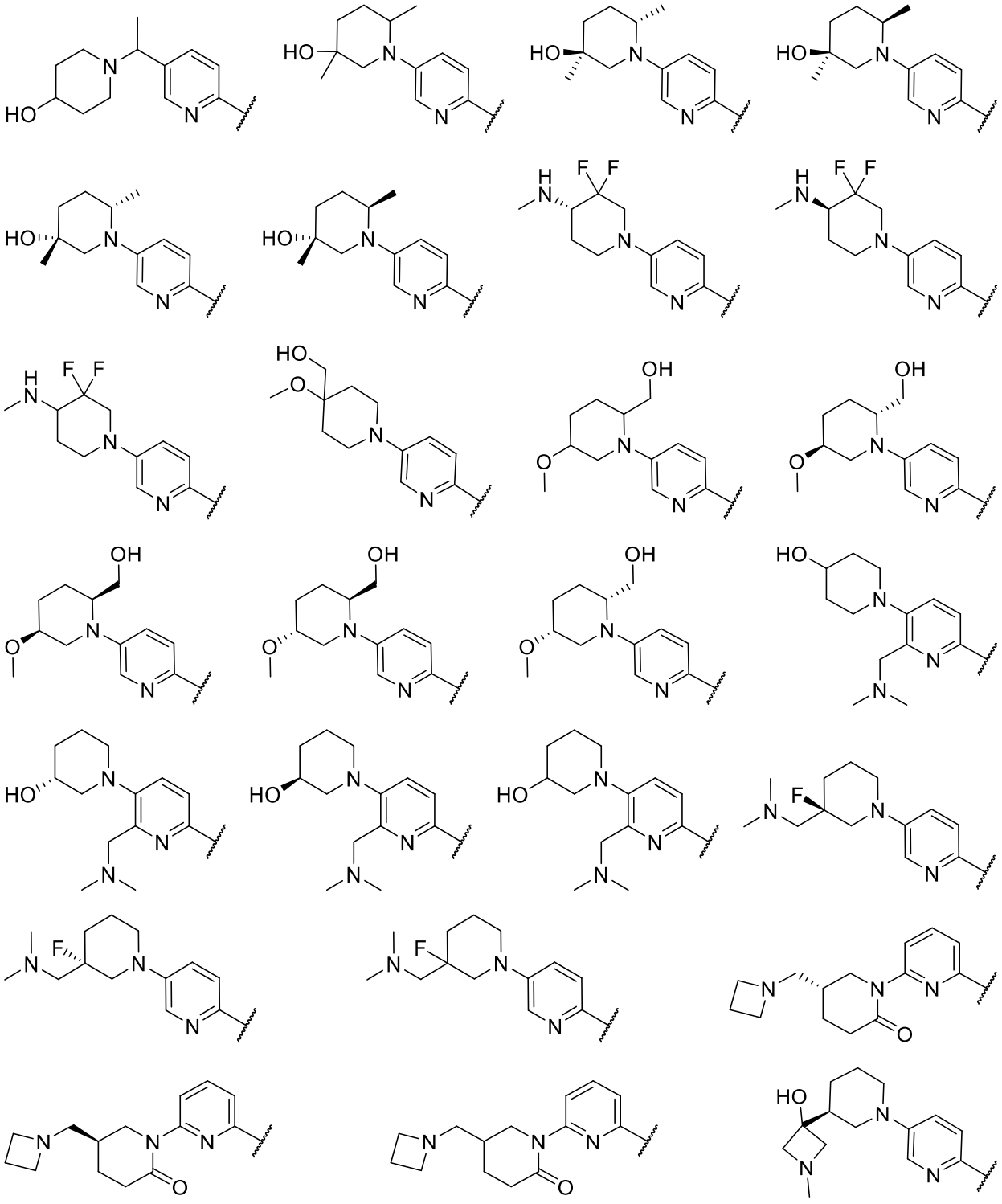


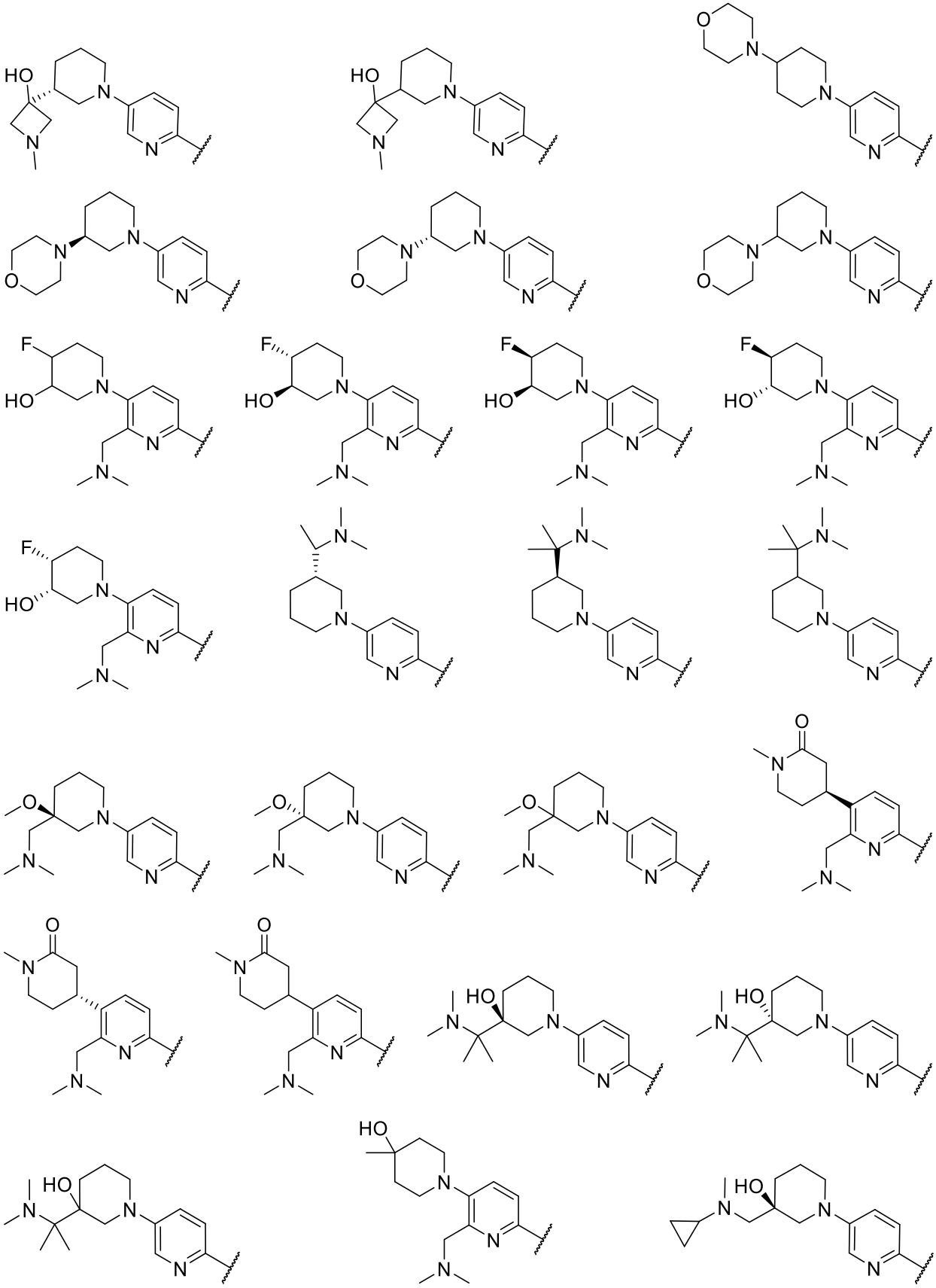


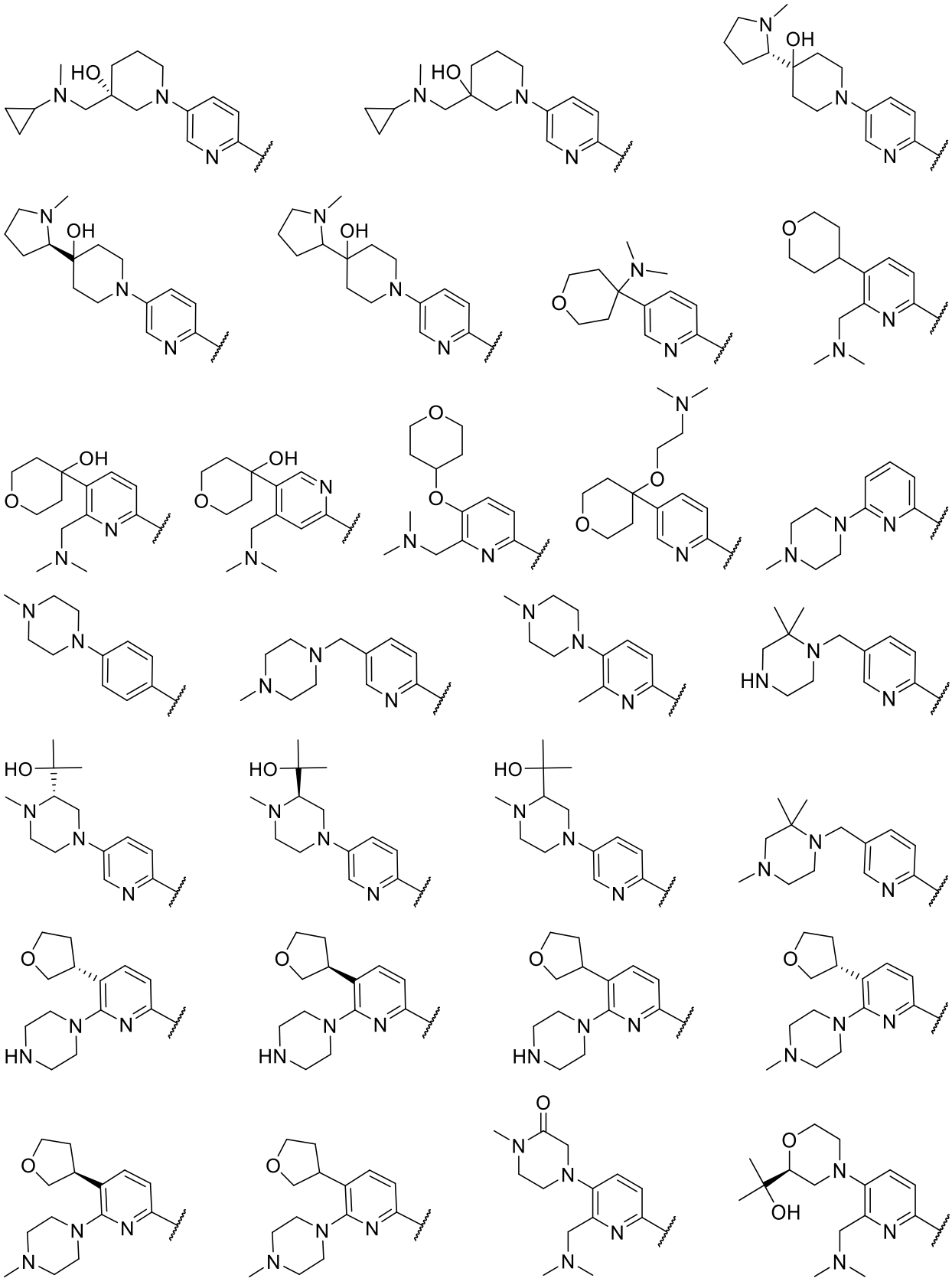


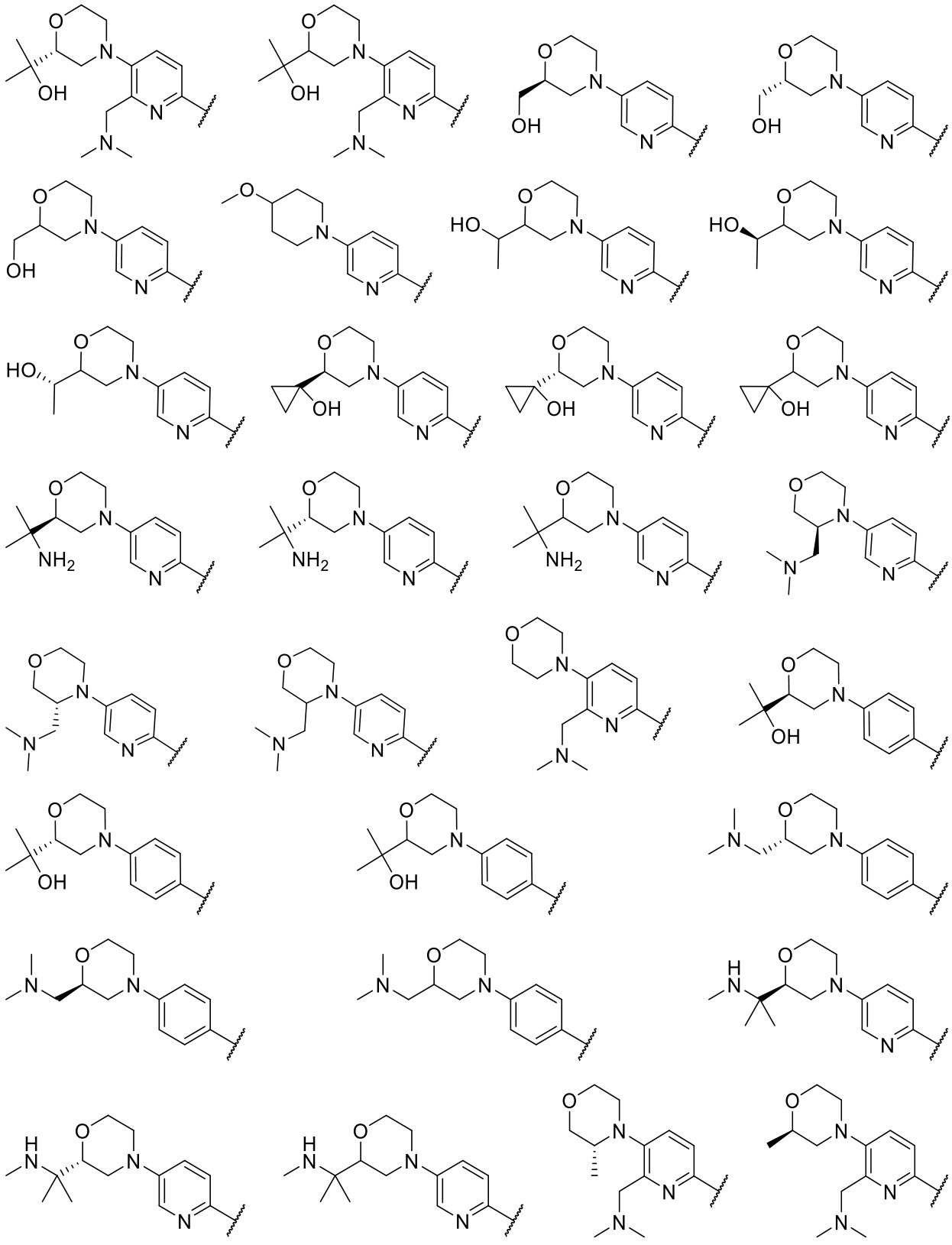


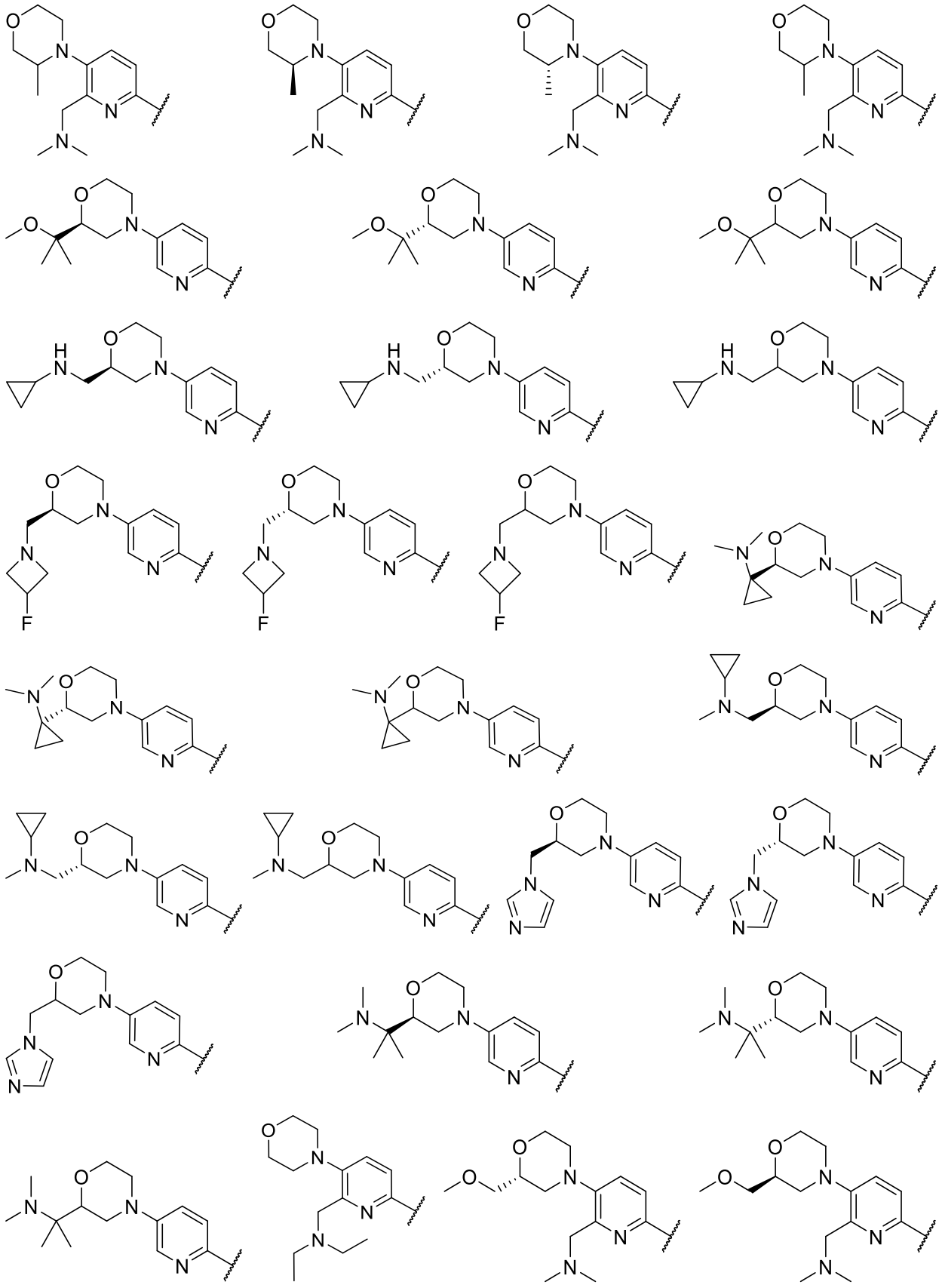


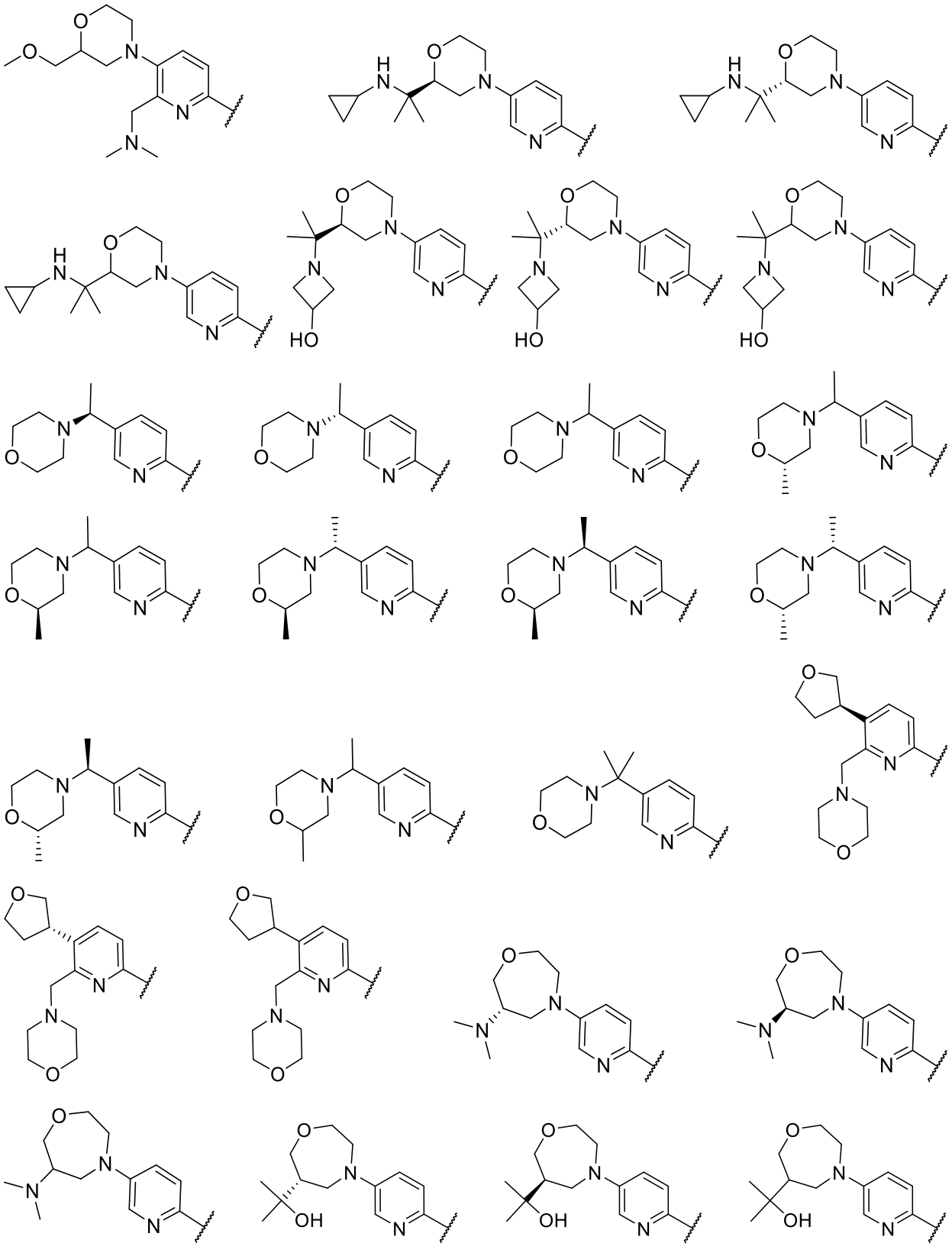


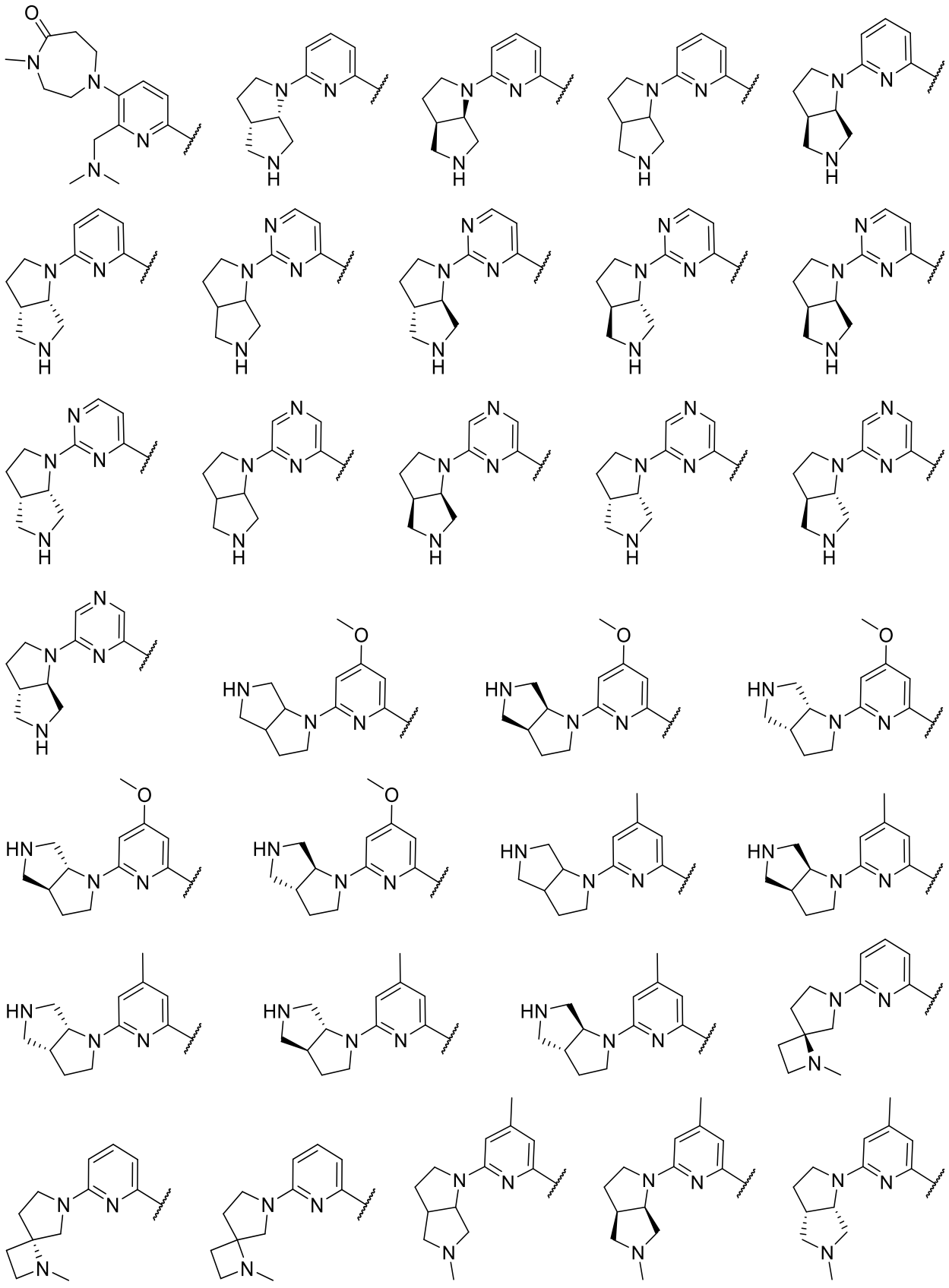


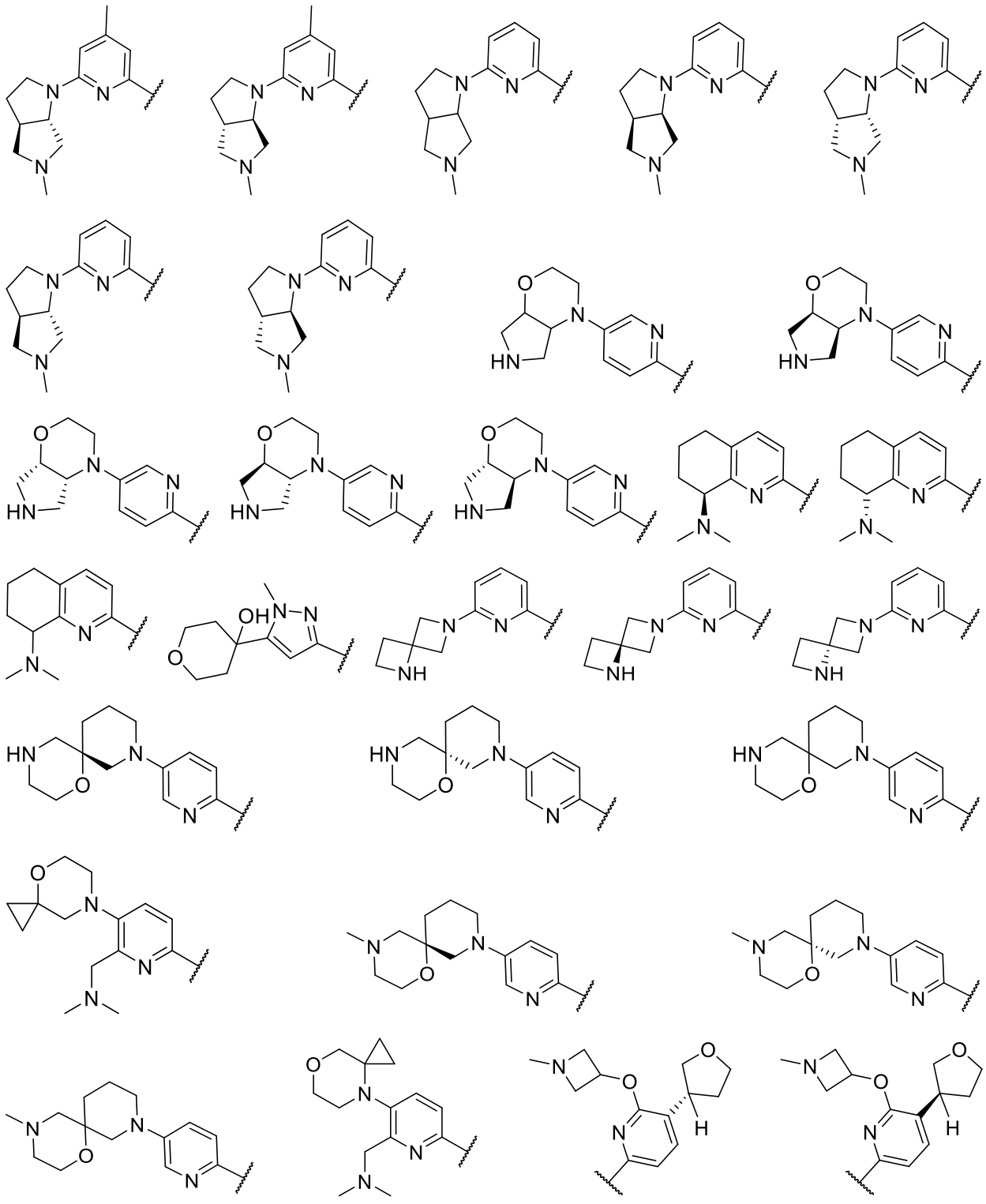


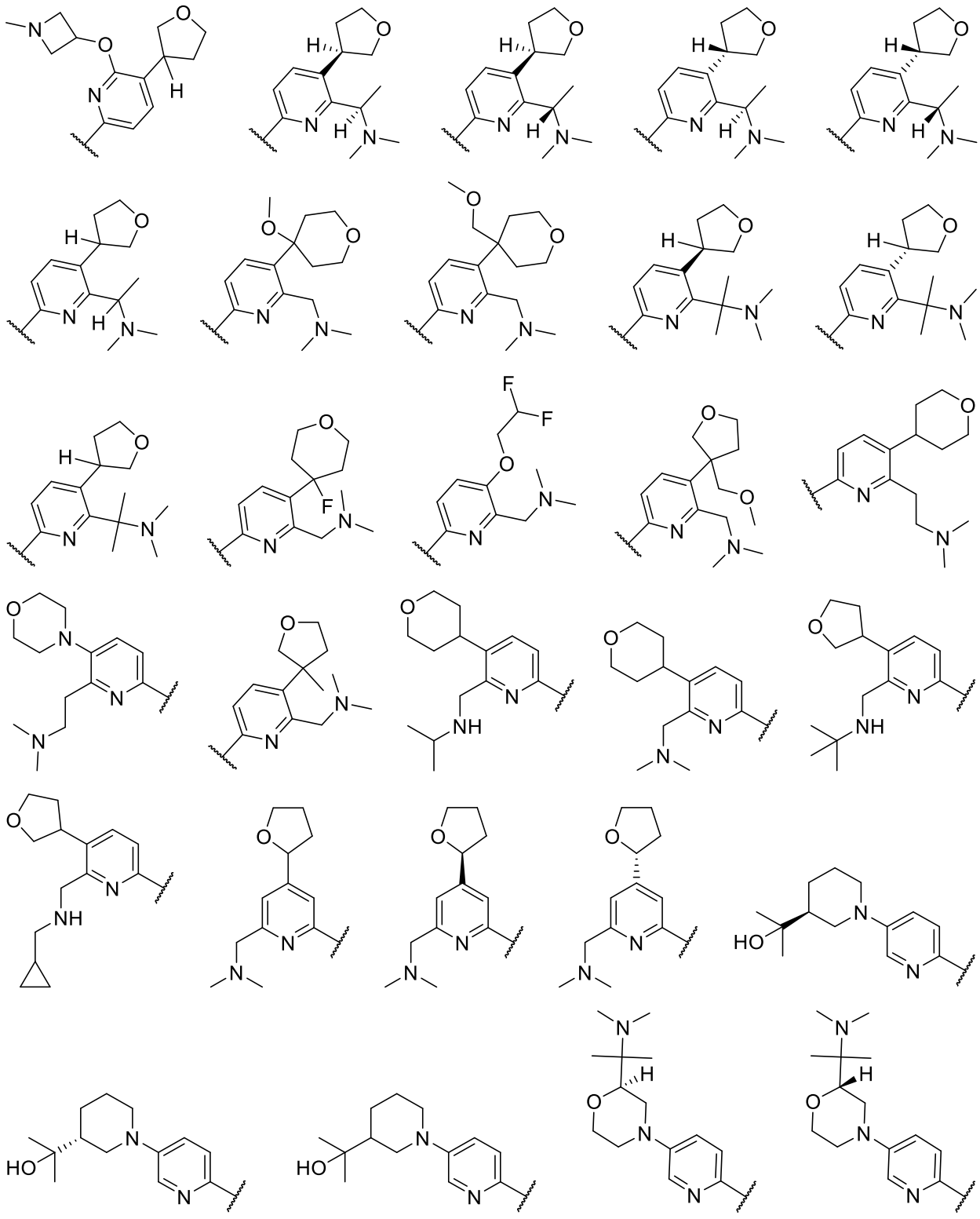


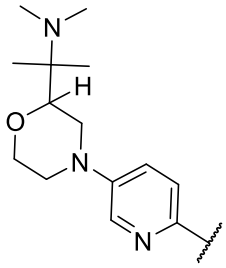
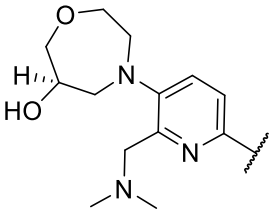
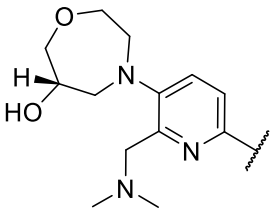
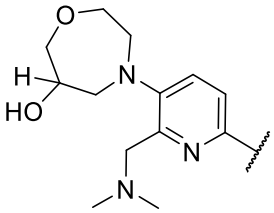
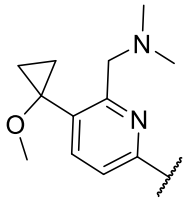
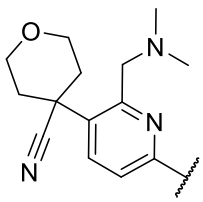
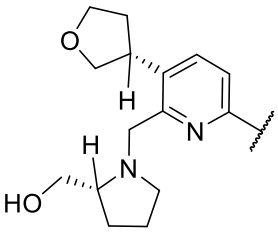
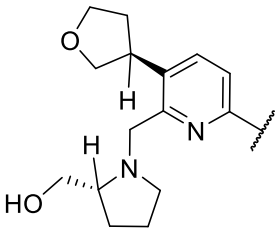
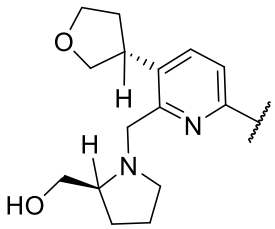
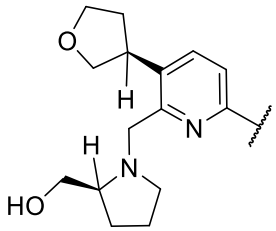


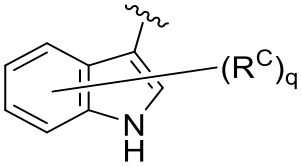


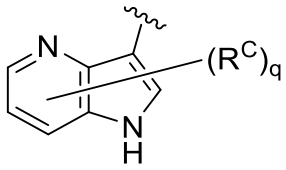
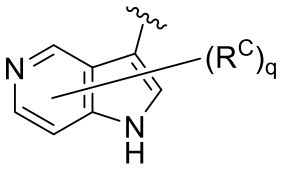
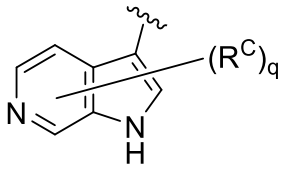
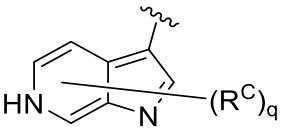
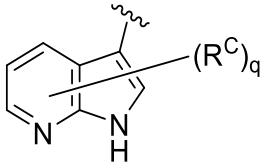
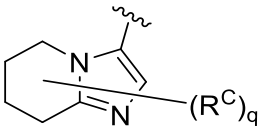
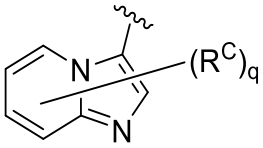
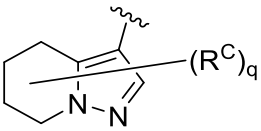
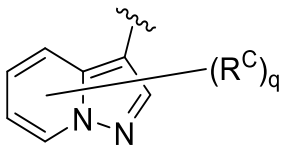
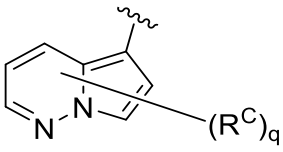
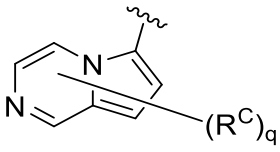
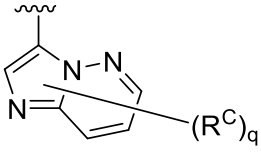


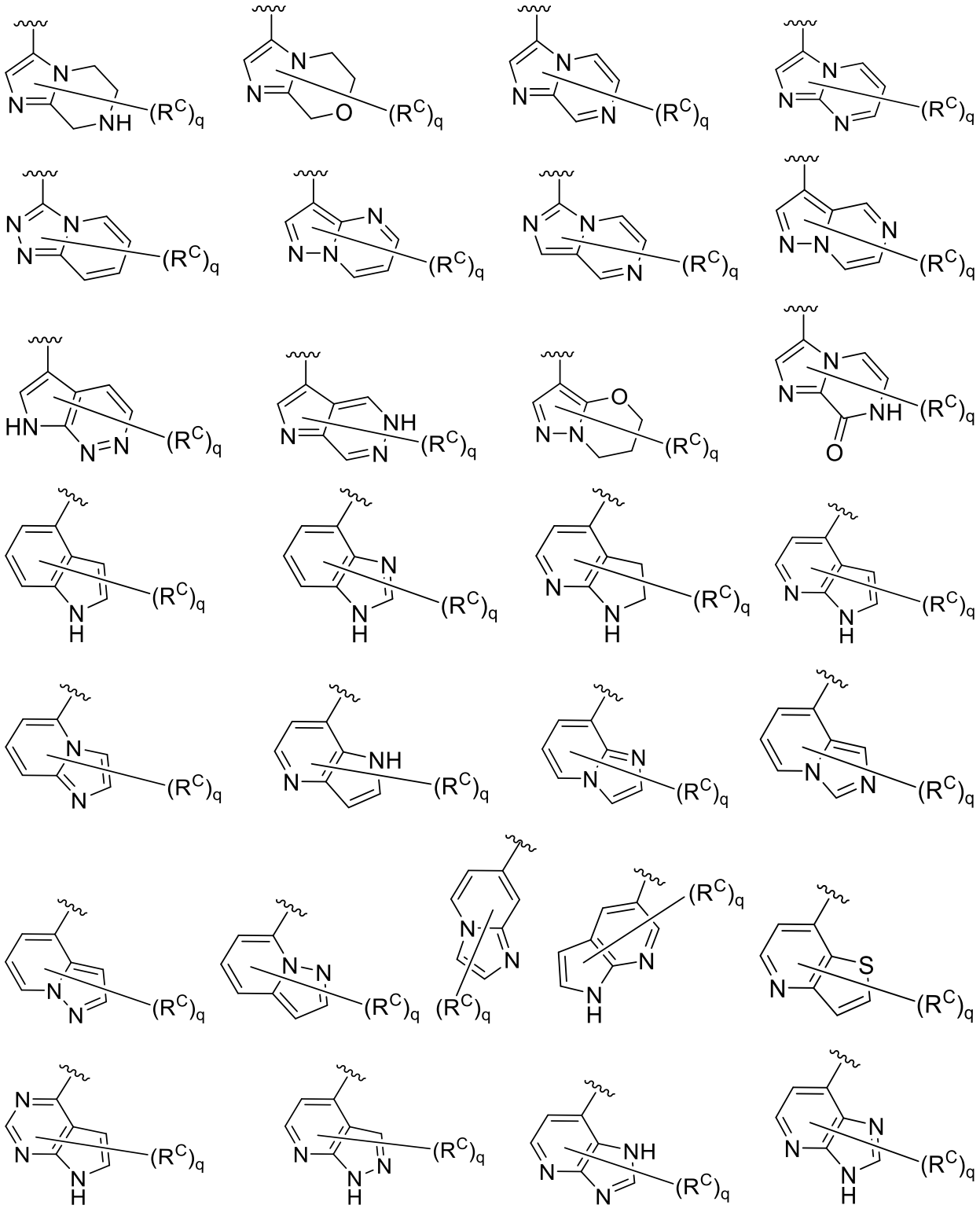


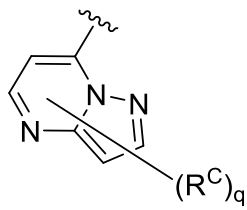
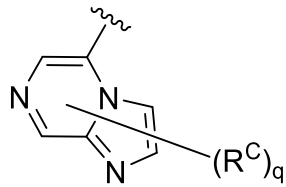
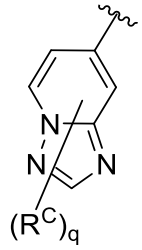
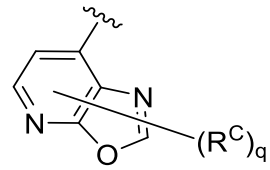
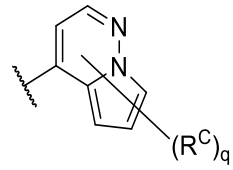
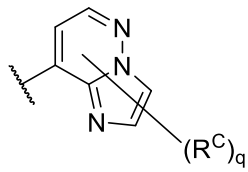
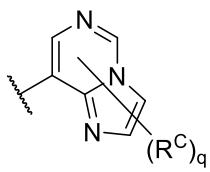


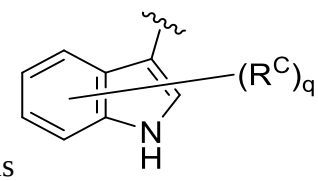









or  .

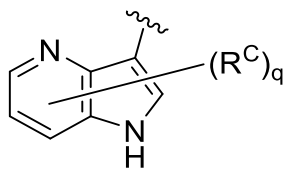
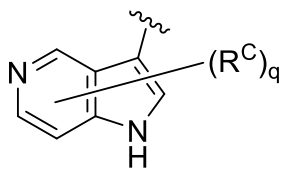
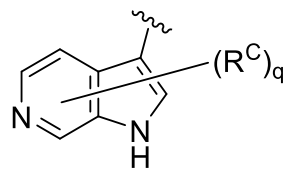
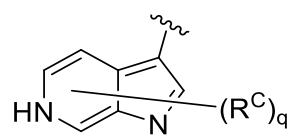
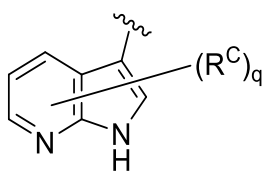
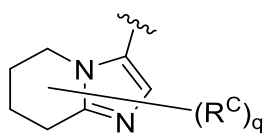
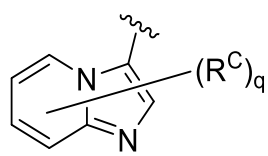
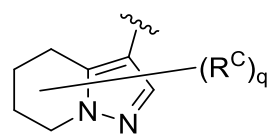
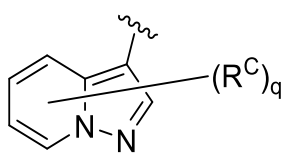
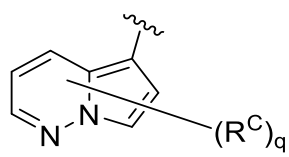
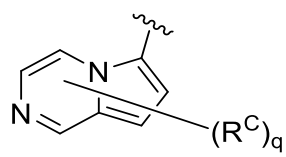
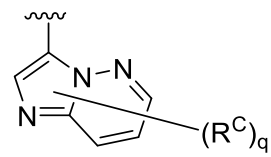
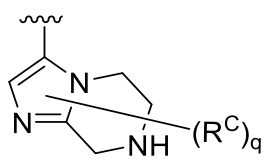
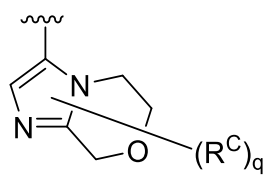
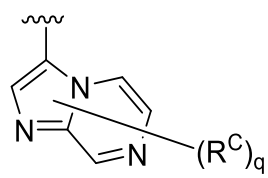
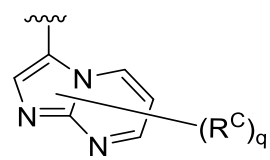
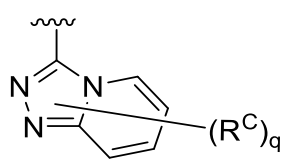
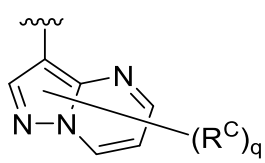
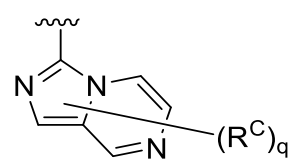
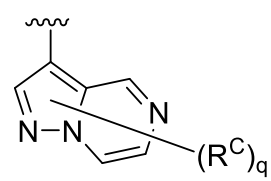
15. The compound of any one of claims 1-5 or 13-14, wherein R^2 is 

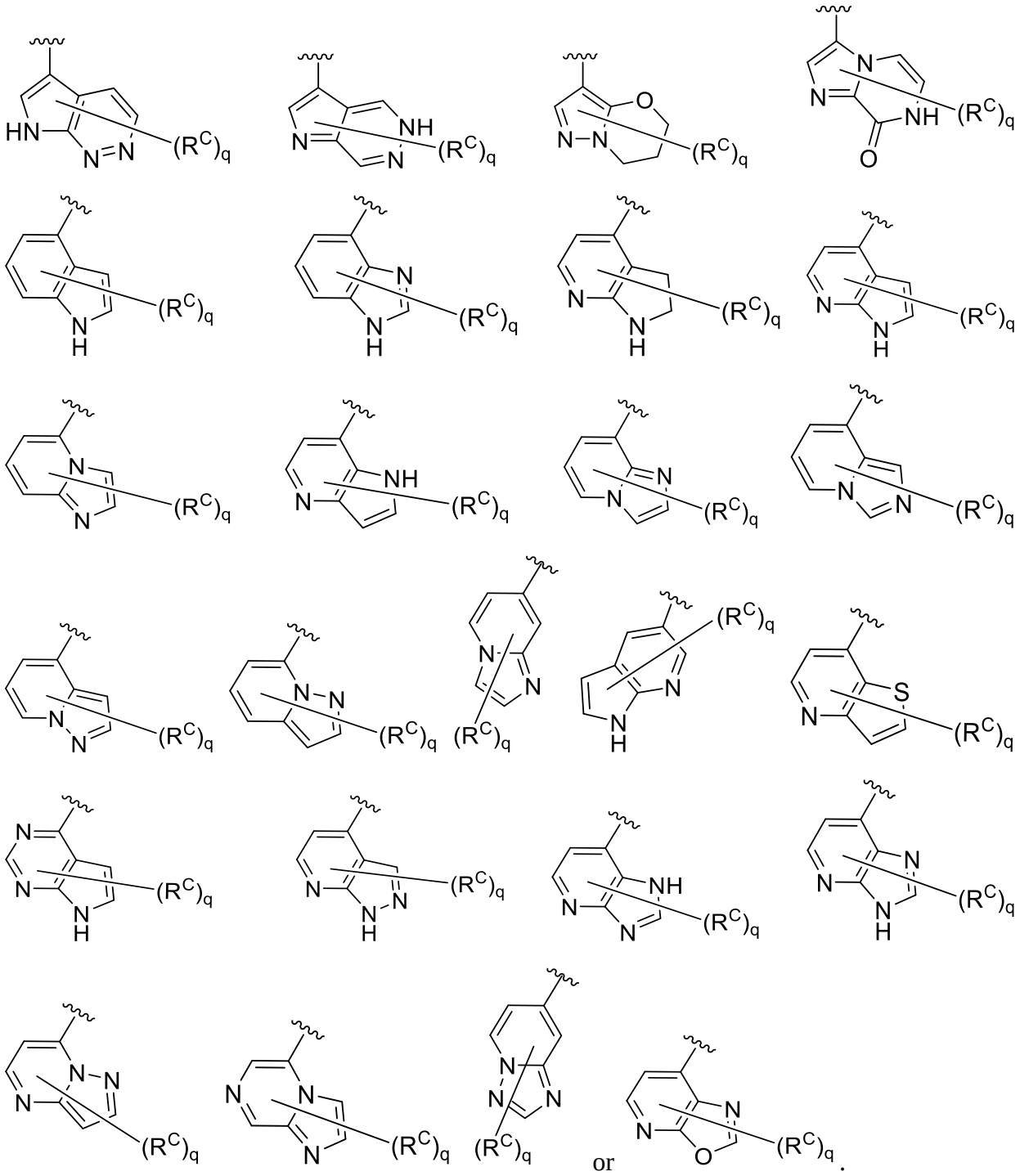















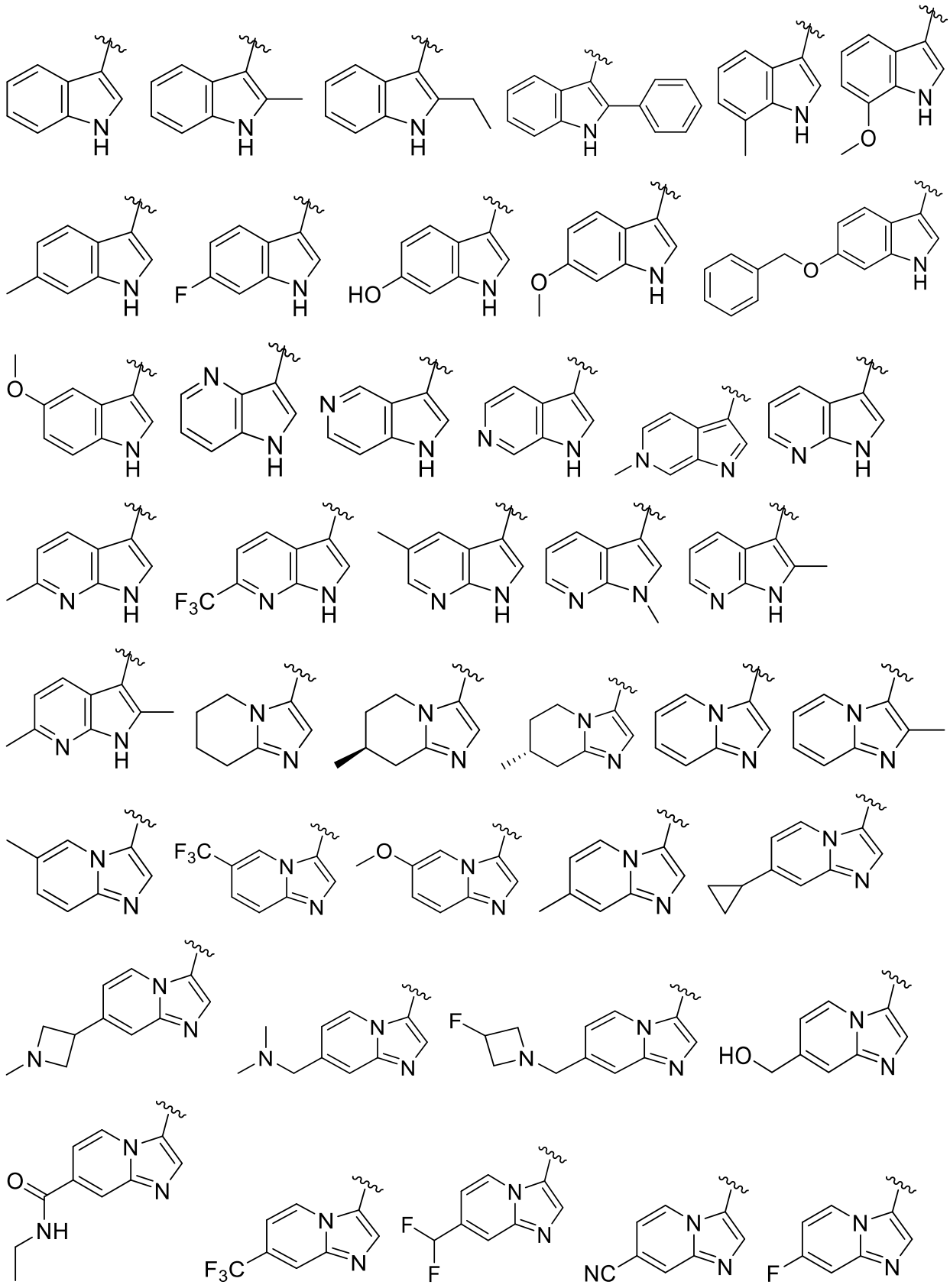






or

.

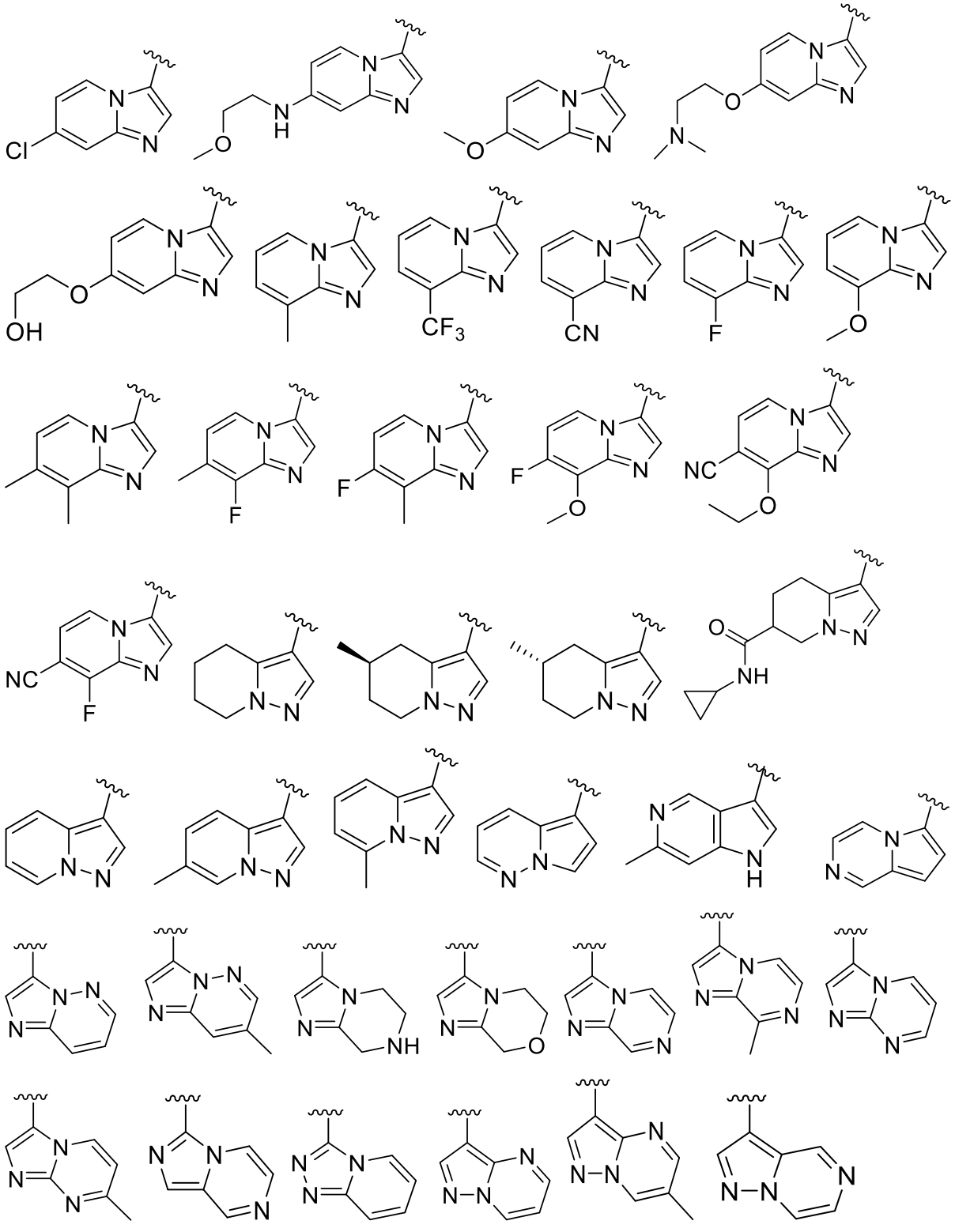
16. The compound of any one of claims 1-5 or 13-14, wherein R^2 is 

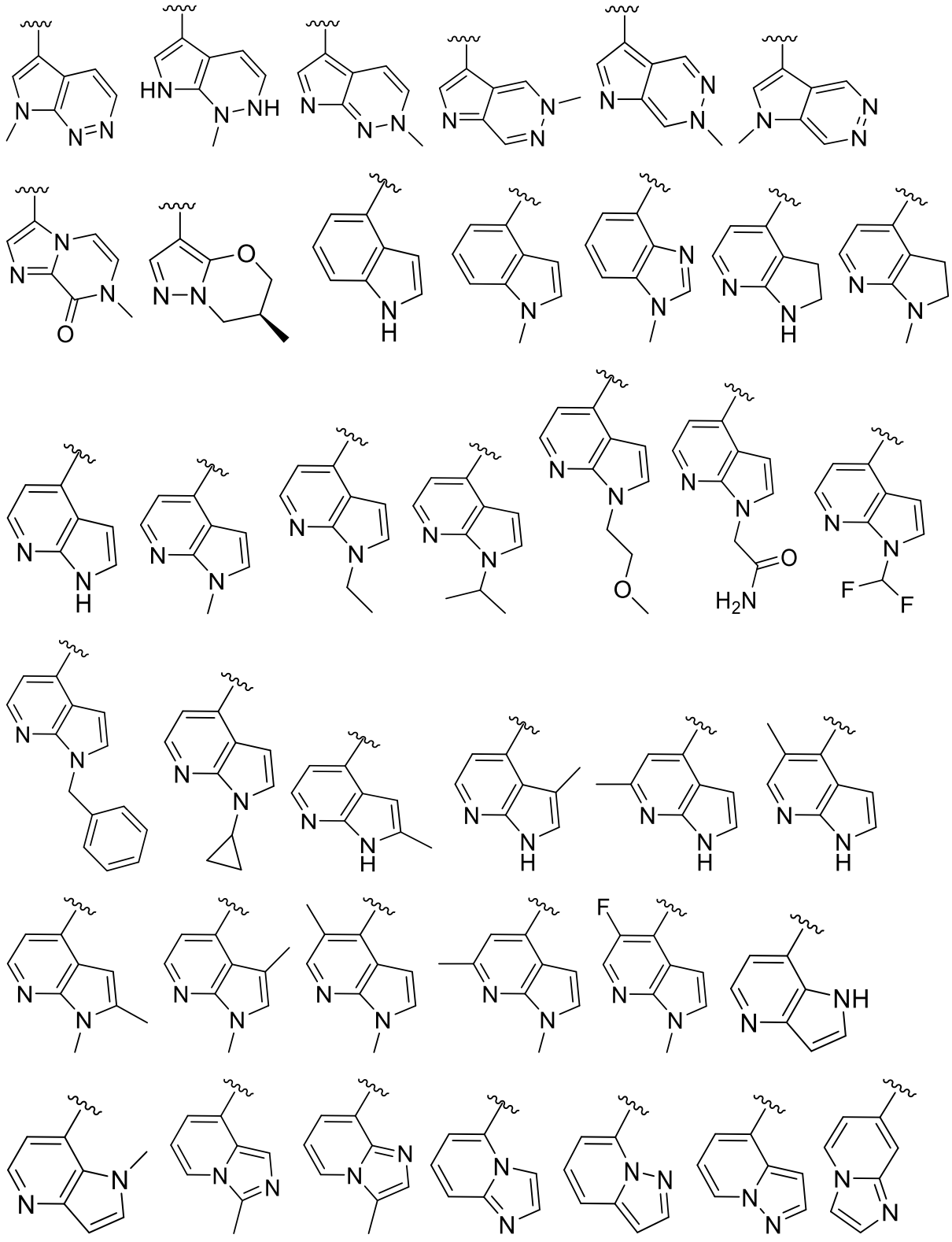





















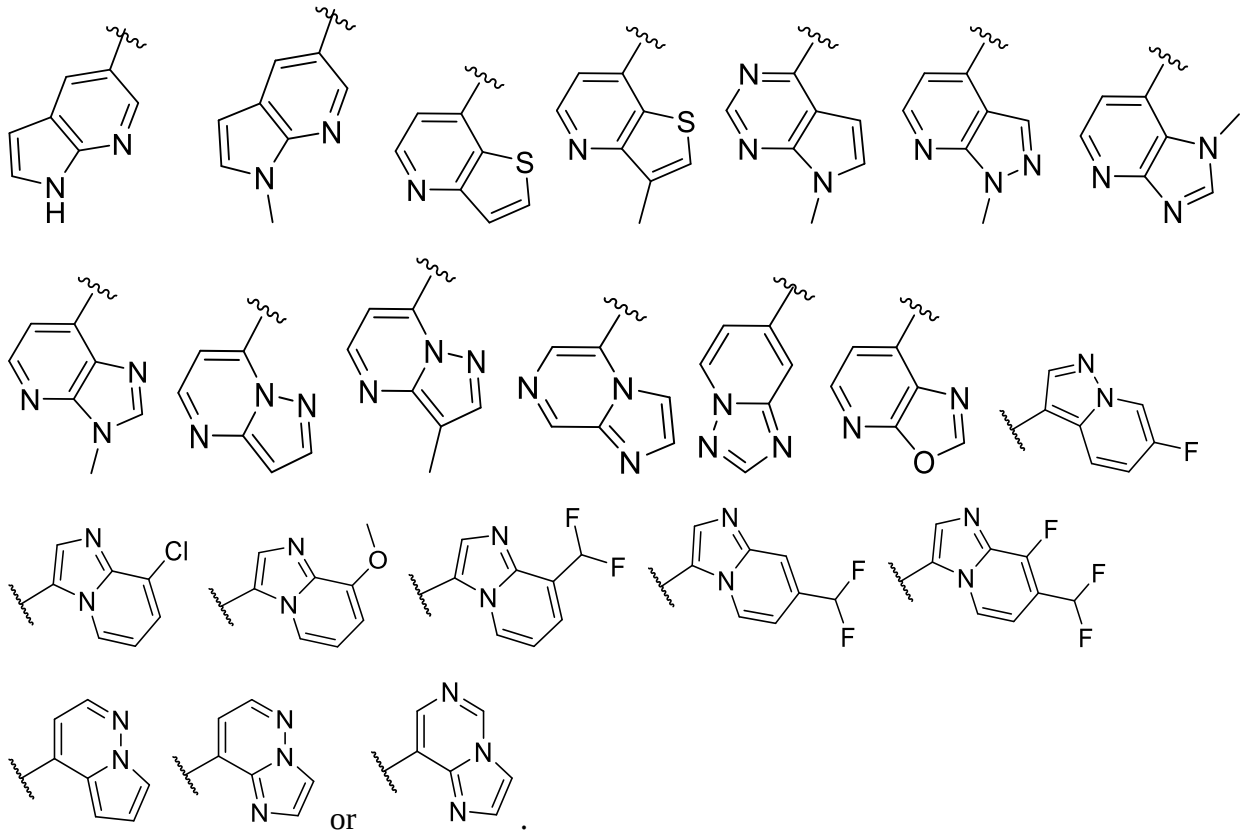


17. The compound of any one of claims 1-5 or 13-14, wherein R^2 is





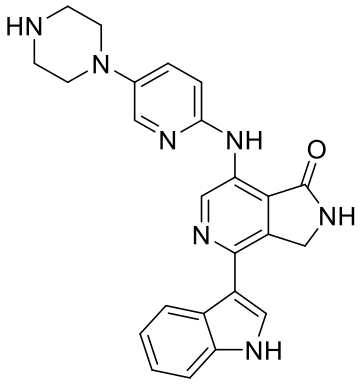




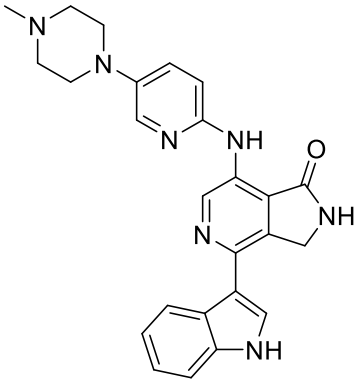
or

18. The compound of any one of claims 1-17, wherein the compound is selected from:

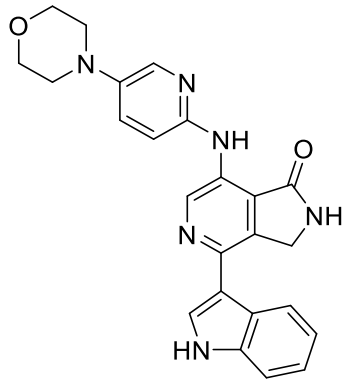
I-1



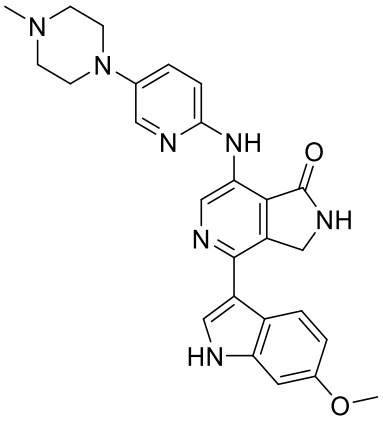
I-2



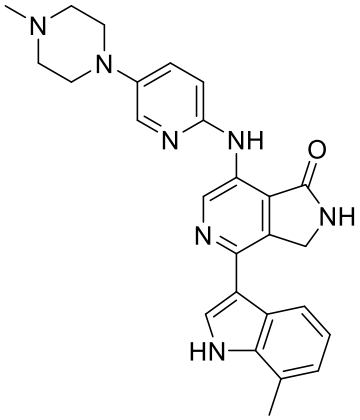
I-3



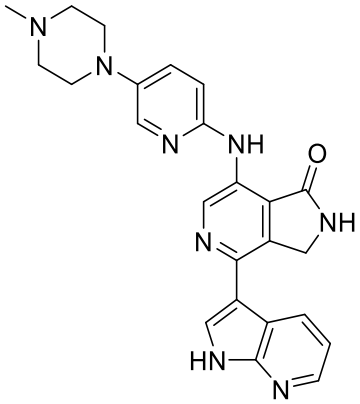
I-4



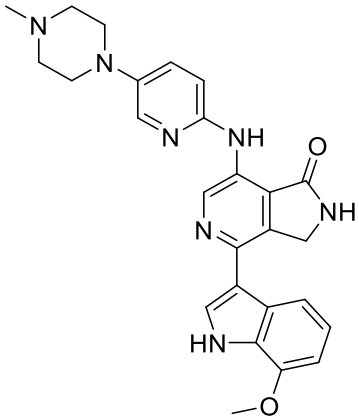
I-5



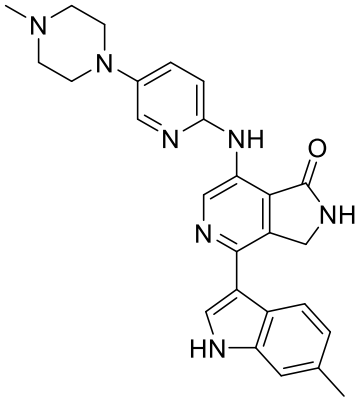
I-6



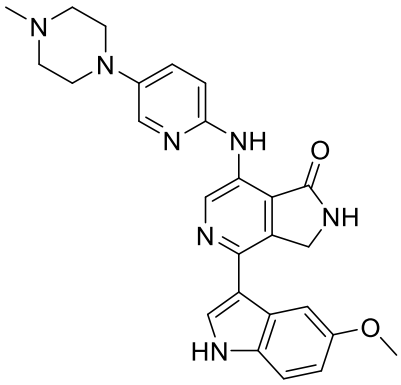
I-7



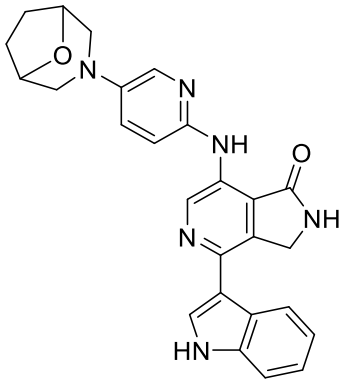
I-8



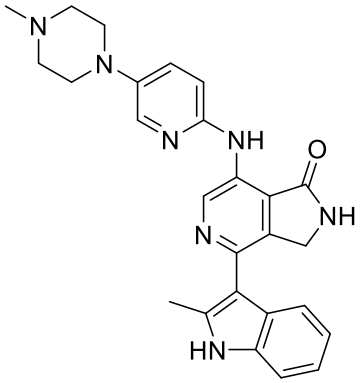
I-9



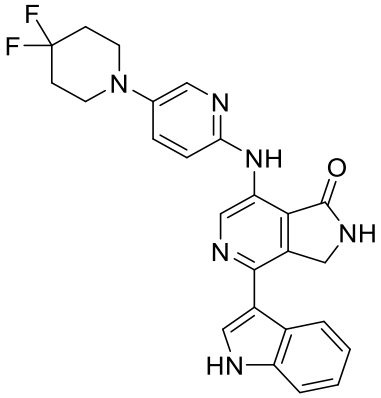
I-10



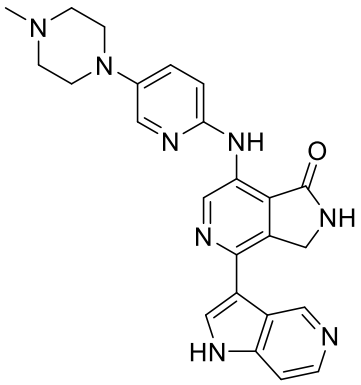
I-11



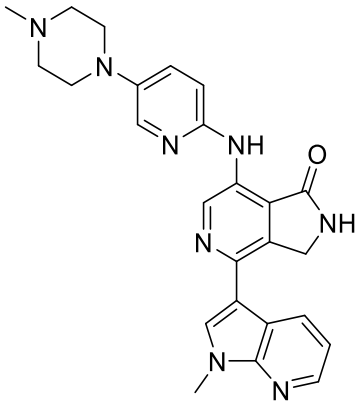
I-12



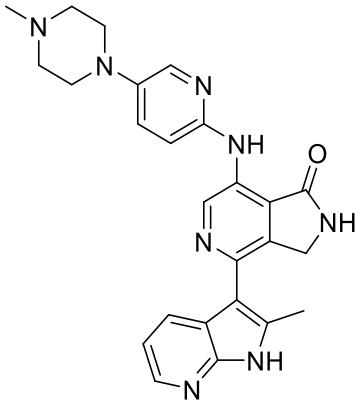
I-13



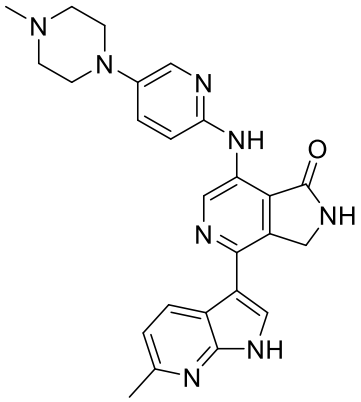
I-14



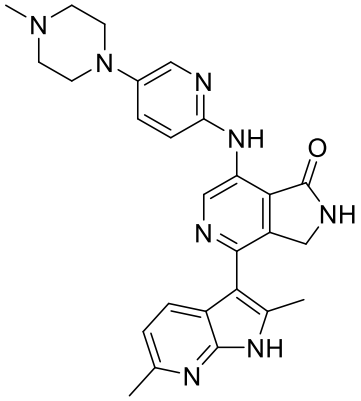
I-15



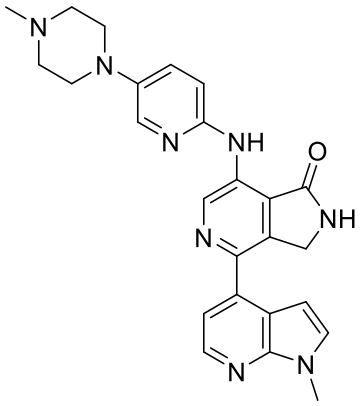
I-16



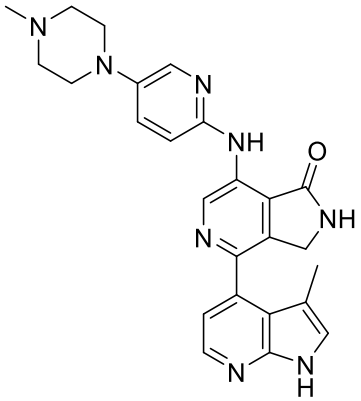
I-17



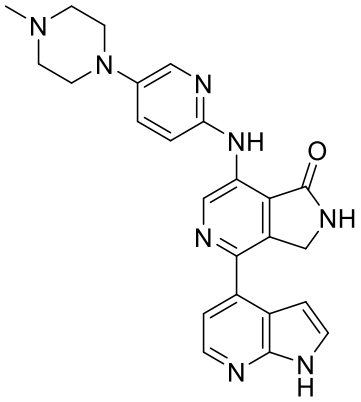
I-18



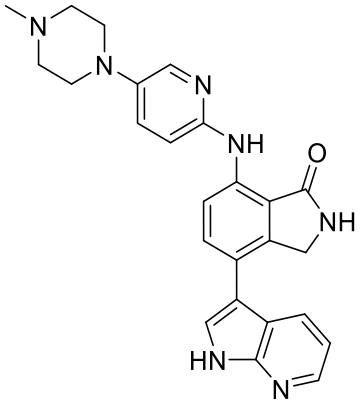
I-19



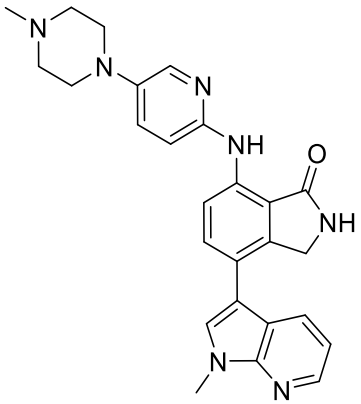
I-20



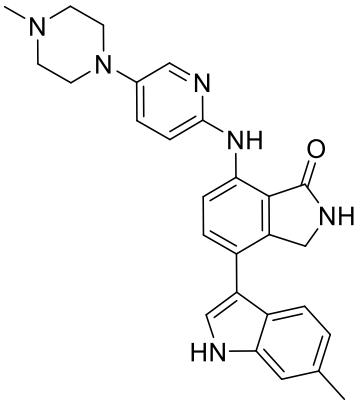
I-21



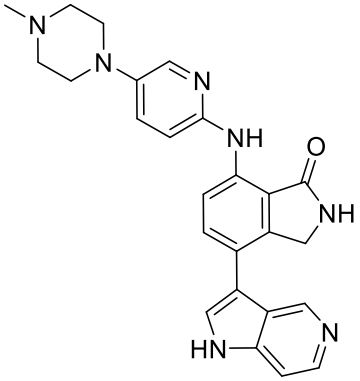
I-22



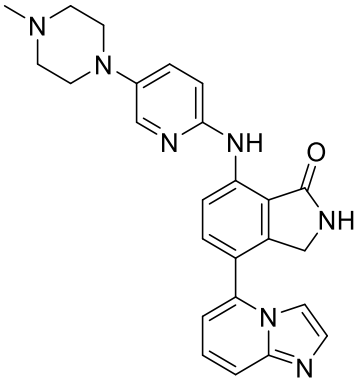
I-23



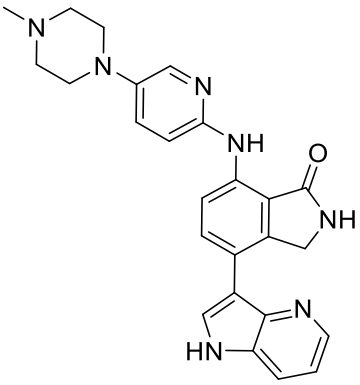
I-24



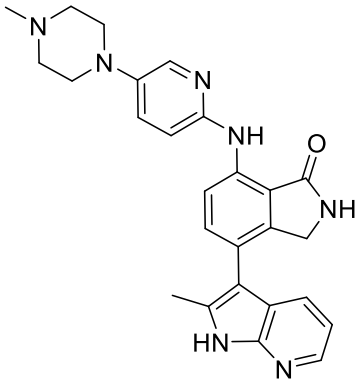
I-25



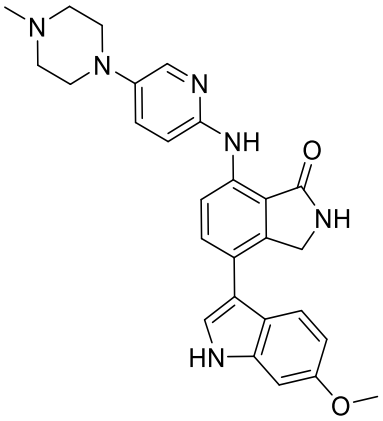
I-26



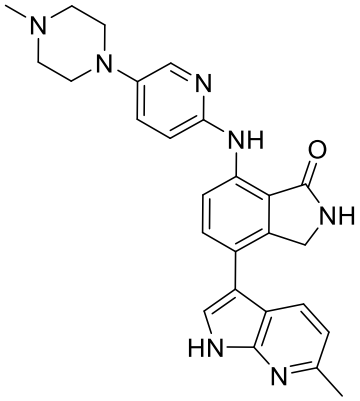
I-27



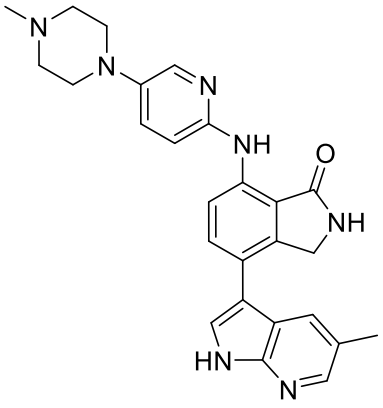
I-28



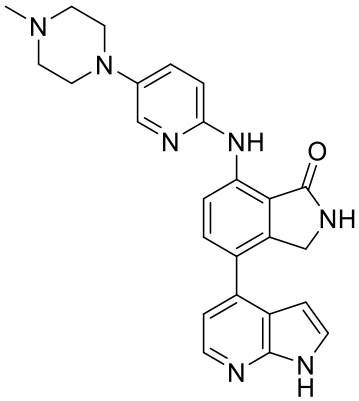
I-29



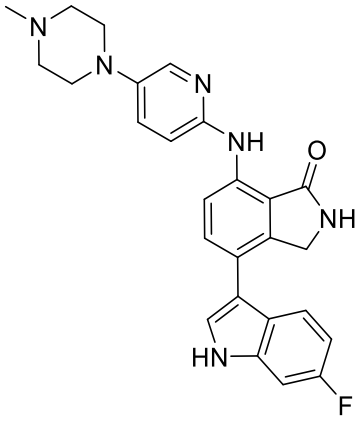
I-30



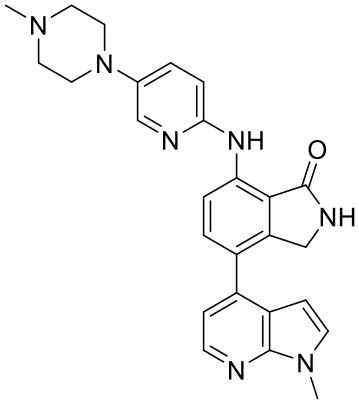
I-31



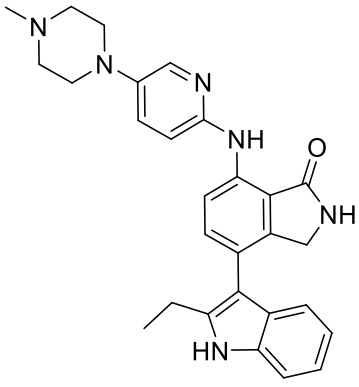
I-32



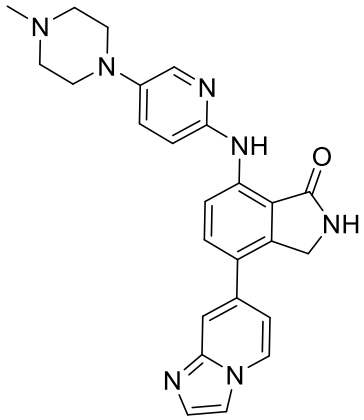
I-33



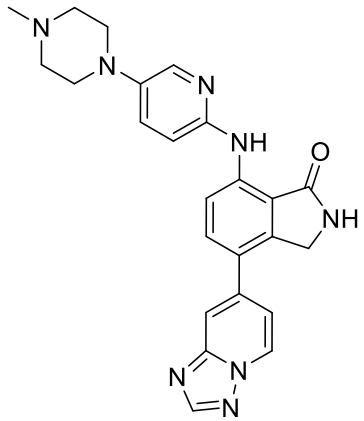
I-34



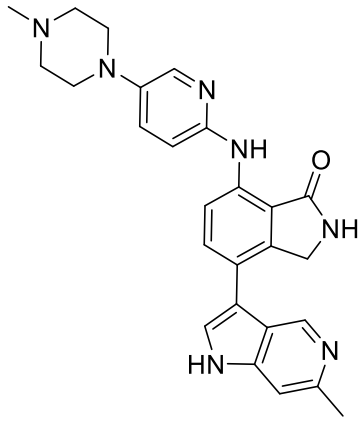
I-35



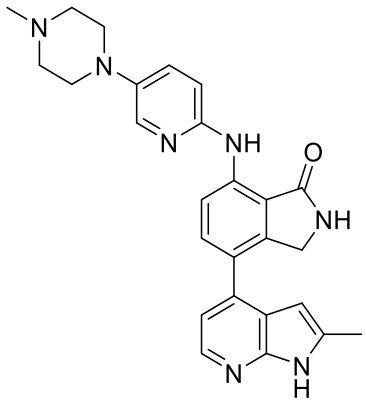
I-36



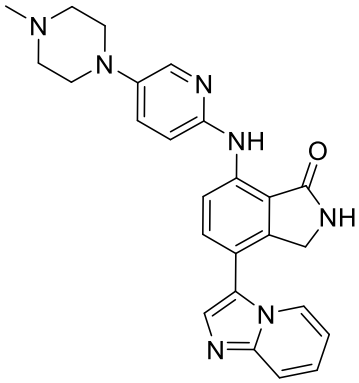
I-37



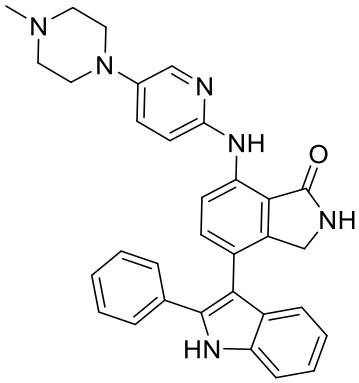
I-38



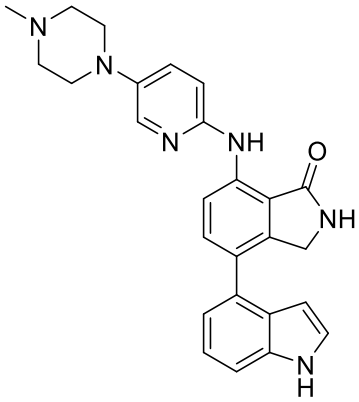
I-39



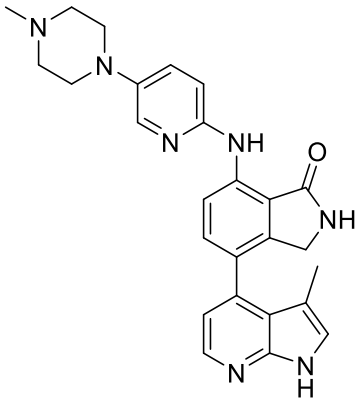
I-40



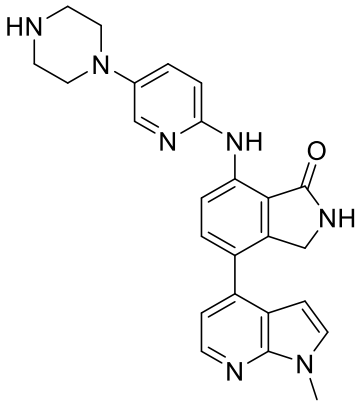
I-41



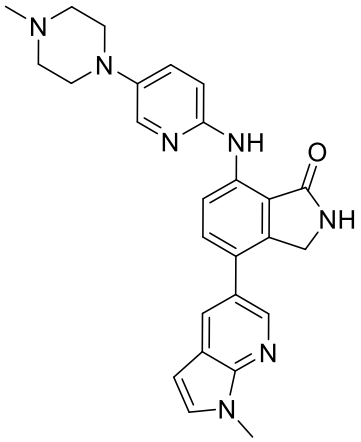
I-42



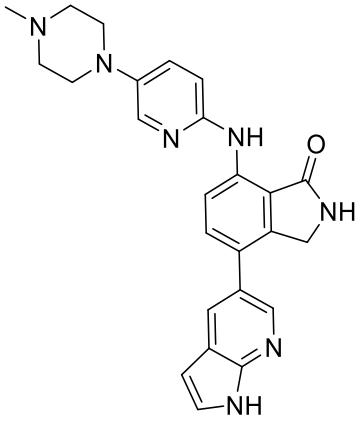
I-43



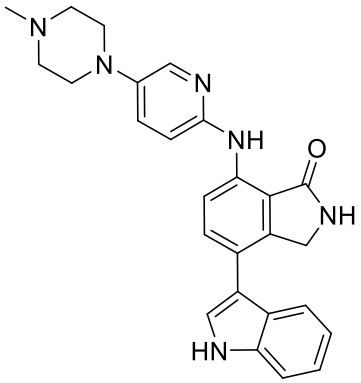
I-44



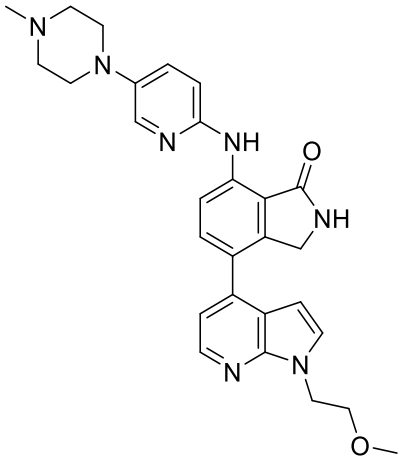
I-45



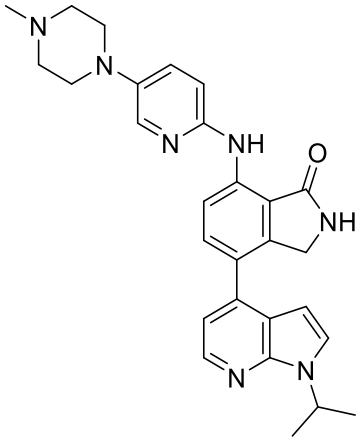
I-46



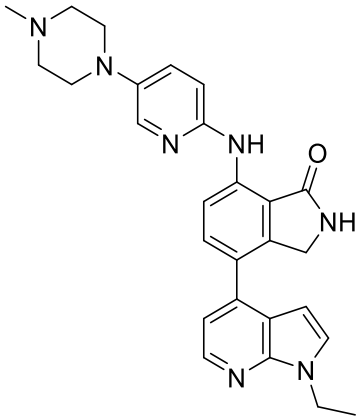
I-47



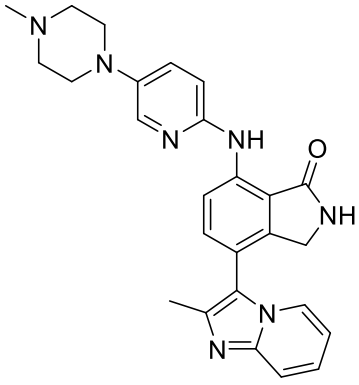
I-48



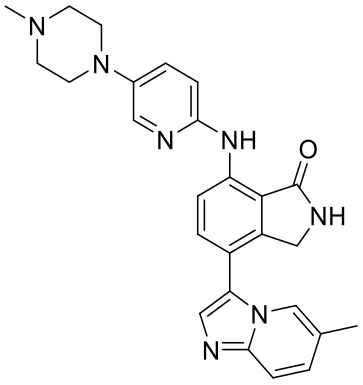
I-49



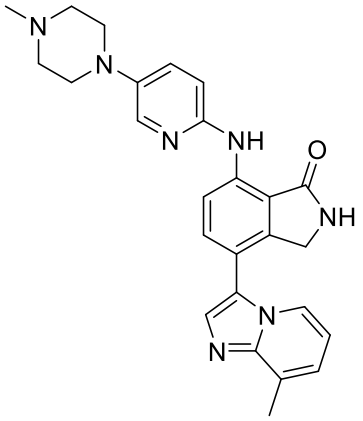
I-50



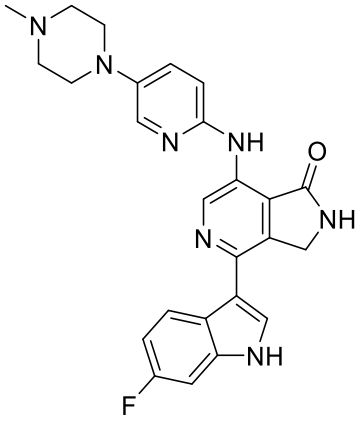
I-51



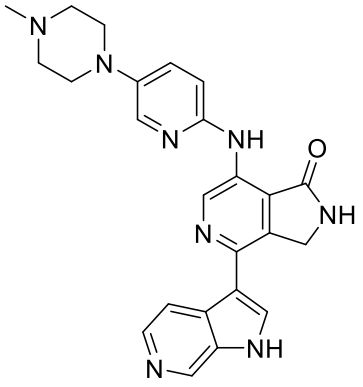
I-52



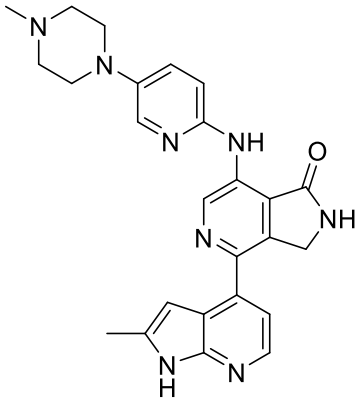
I-53



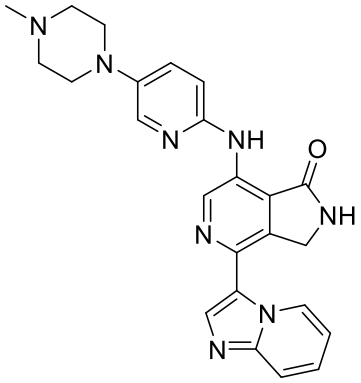
I-54



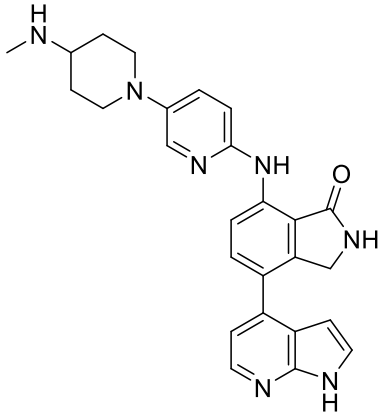
I-55



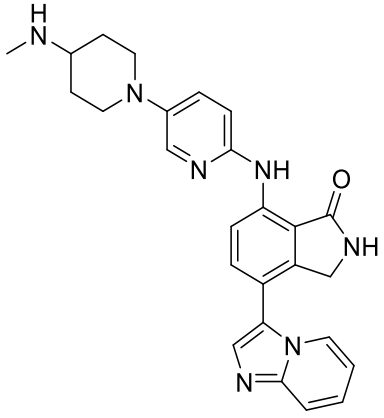
I-56



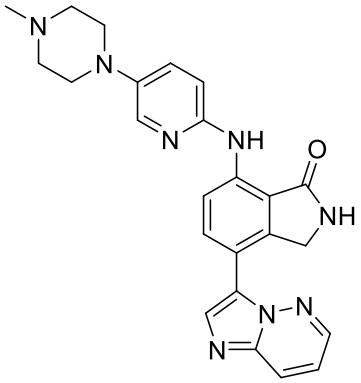
I-57



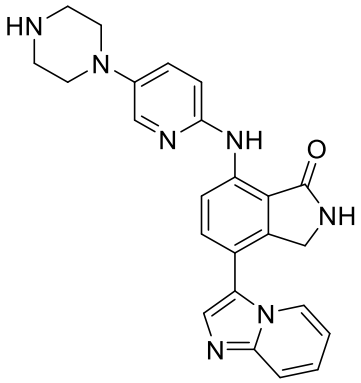
I-58



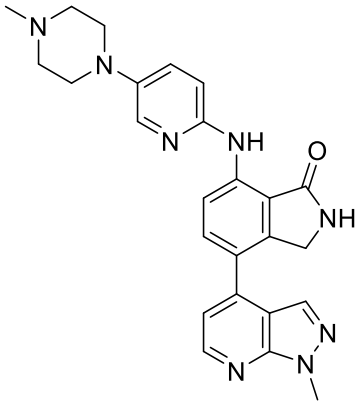
I-59



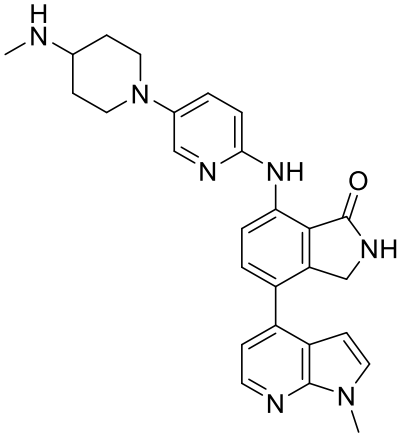
I-60



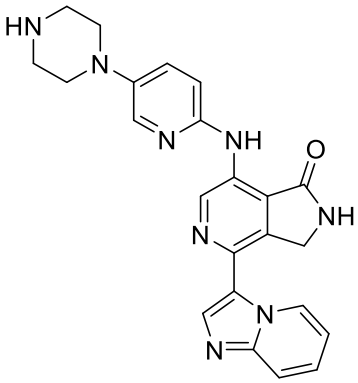
I-61



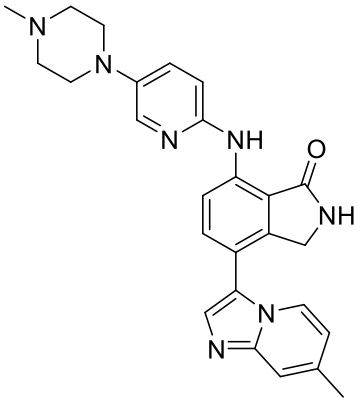
I-62



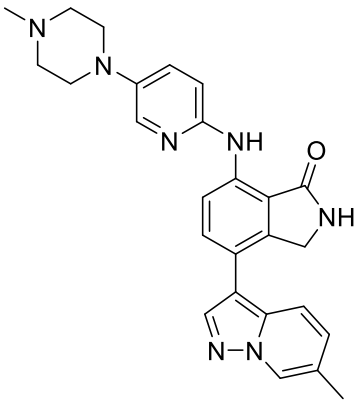
I-63



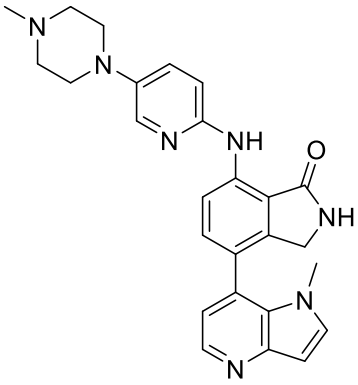
I-64



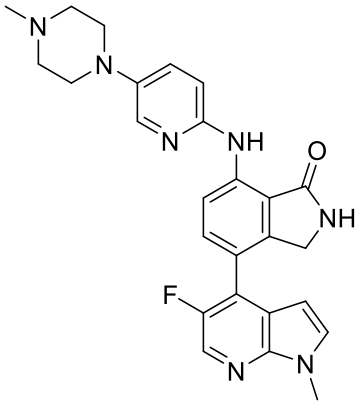
I-65



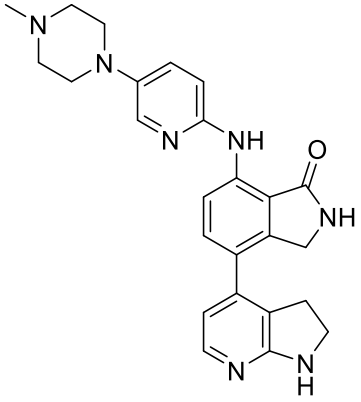
I-66



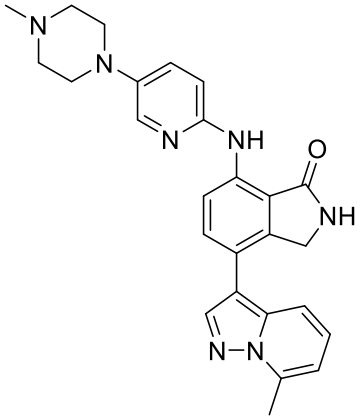
I-67



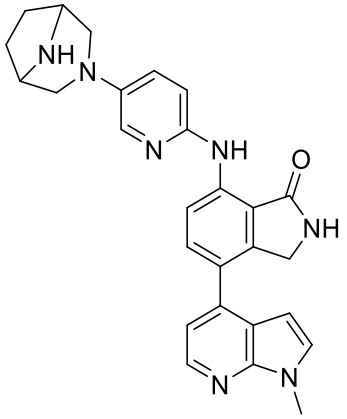
I-68



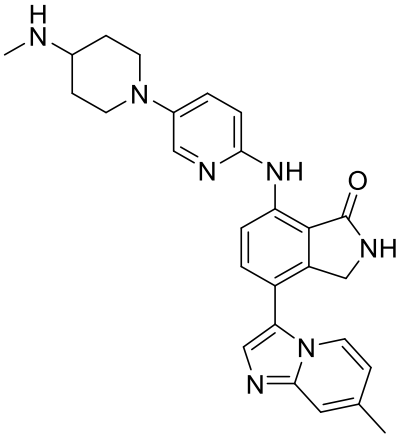
I-69



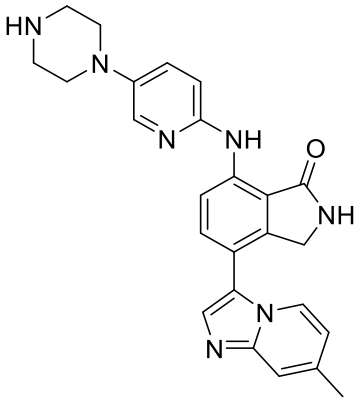
I-70



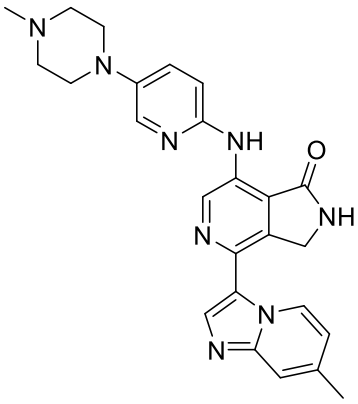
I-71



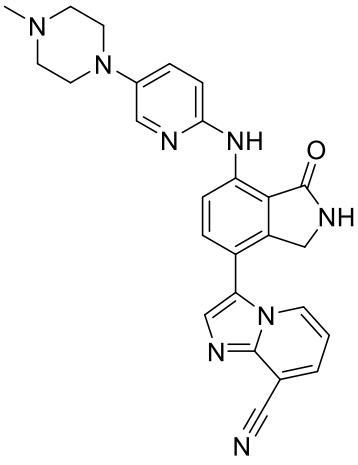
I-72



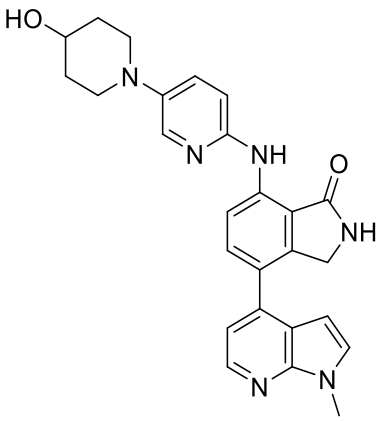
I-73



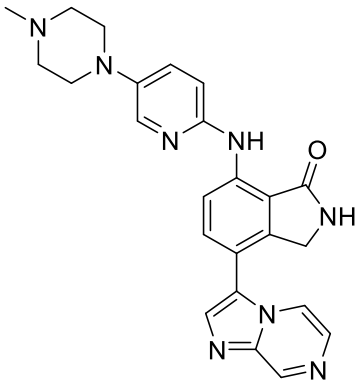
I-74



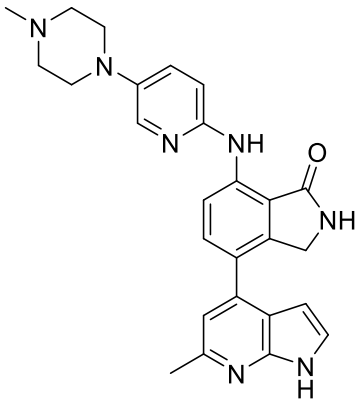
I-75



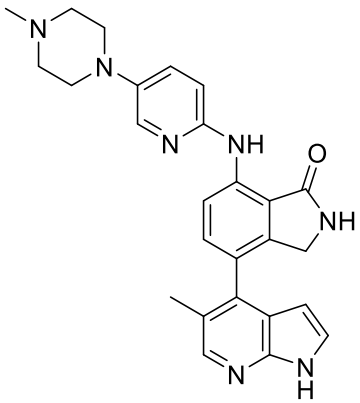
I-76



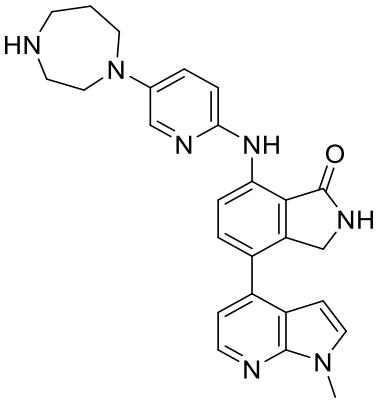
I-77



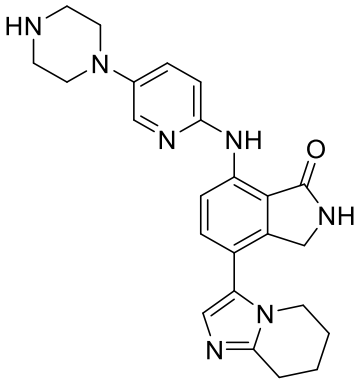
I-78



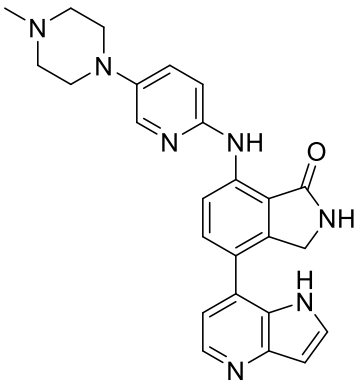
I-79



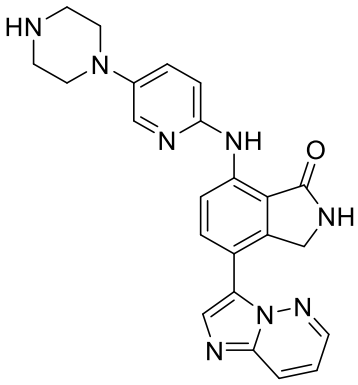
I-80



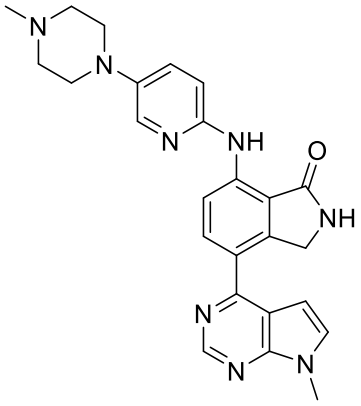
I-81



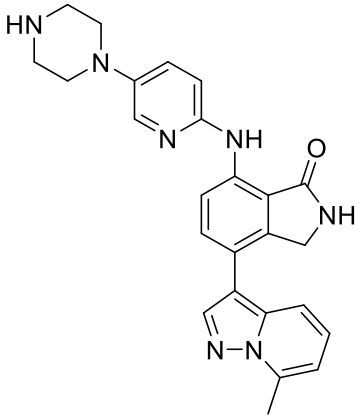
I-82



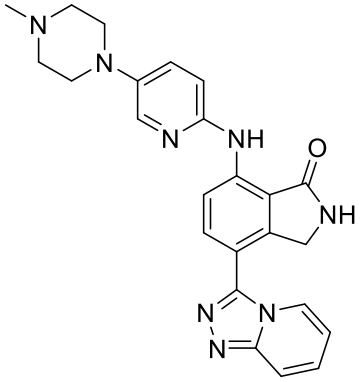
I-83



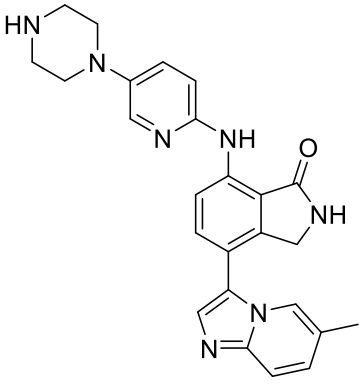
I-84



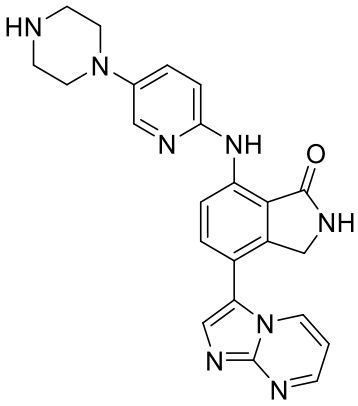
I-85



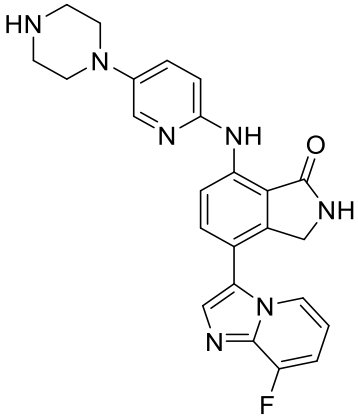
I-86



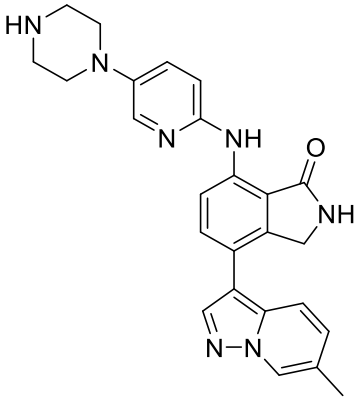
I-87



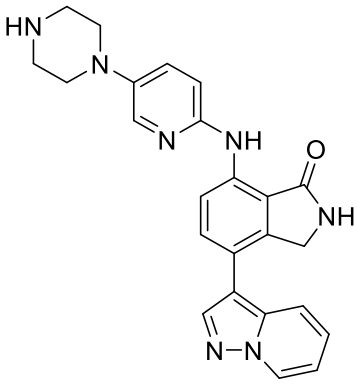
I-88



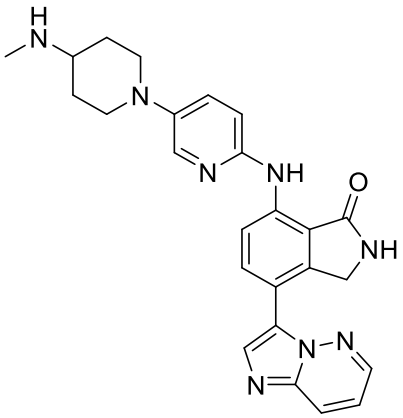
I-89



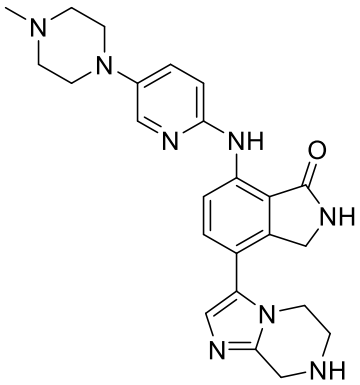
I-90



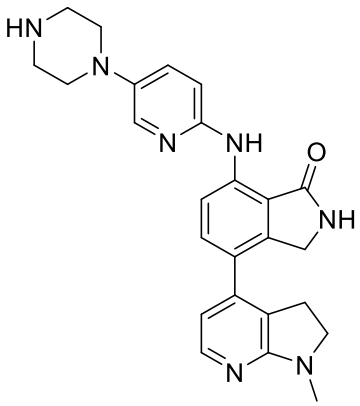
I-91



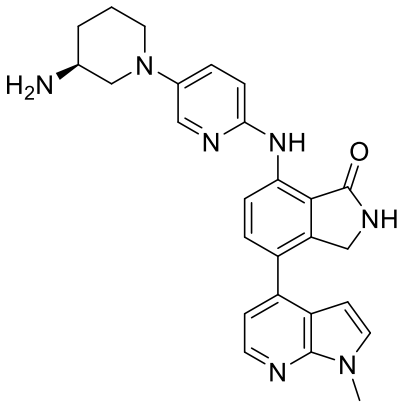
I-92



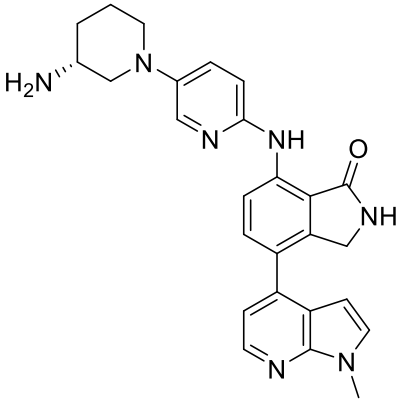
I-93



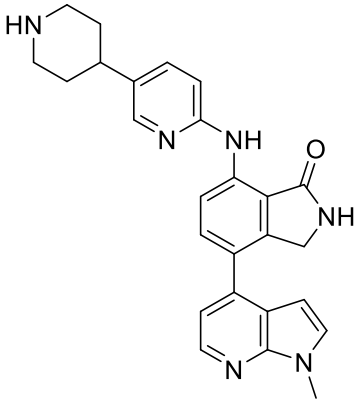
I-94



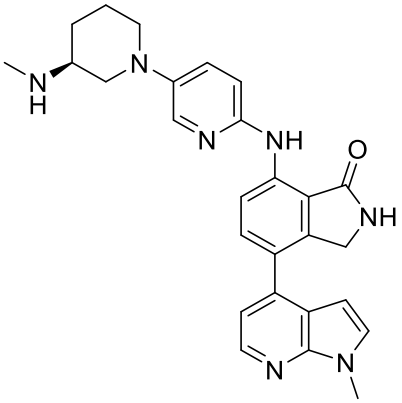
I-95



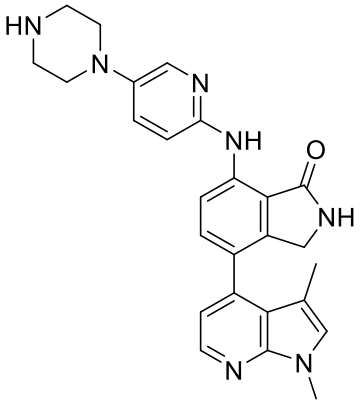
I-96



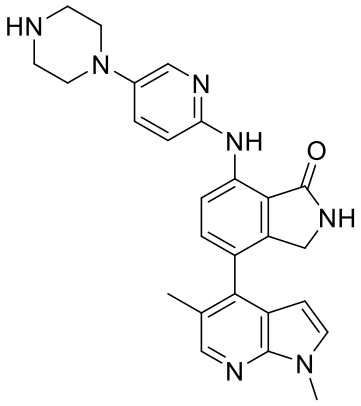
I-97



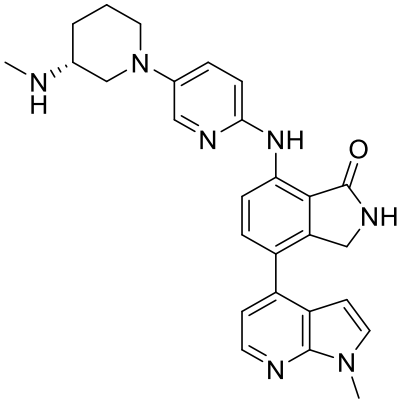
I-98



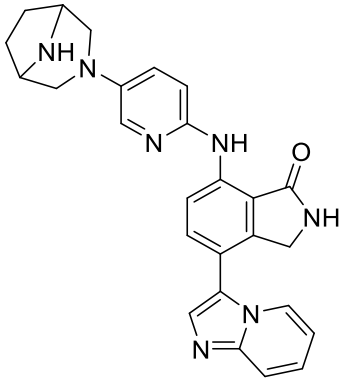
I-99



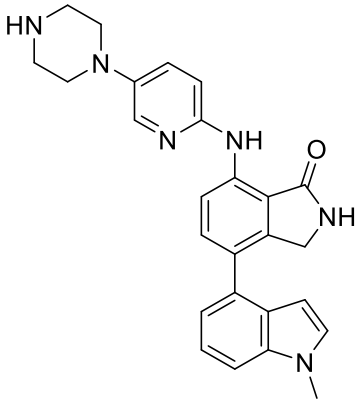
I-100



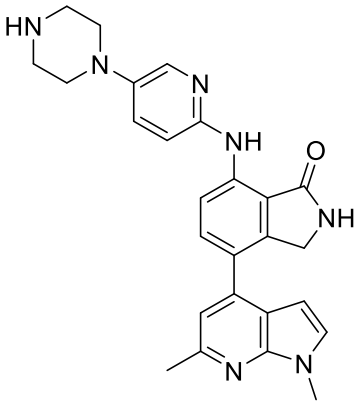
I-101



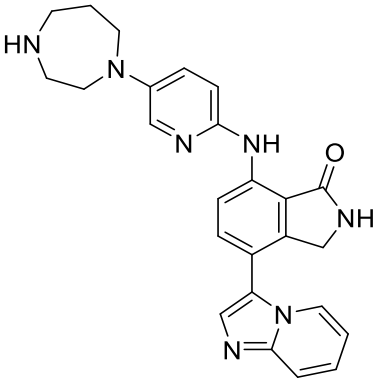
I-102



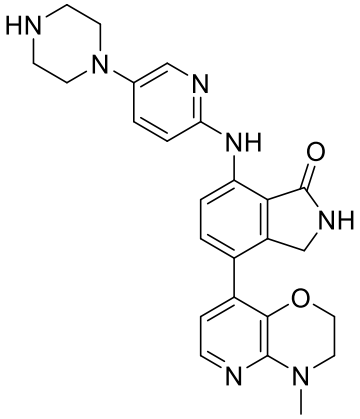
I-103



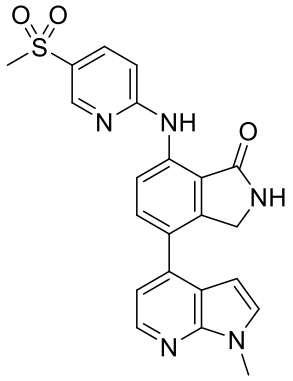
I-104



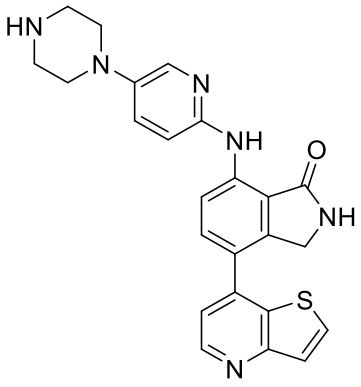
I-105



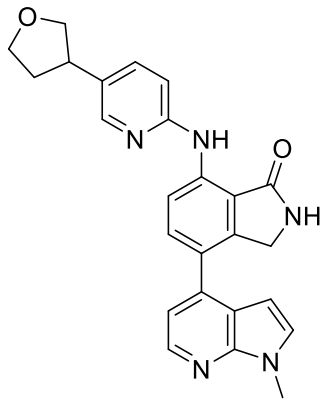
I-106



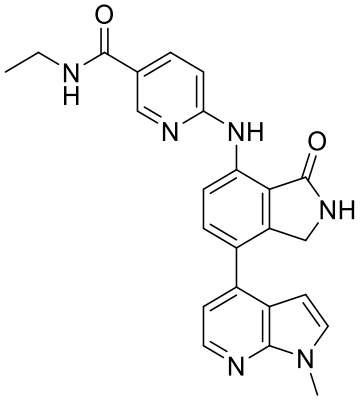
I-107



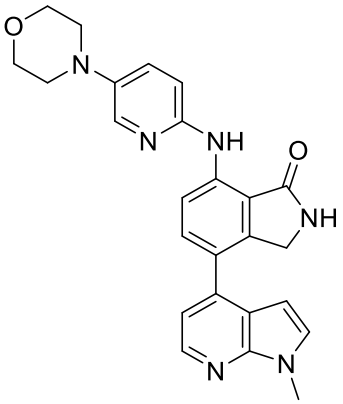
I-108



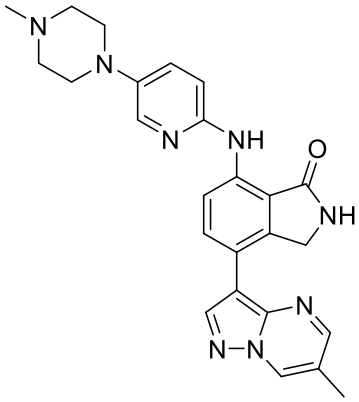
I-109



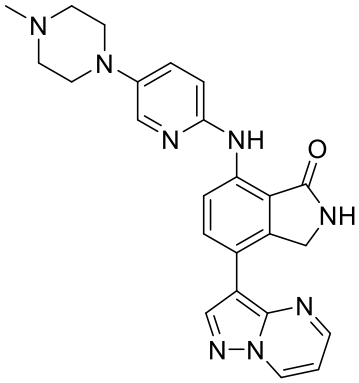
I-110



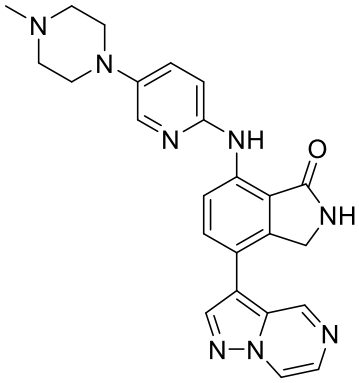
I-111



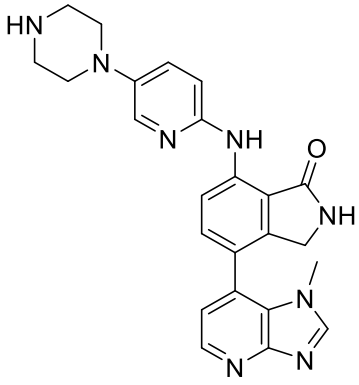
I-112



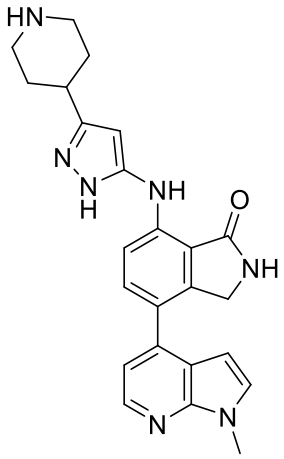
I-113



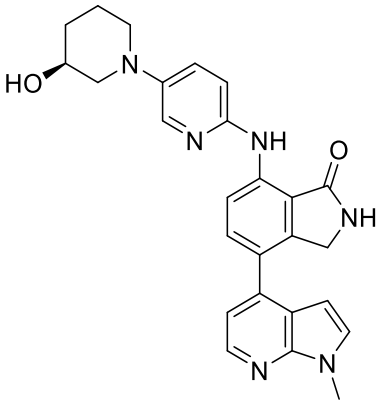
I-114



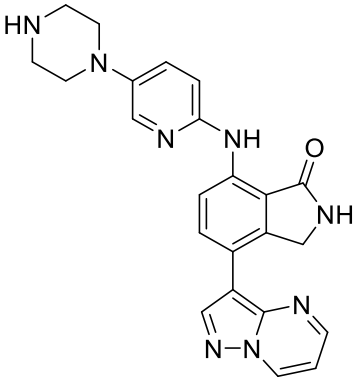
I-115



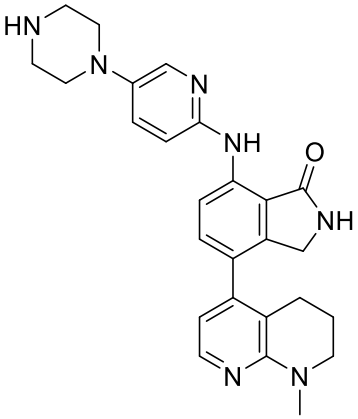
I-116



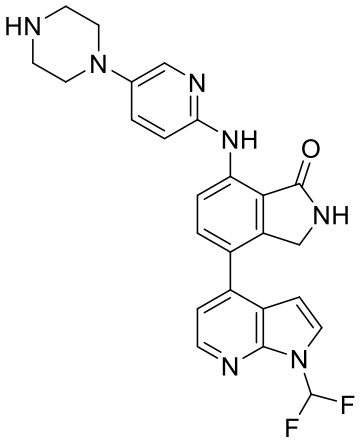
I-117



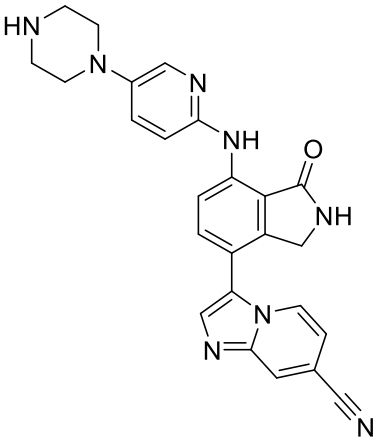
I-118



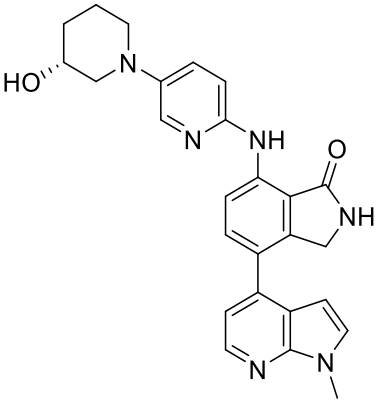
I-119



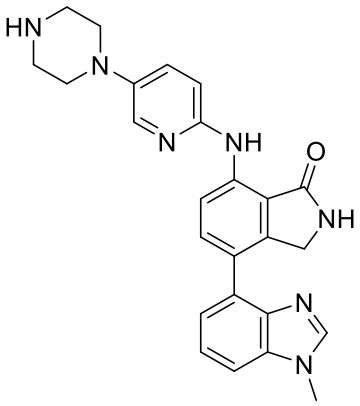
I-120



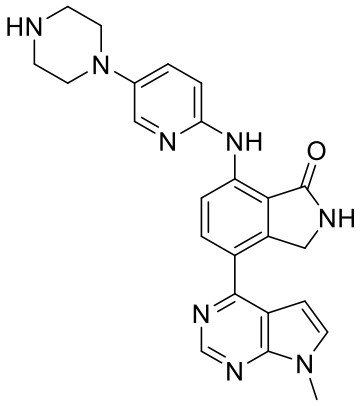
I-121



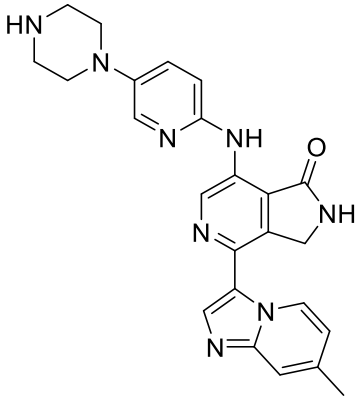
I-122



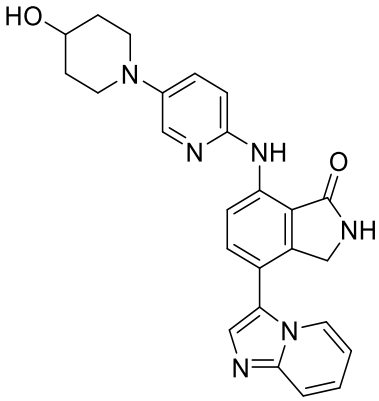
I-123



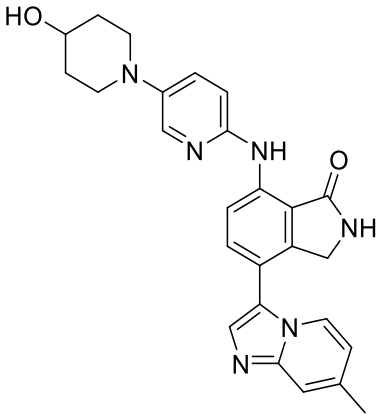
I-124



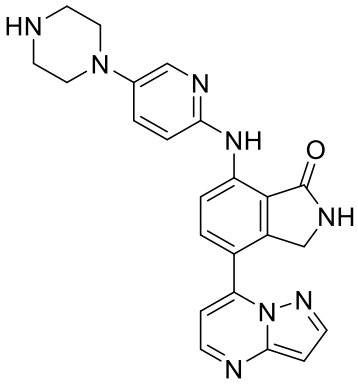
I-125



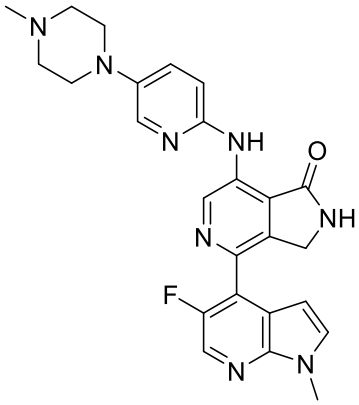
I-126



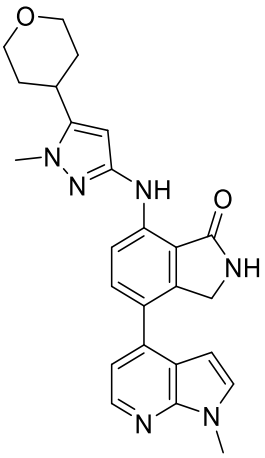
I-127



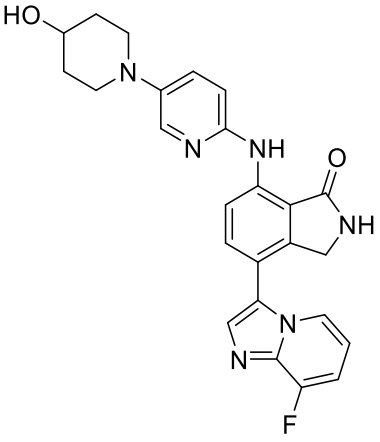
I-128



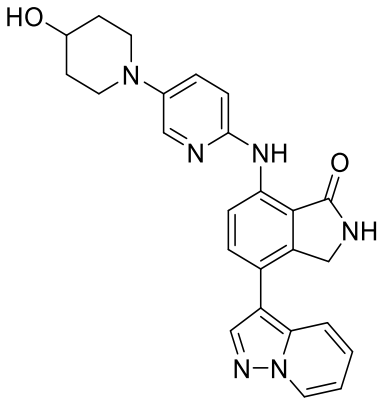
I-129



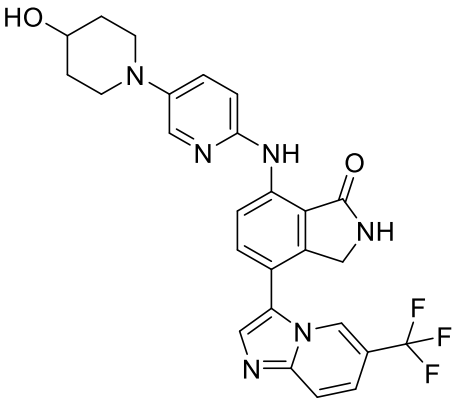
I-130



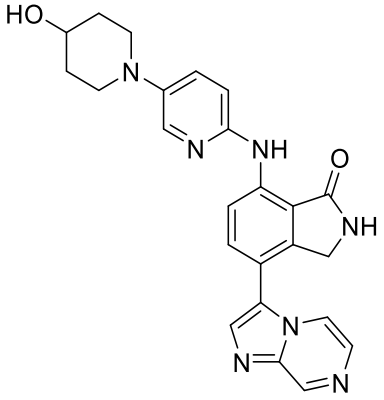
I-131



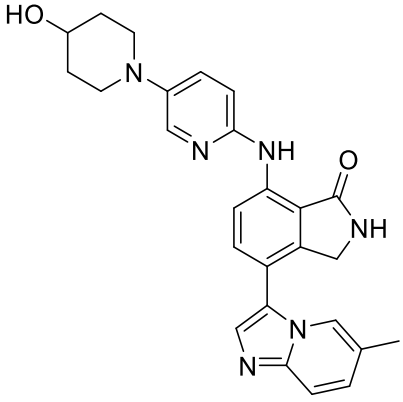
I-132



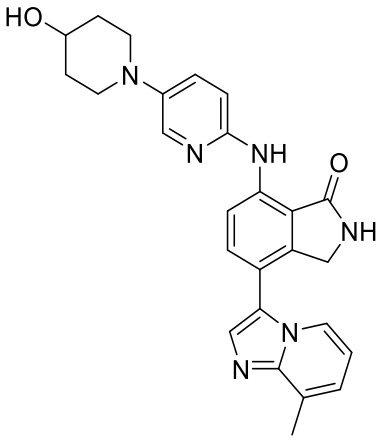
I-133



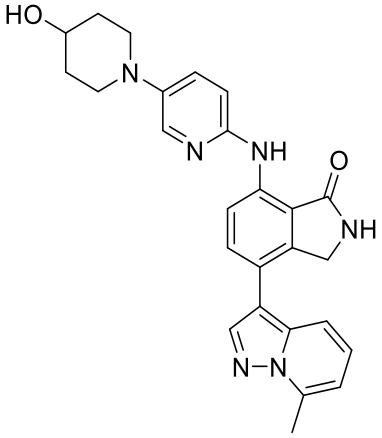
I-134



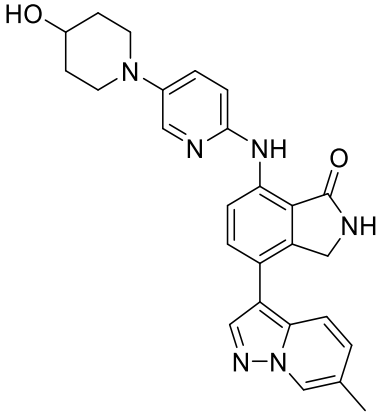
I-135



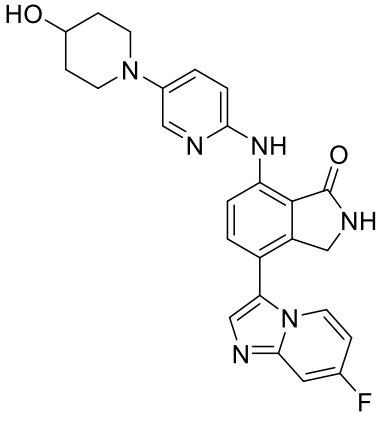
I-136



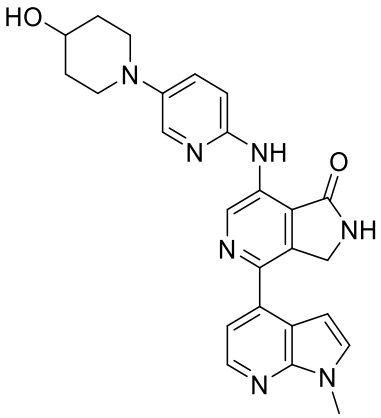
I-137



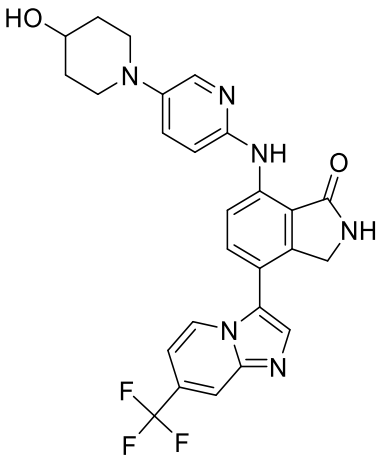
I-138



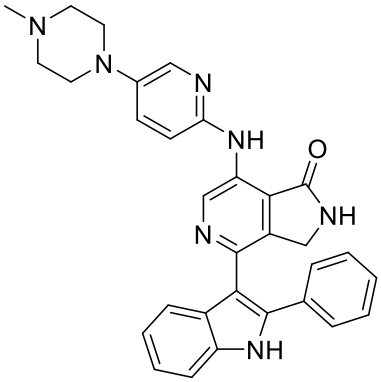
I-139



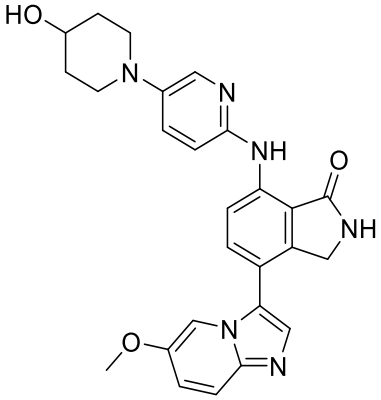
I-140



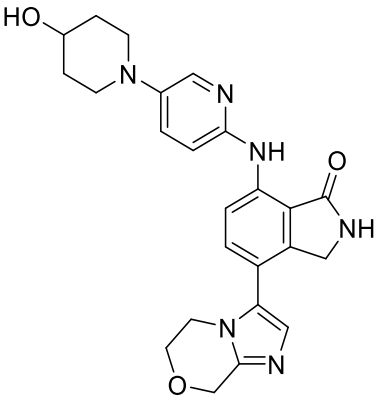
I-141



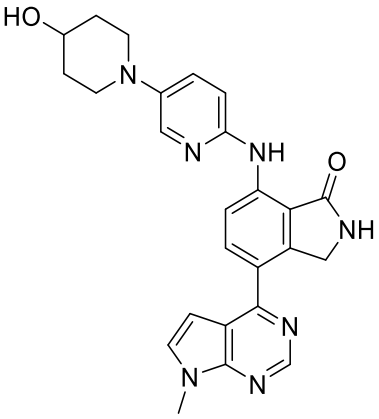
I-142



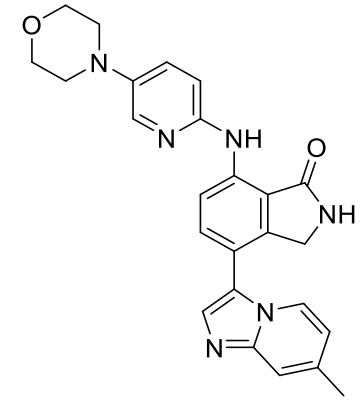
I-143



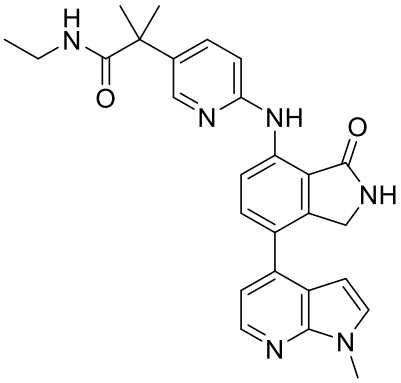
I-144



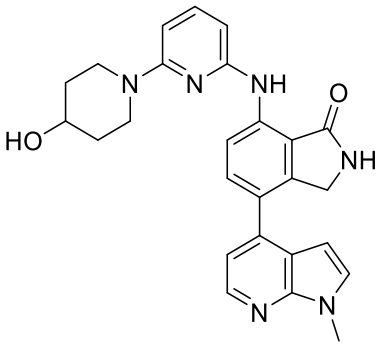
I-145



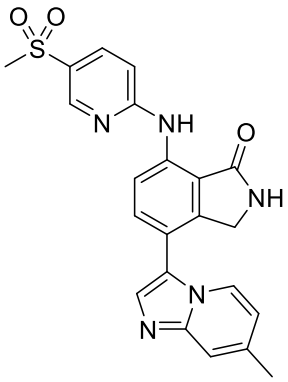
I-146



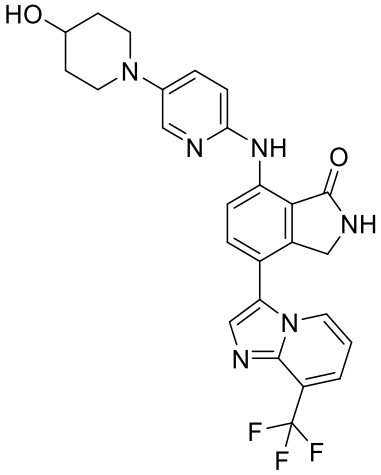
I-147



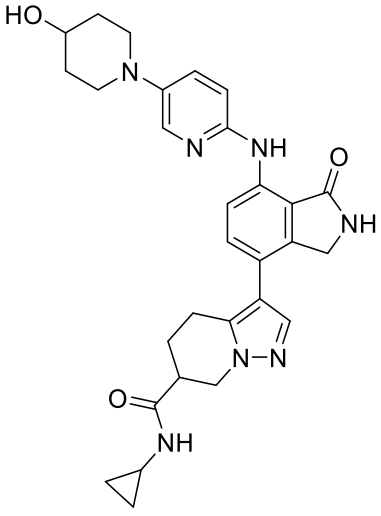
I-148



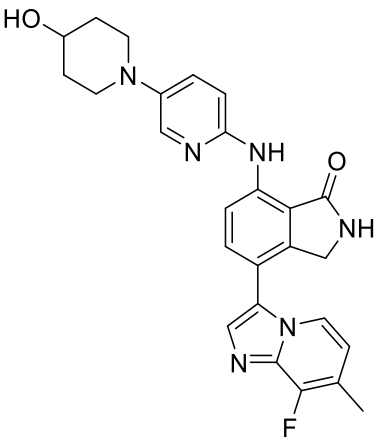
I-149



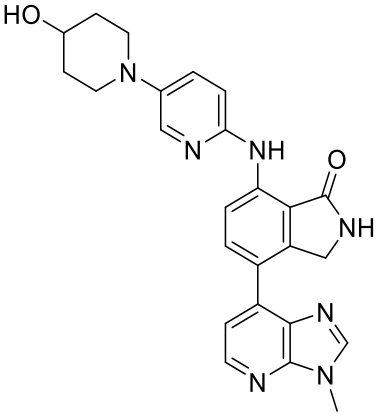
I-150



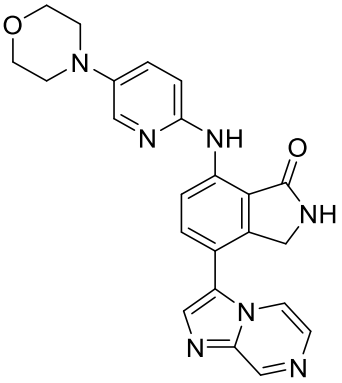
I-151



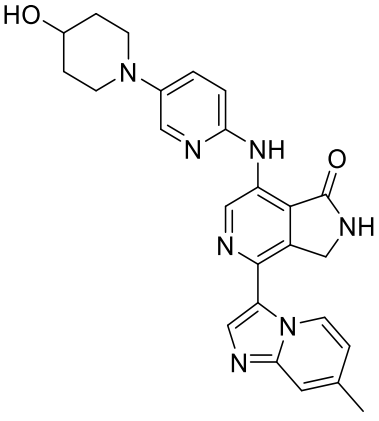
I-152



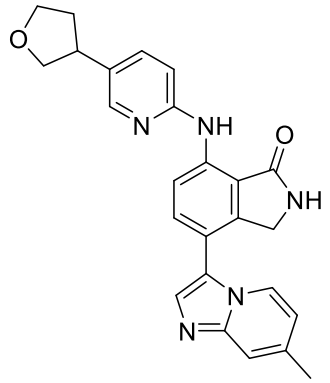
I-153



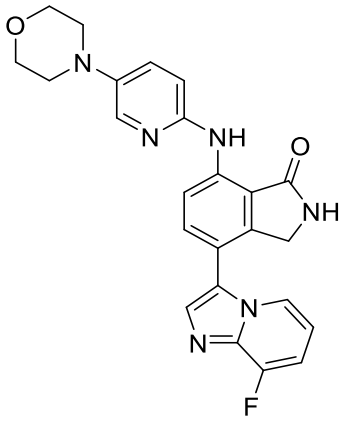
I-154



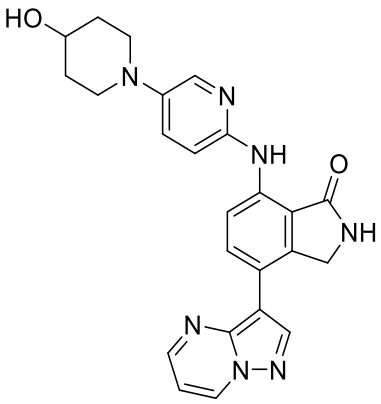
I-155



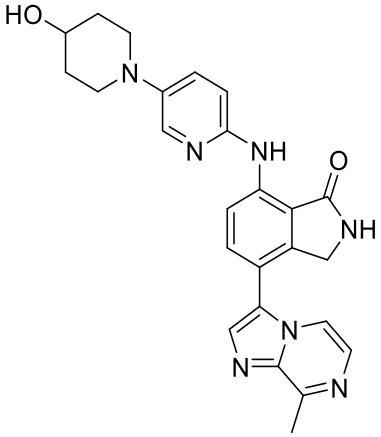
I-156



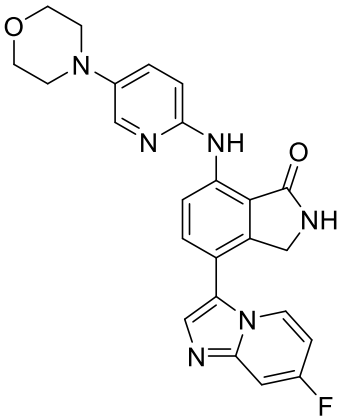
I-157



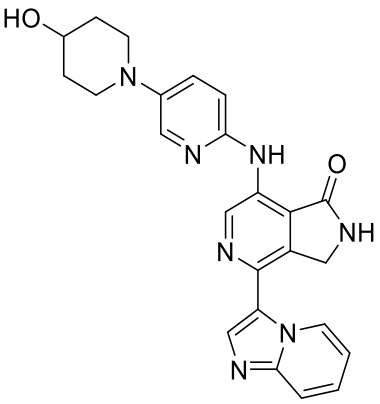
I-158



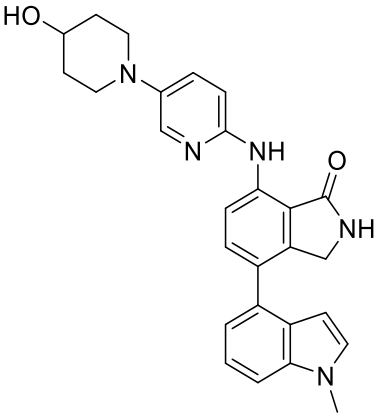
I-159



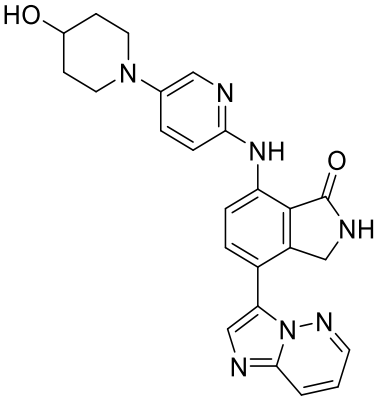
I-160



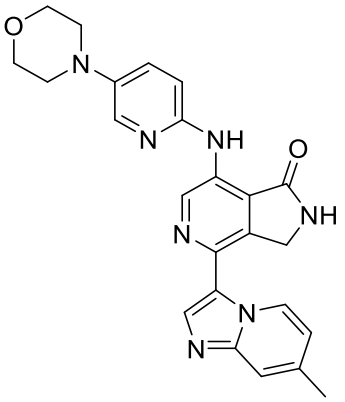
I-161



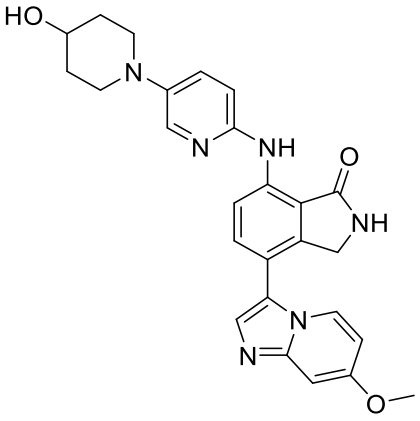
I-162



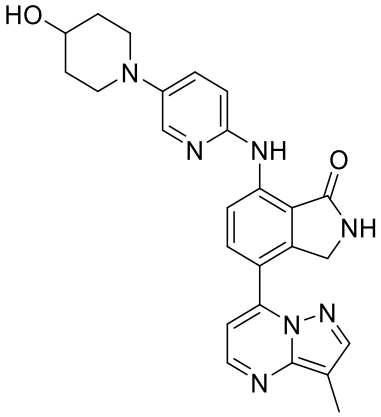
I-163



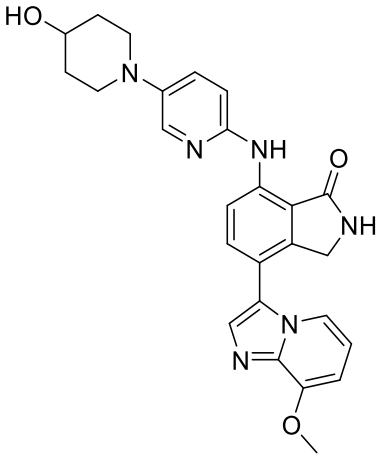
I-164



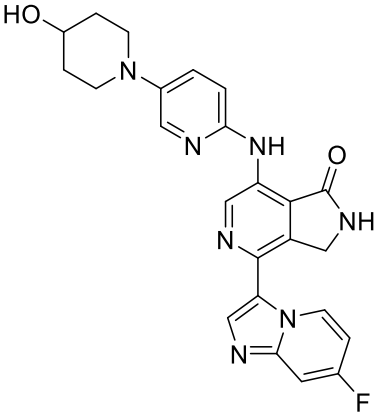
I-165



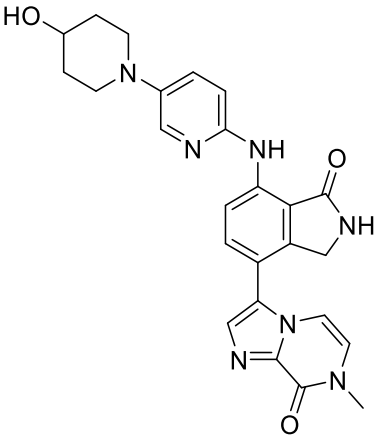
I-166



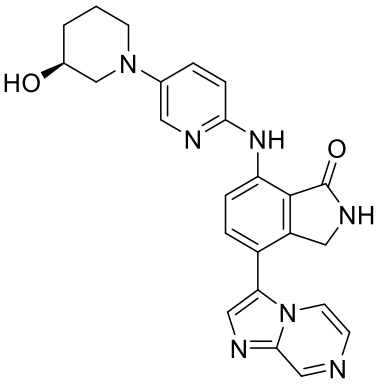
I-167



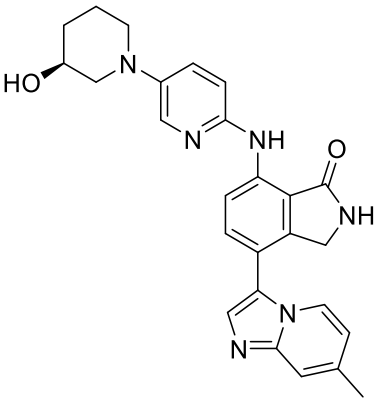
I-168



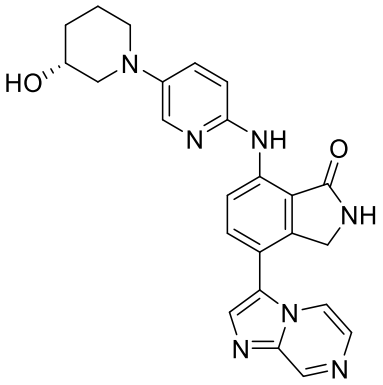
I-169



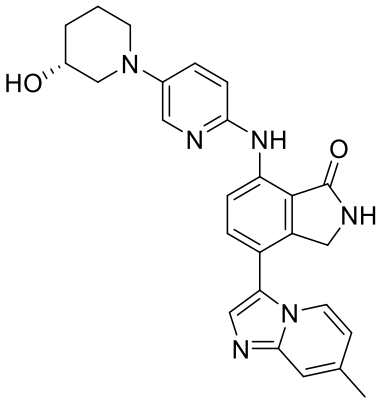
I-170



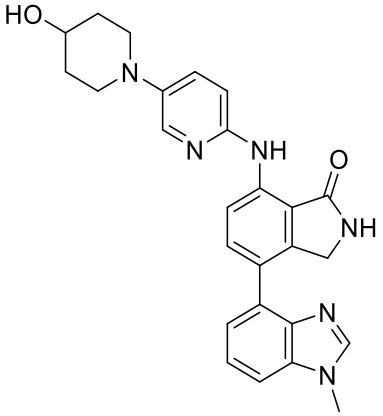
I-171



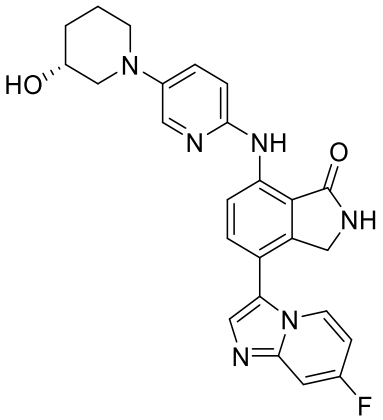
I-172



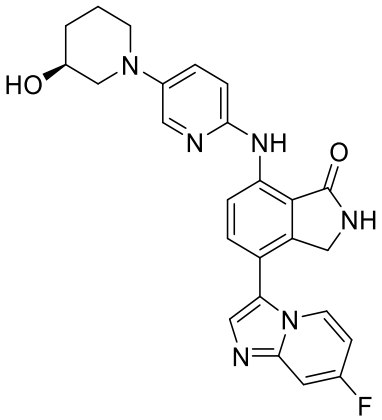
I-173



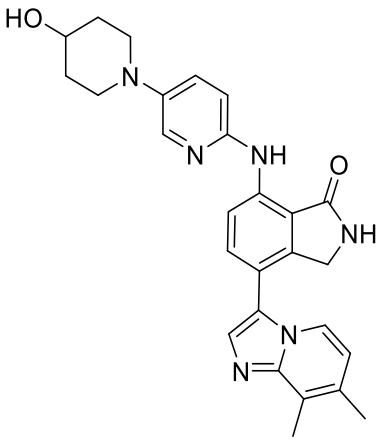
I-174



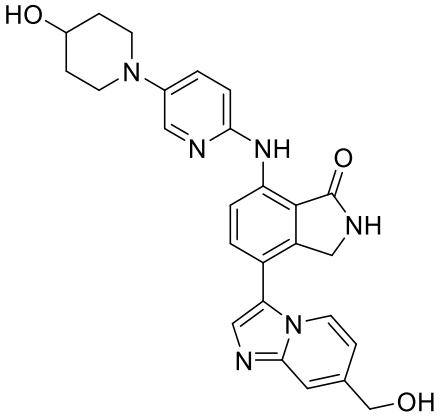
I-175



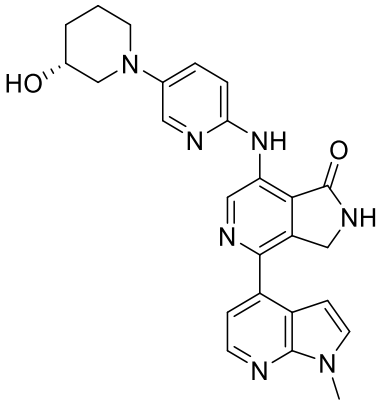
I-176



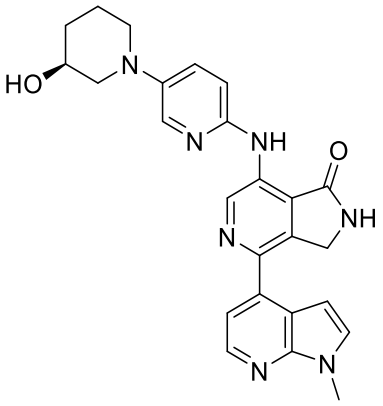
I-177



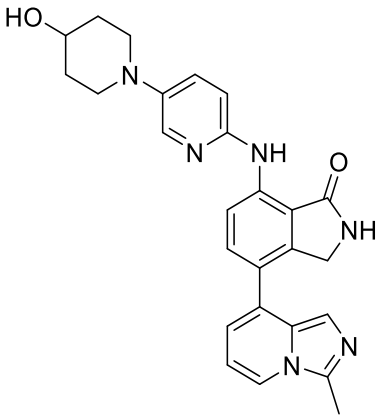
I-178



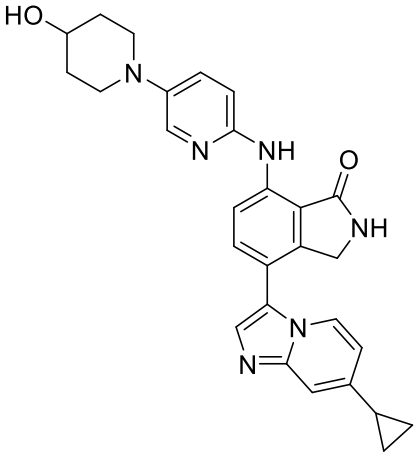
I-179



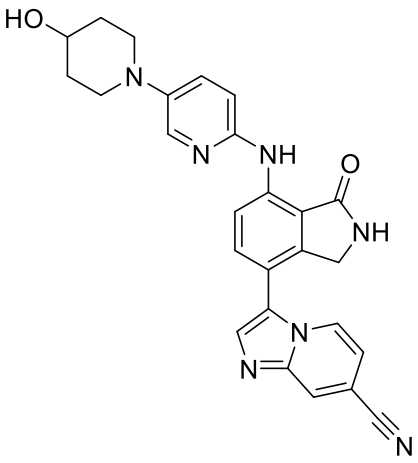
I-180



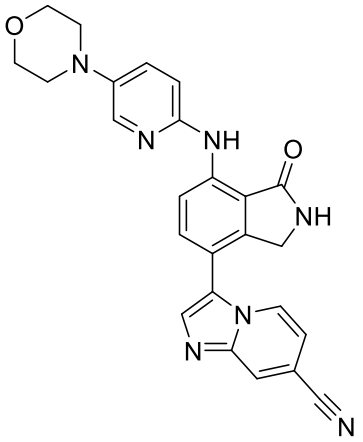
I-181



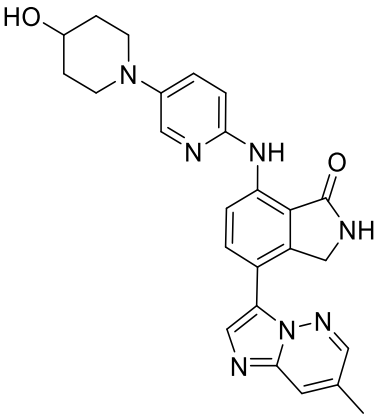
I-182



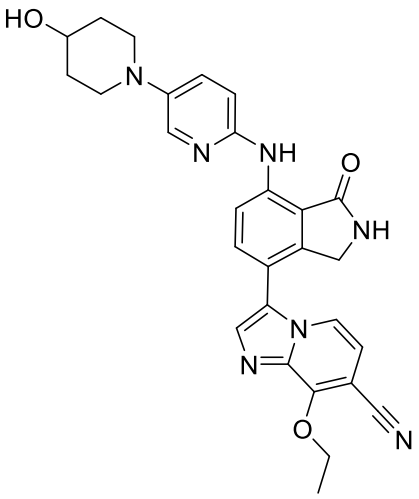
I-183



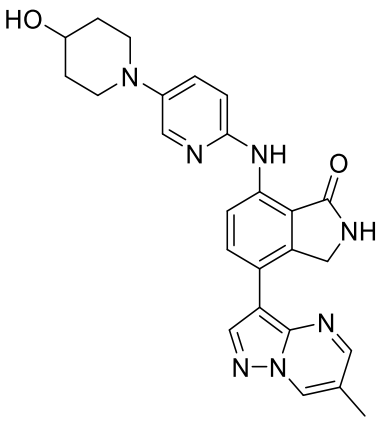
I-184



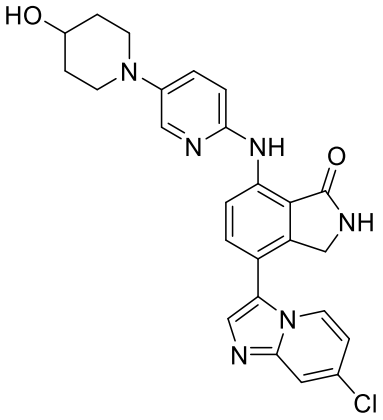
I-185



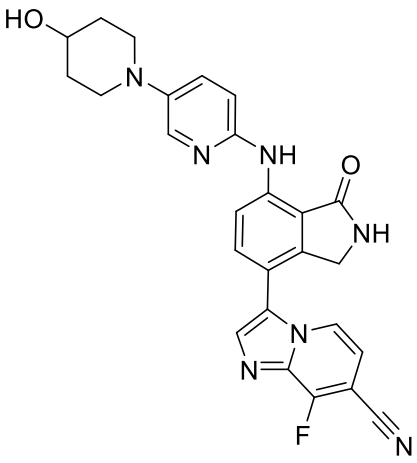
I-186



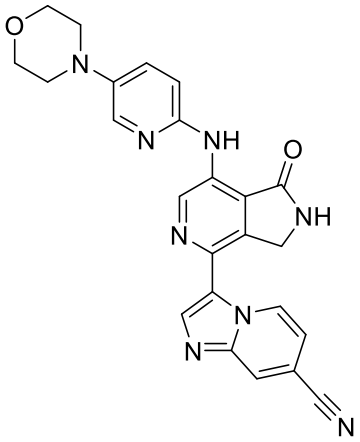
I-187



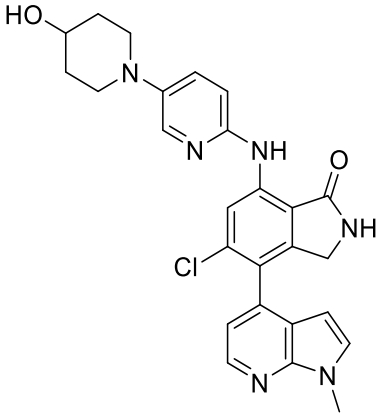
I-188



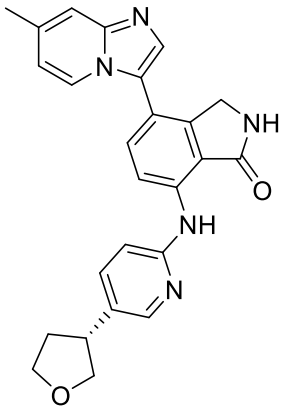
I-189



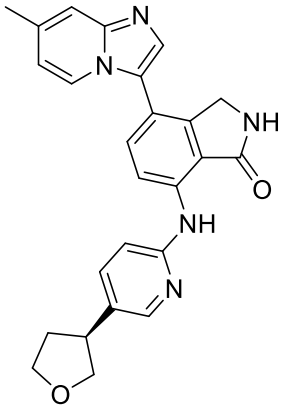
I-190



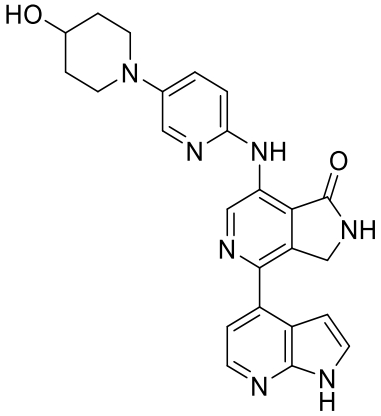
I-191



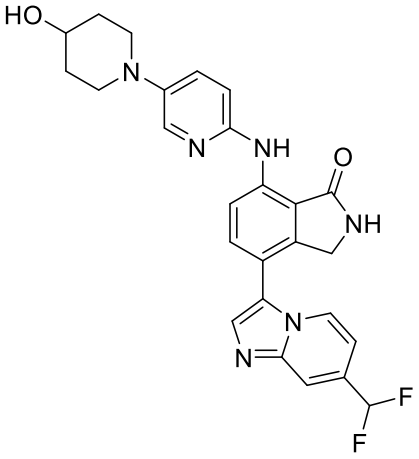
I-192



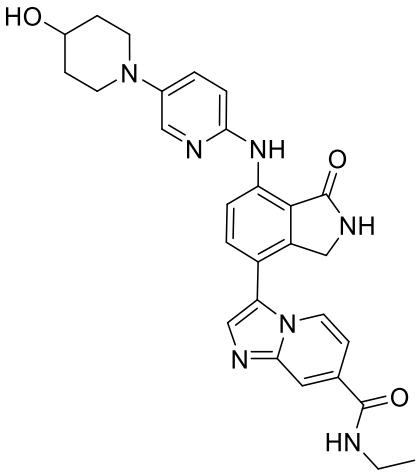
I-193



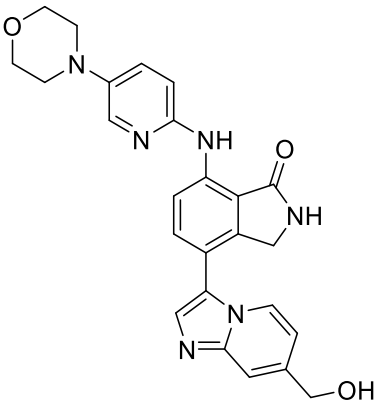
I-194



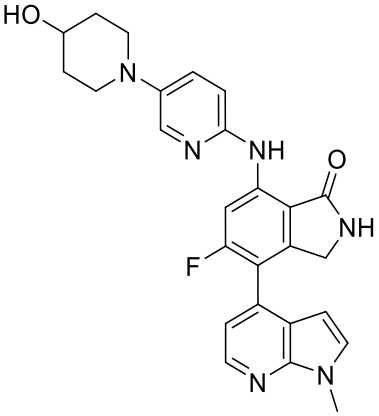
I-195



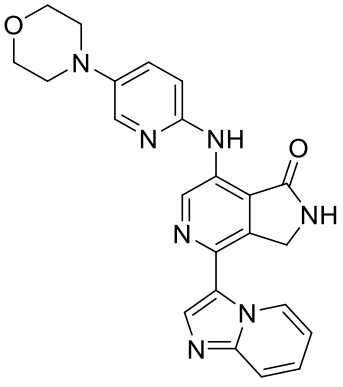
I-196



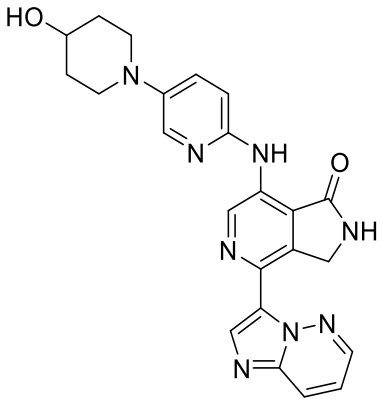
I-197



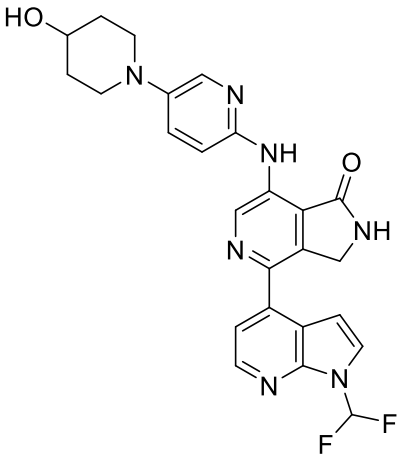
I-198



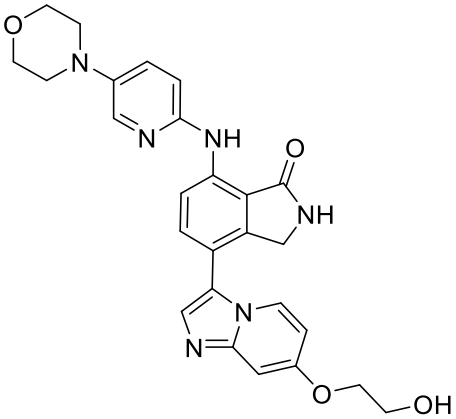
I-199



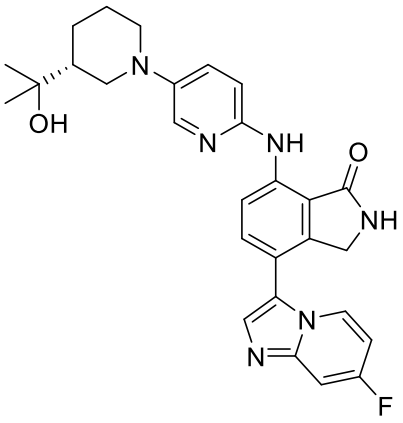
I-200



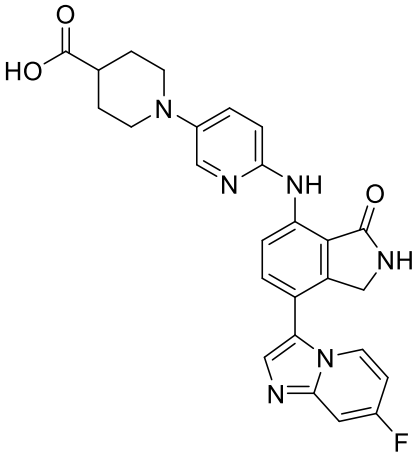
I-201



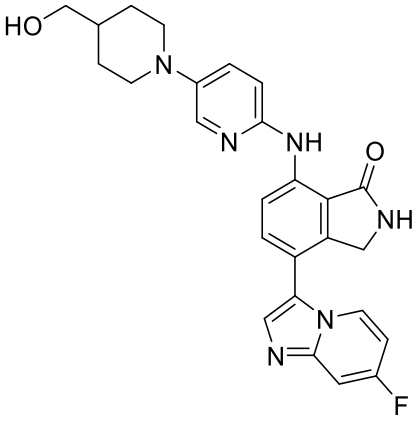
I-202



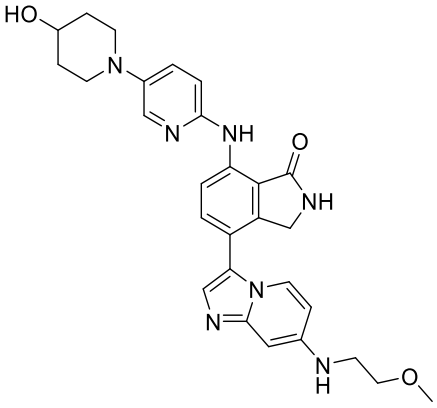
I-203



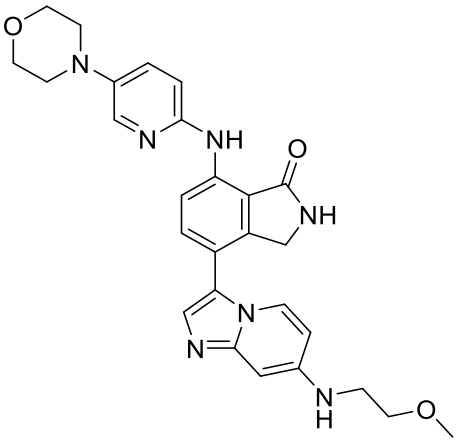
I-204



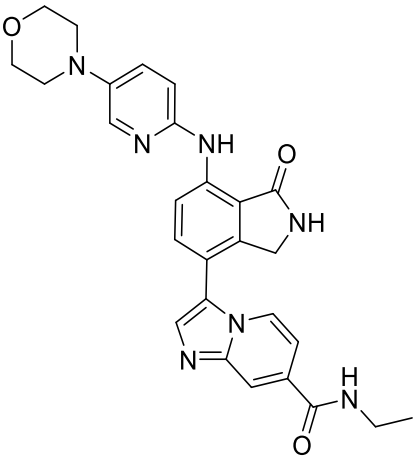
I-205



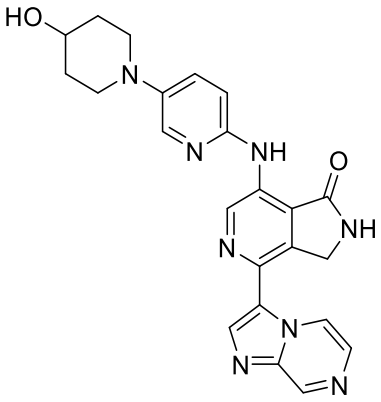
I-206



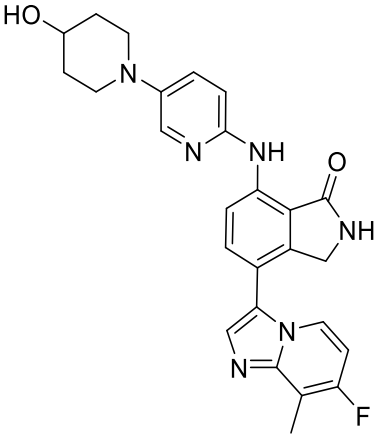
I-207



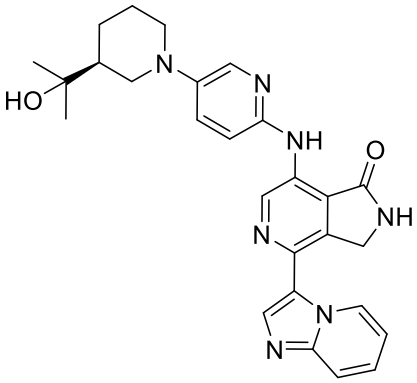
I-208



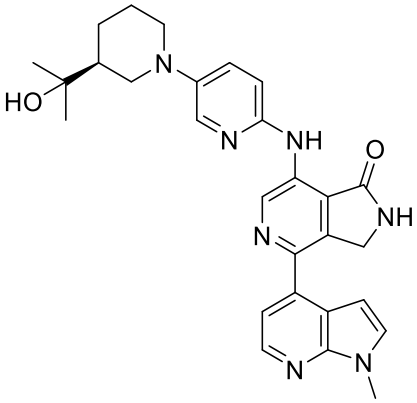
I-209



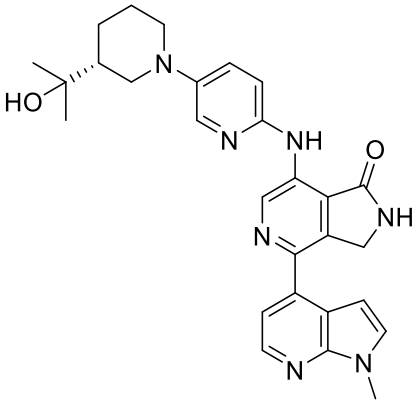
I-210



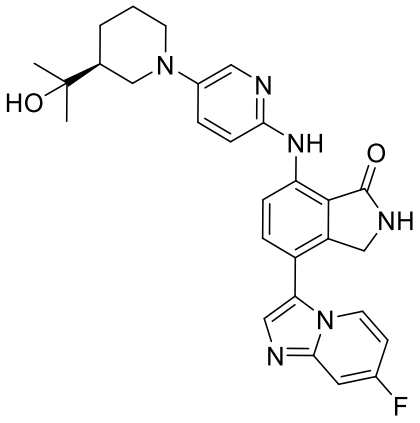
I-211



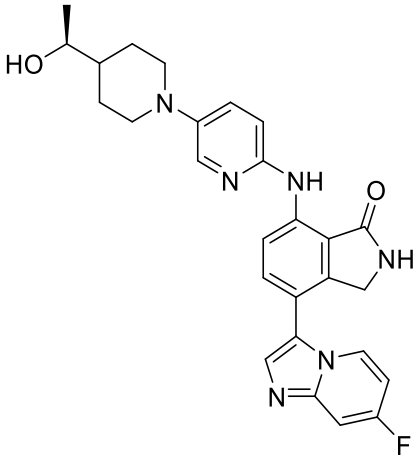
I-212



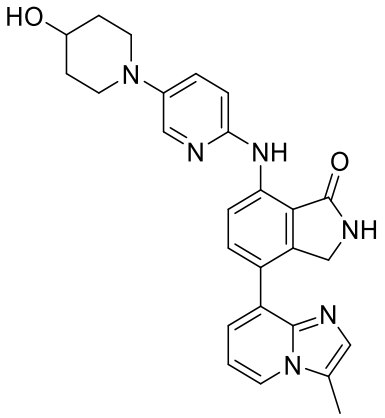
I-213



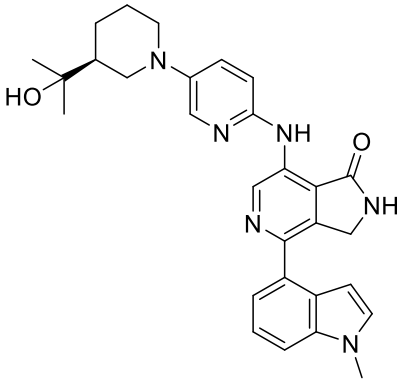
I-214



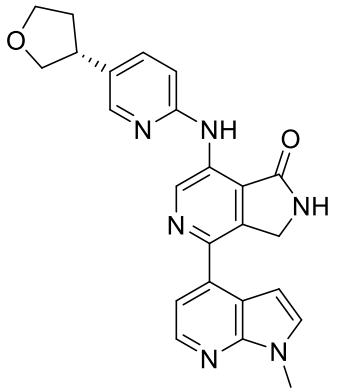
I-215



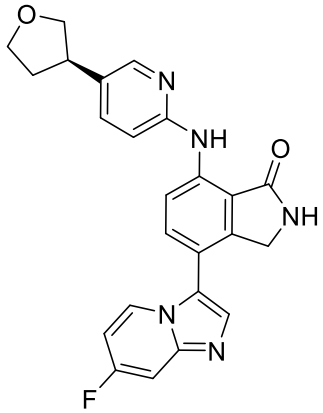
I-216



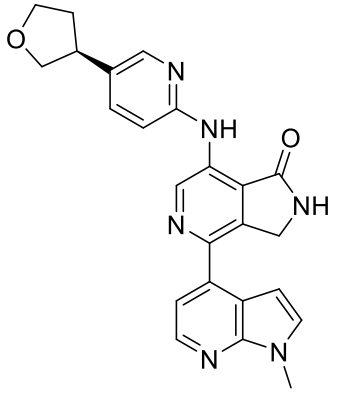
I-217



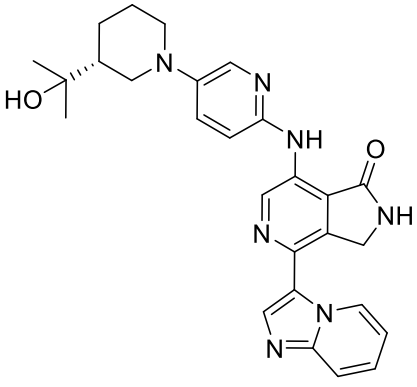
I-218



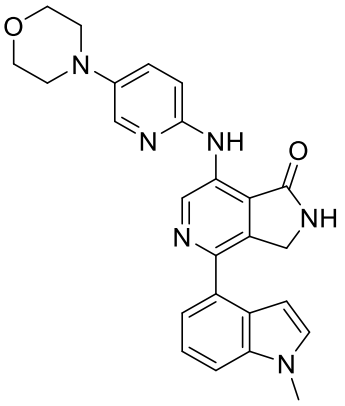
I-219



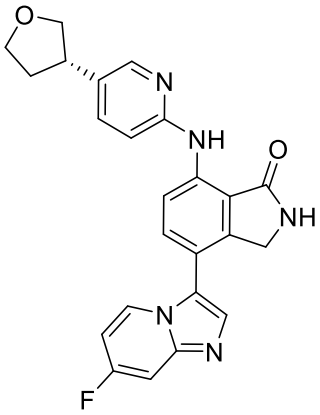
I-220



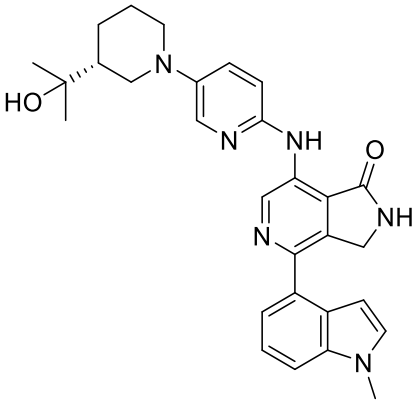
I-221



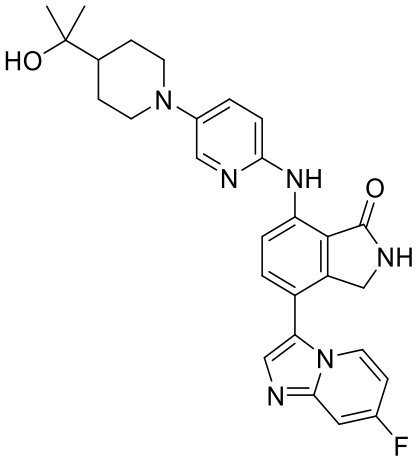
I-222



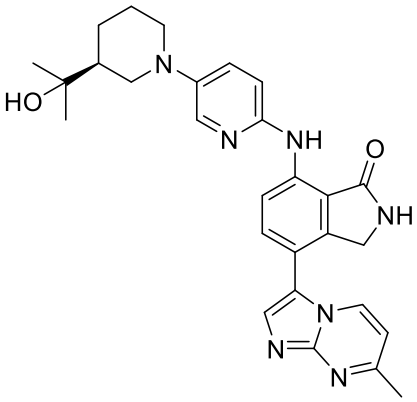
I-223



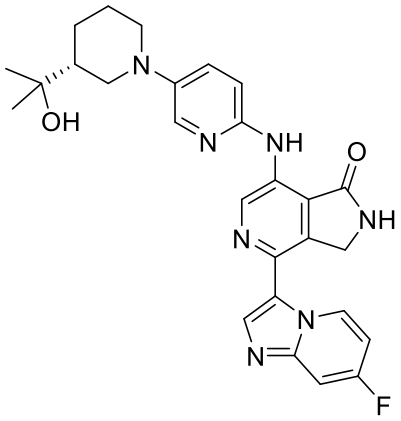
I-224



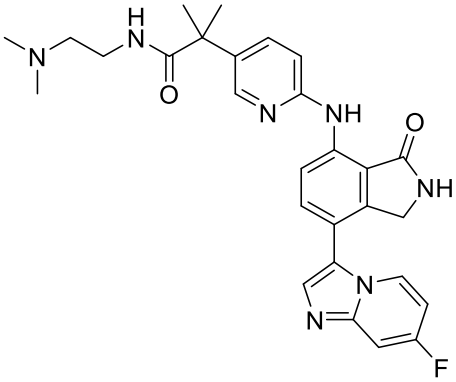
I-225



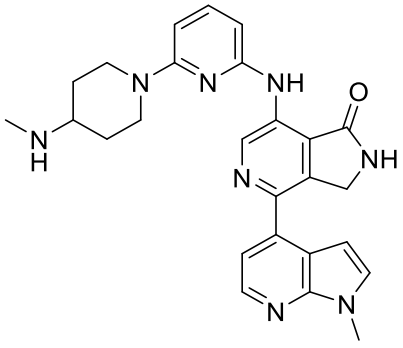
I-226



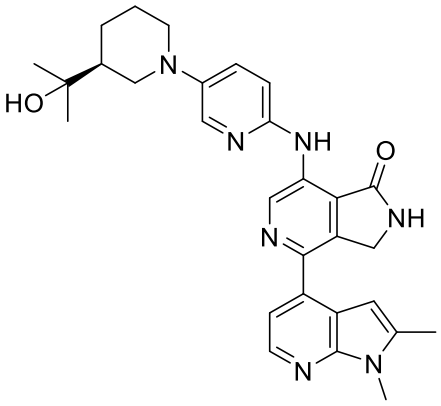
I-227



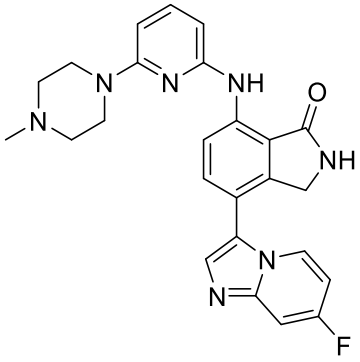
I-228



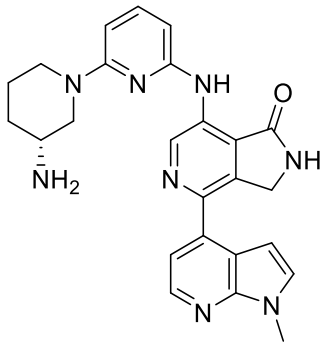
I-229



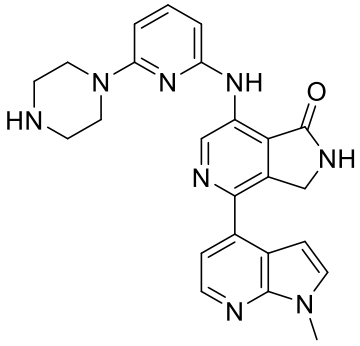
I-230



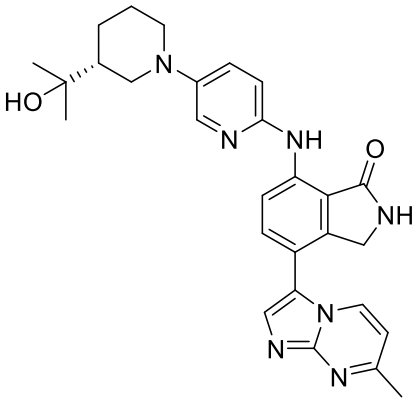
I-231



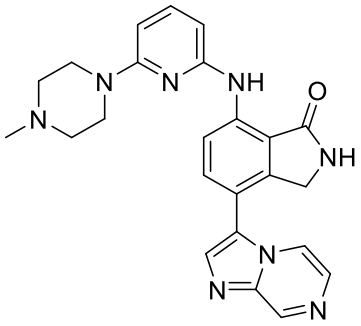
I-232



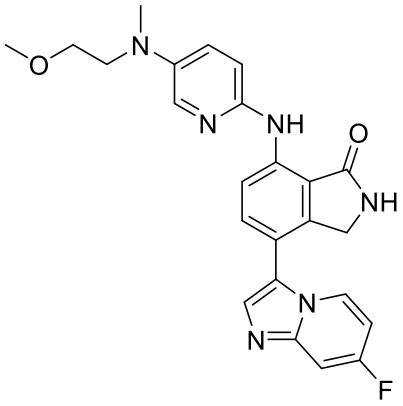
I-233



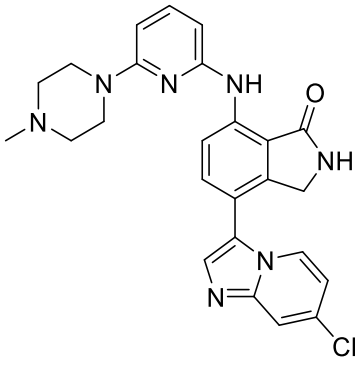
I-234



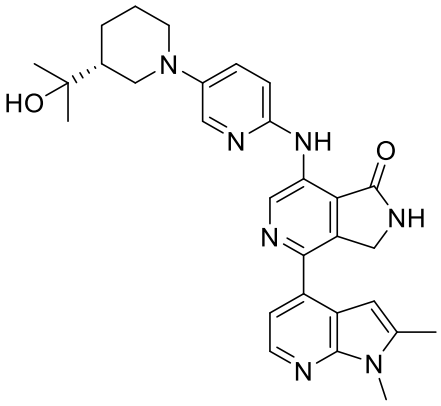
I-235



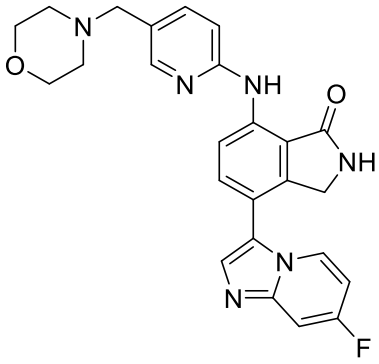
I-236



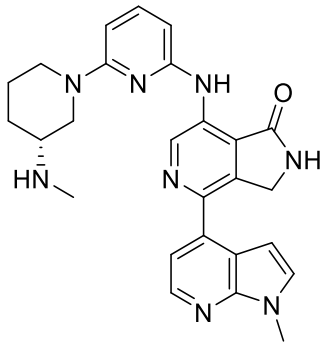
I-237



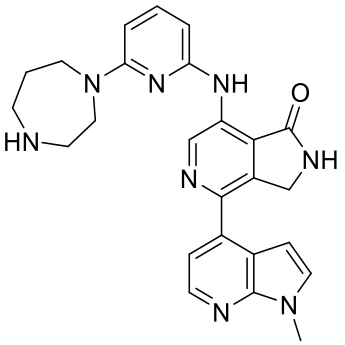
I-238



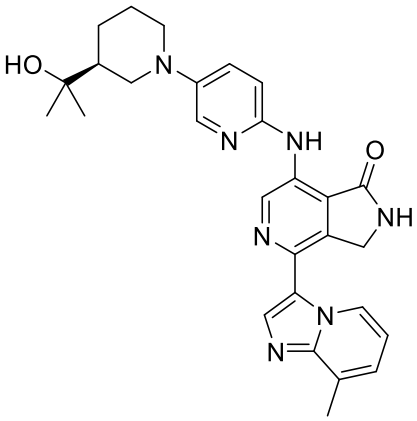
I-239



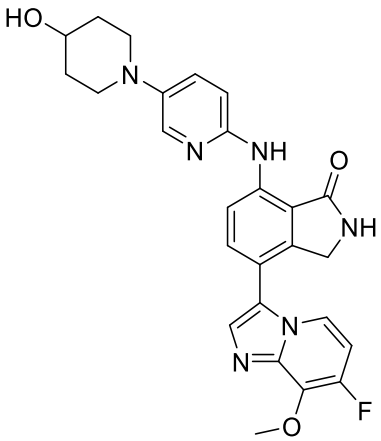
I-240



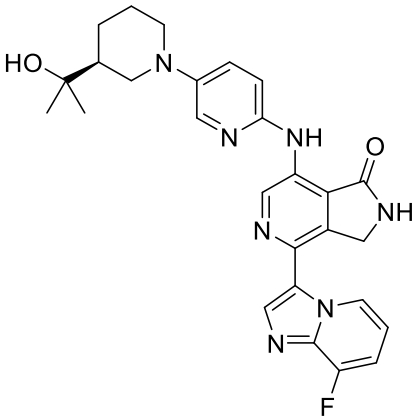
I-241



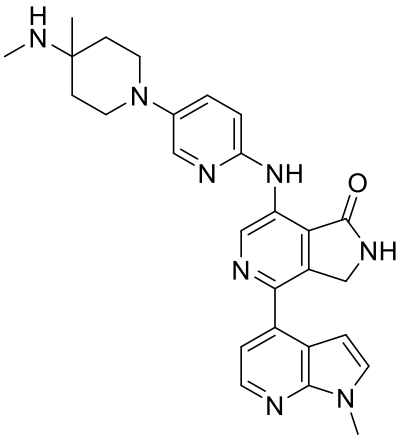
I-242



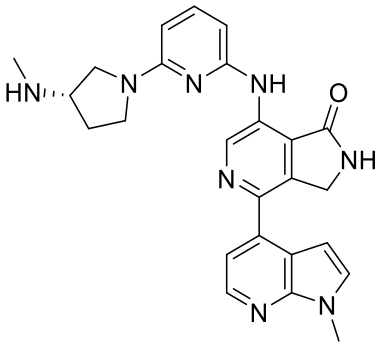
I-243



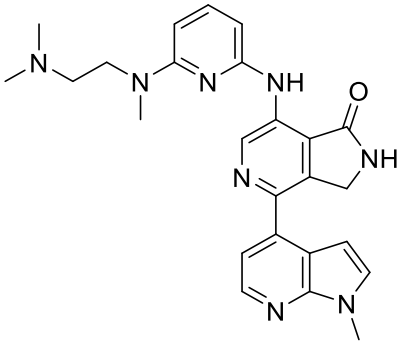
I-244



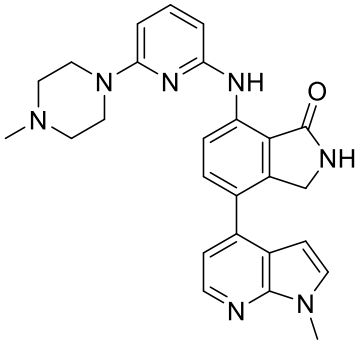
I-245



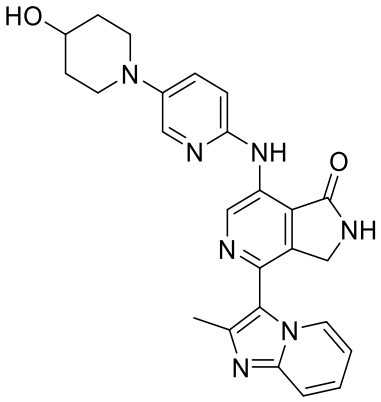
I-246



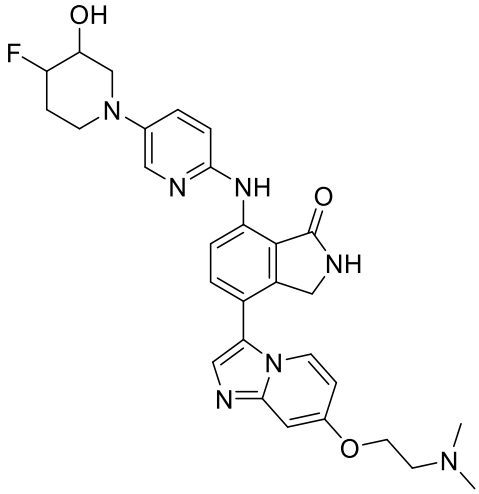
I-247



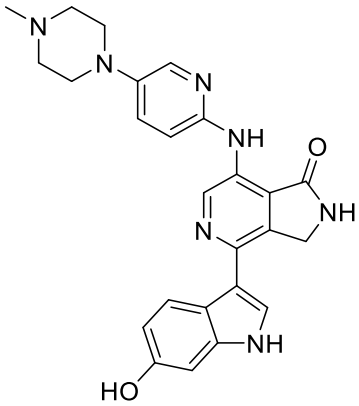
I-248



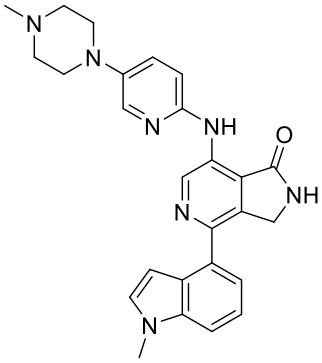
I-249



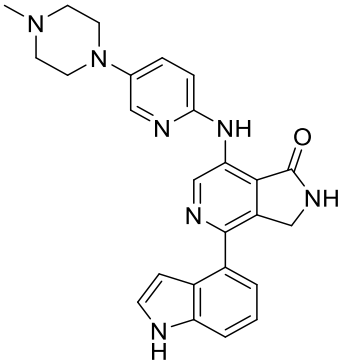
I-250



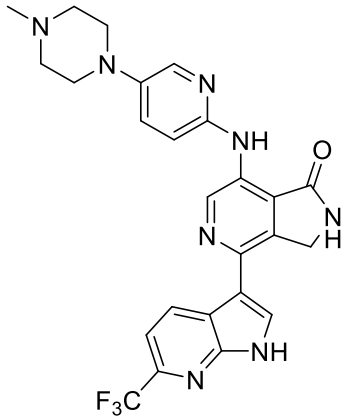
I-251



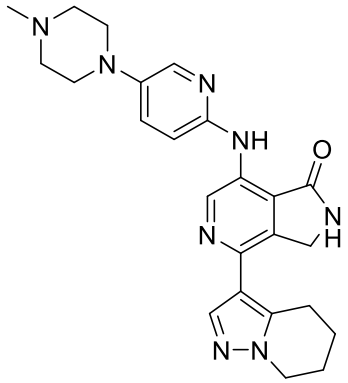
I-252



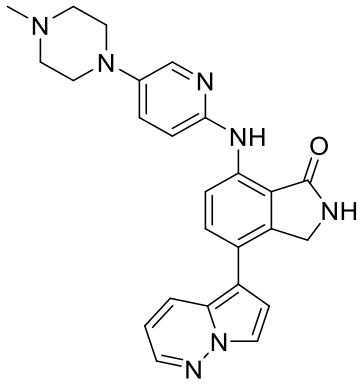
I-253



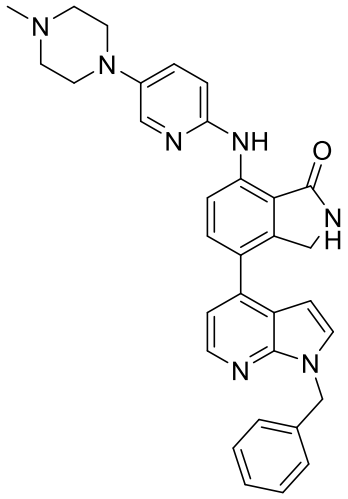
I-255



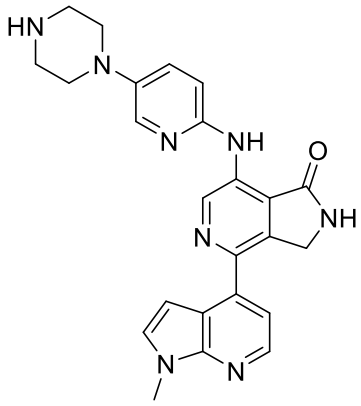
I-256



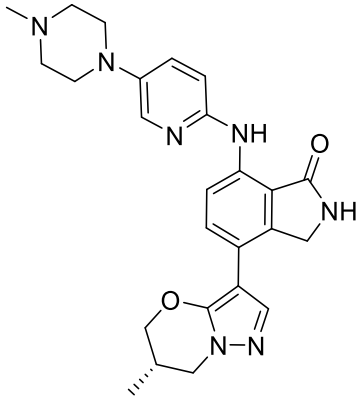
I-257



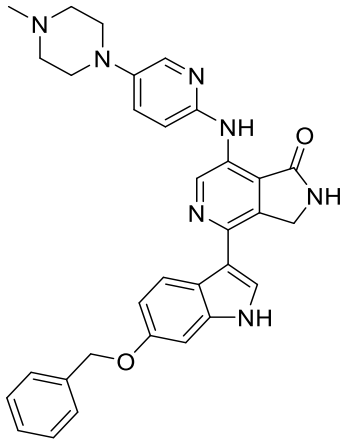
I-258



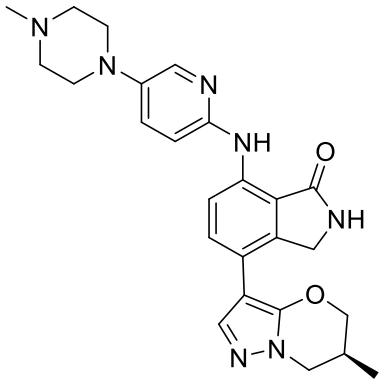
I-259



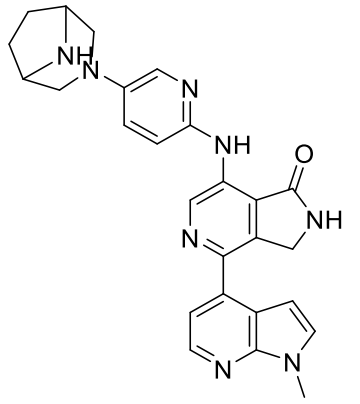
I-260



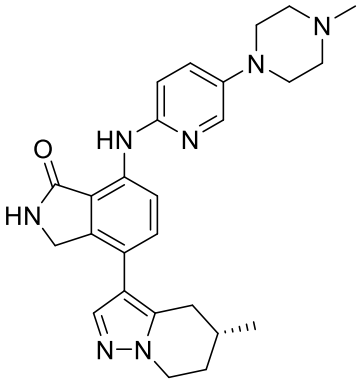
I-261



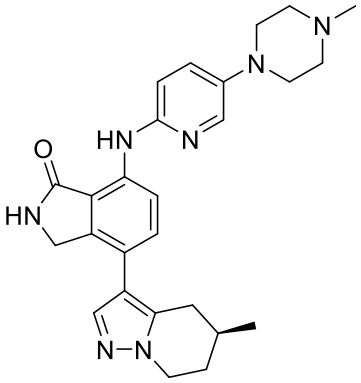
I-262



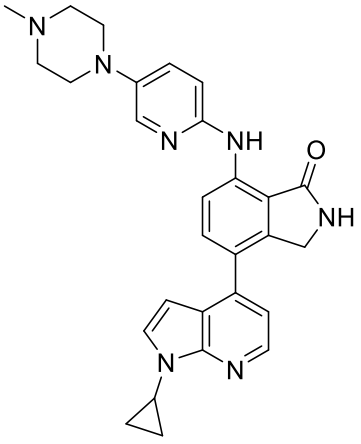
I-263



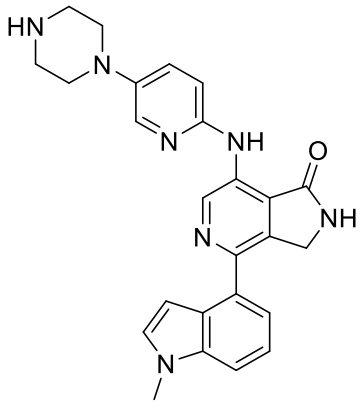
I-264



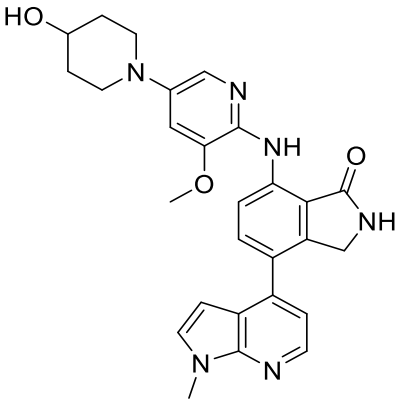
I-265



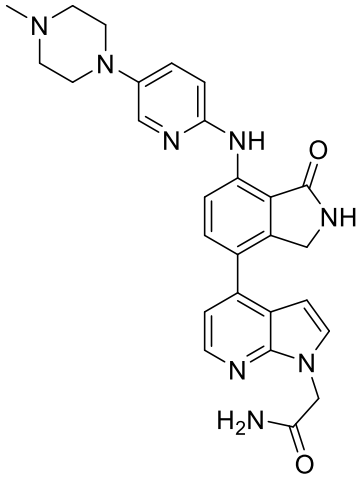
I-266



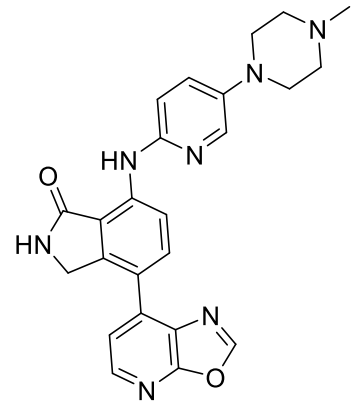
I-267



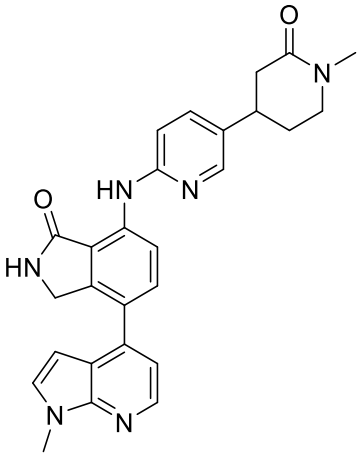
I-269



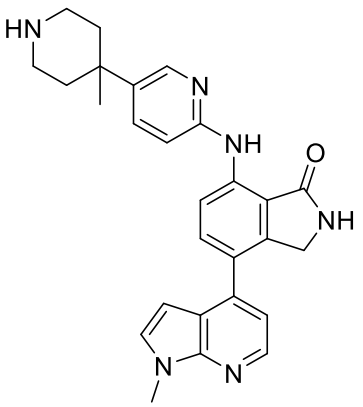
I-270



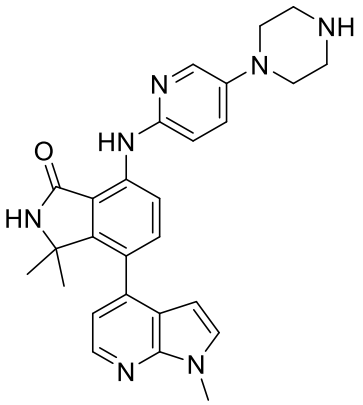
I-271



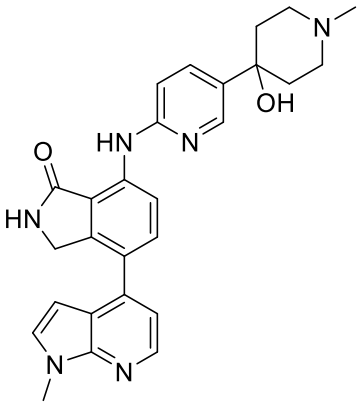
I-272



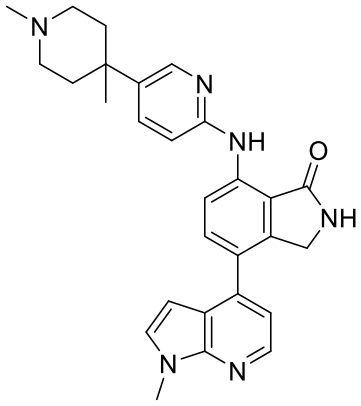
I-273



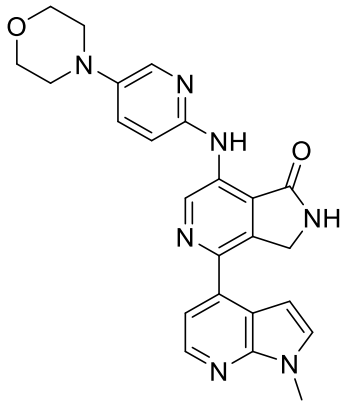
I-274



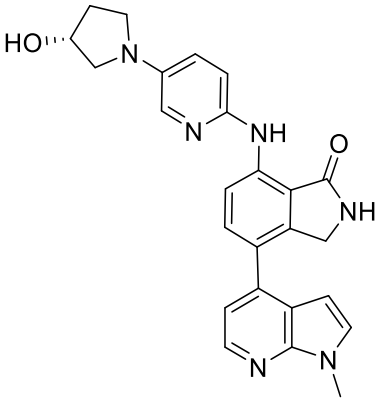
I-275



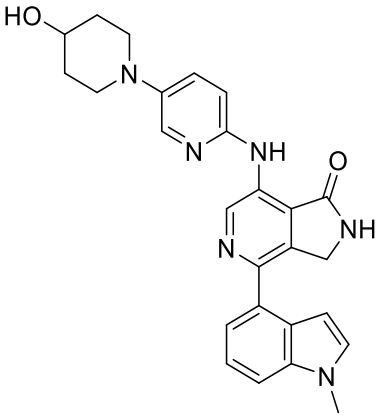
I-276



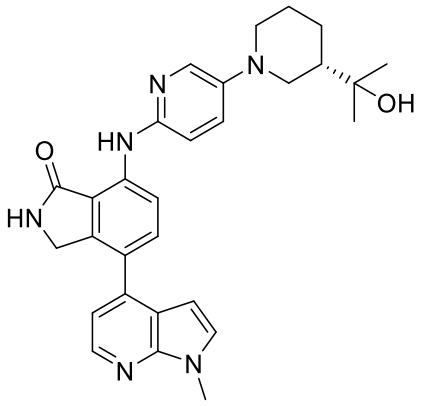
I-278



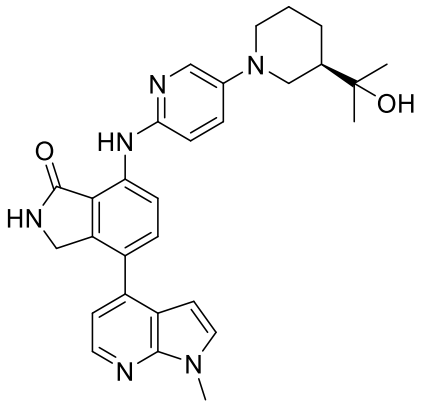
I-279



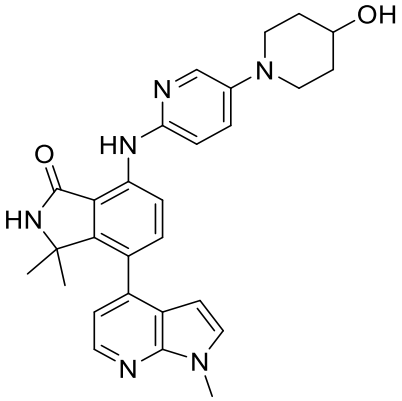
I-280



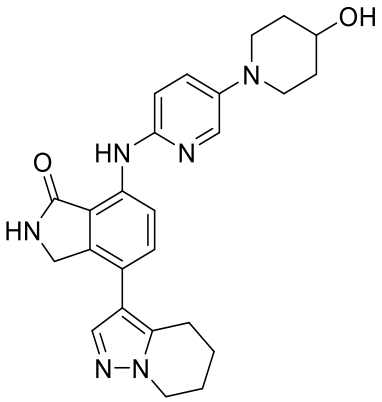
I-281



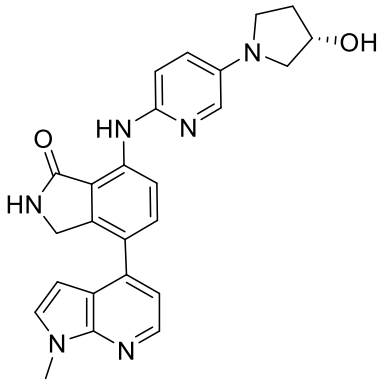
I-282



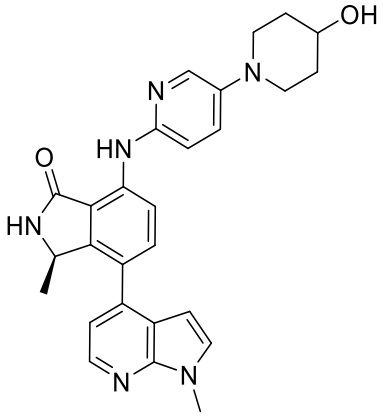
I-284



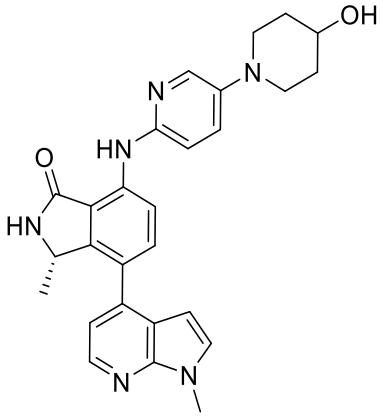
I-285



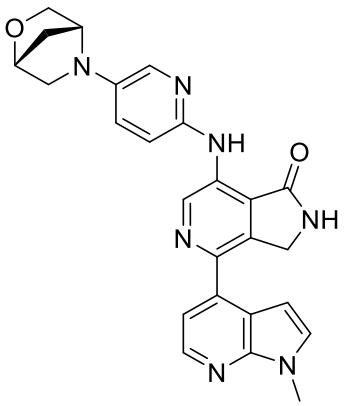
I-286



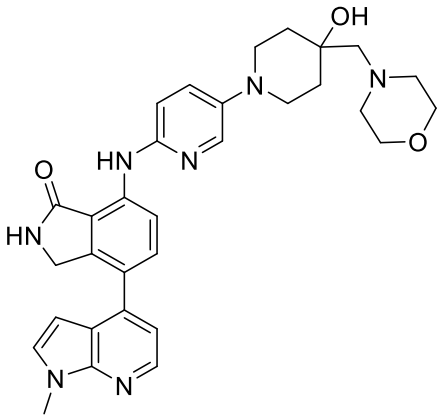
I-287



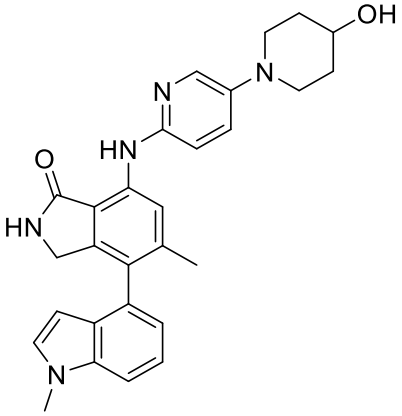
I-289



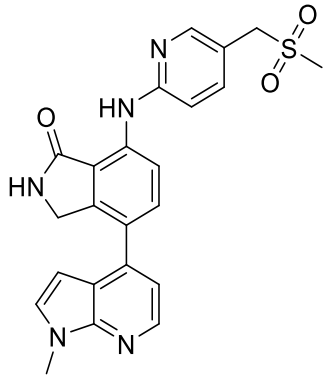
I-291



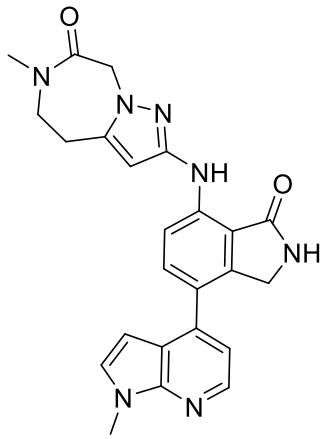
I-292



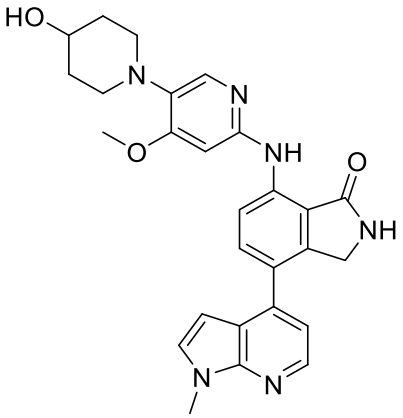
I-293



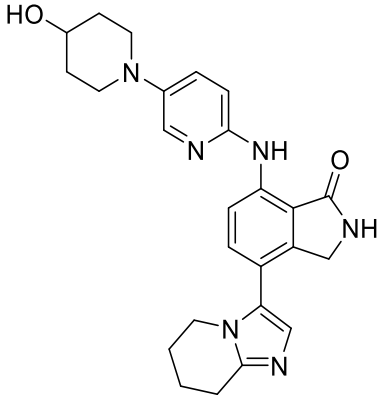
I-294



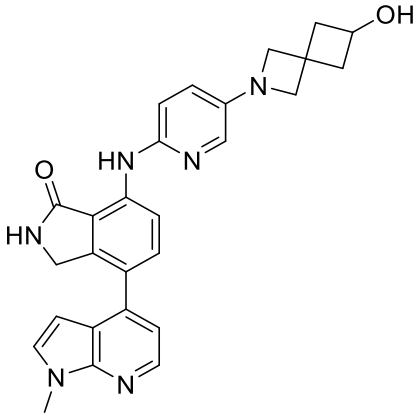
I-295



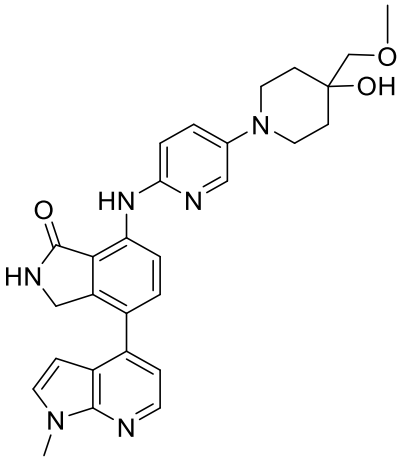
I-296



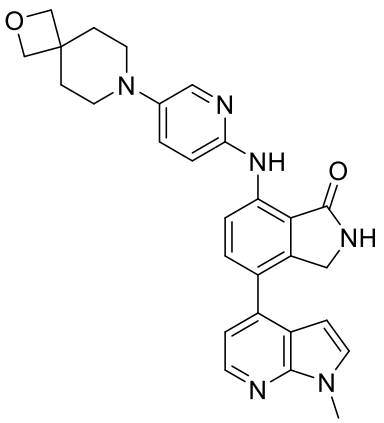
I-297



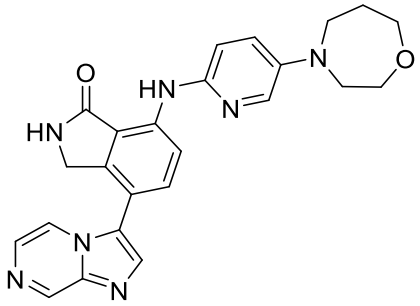
I-298



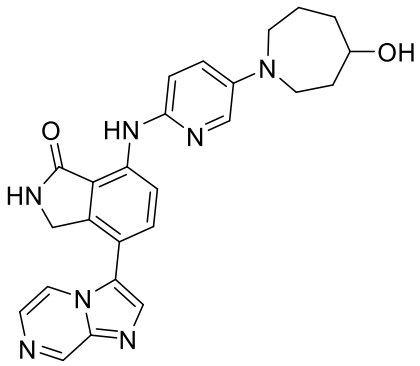
I-299



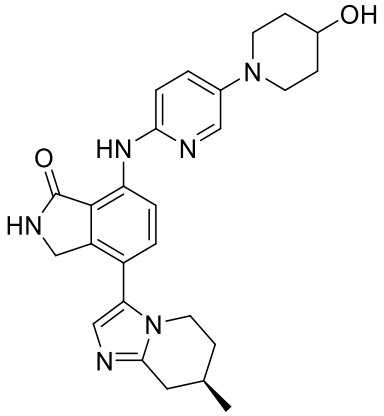
I-300



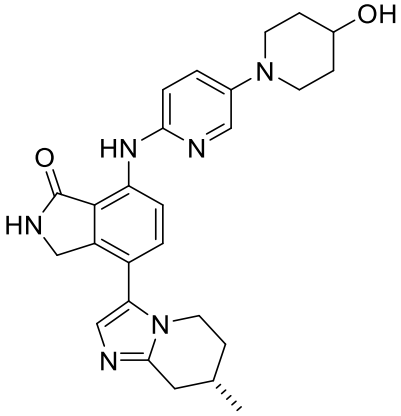
I-301



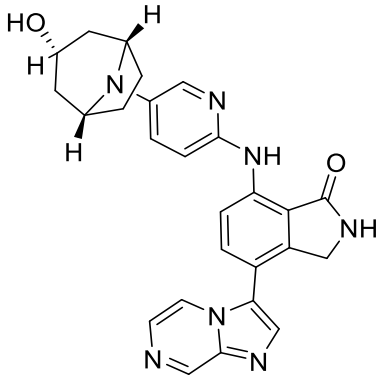
I-302



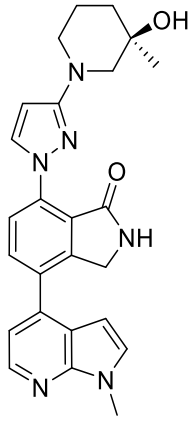
I-303



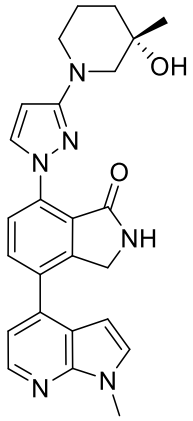
I-304



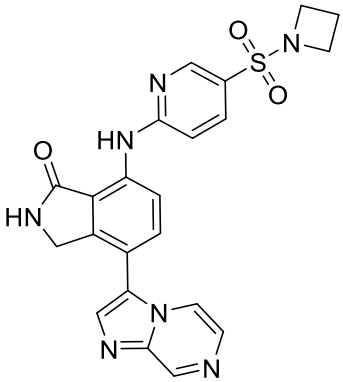
I-305



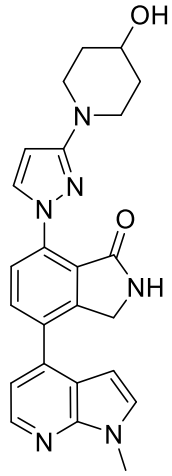
I-306



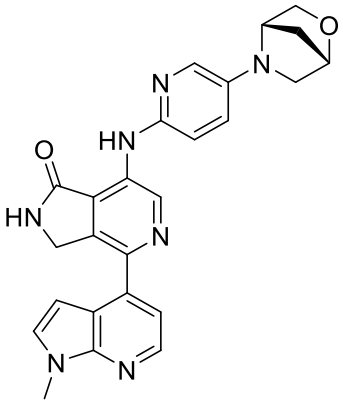
I-307



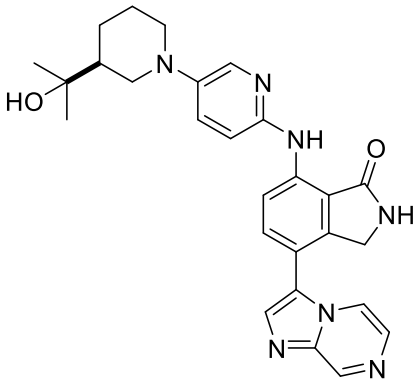
I-308



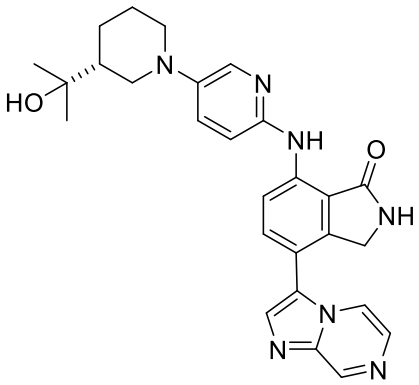
I-309



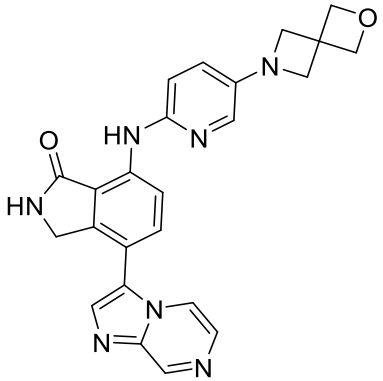
I-310



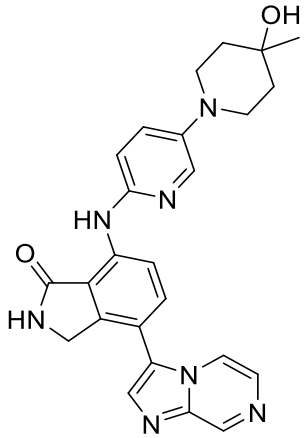
I-311



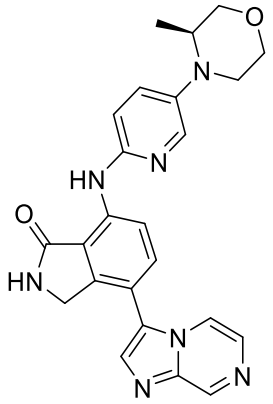
I-312



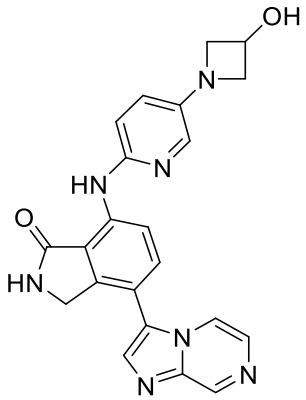
I-313



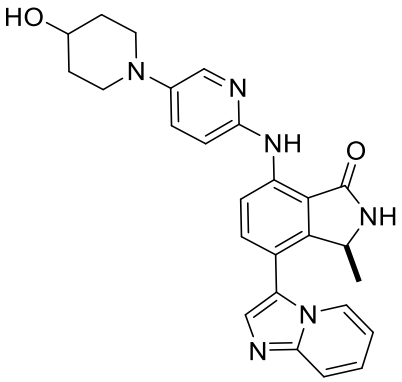
I-314



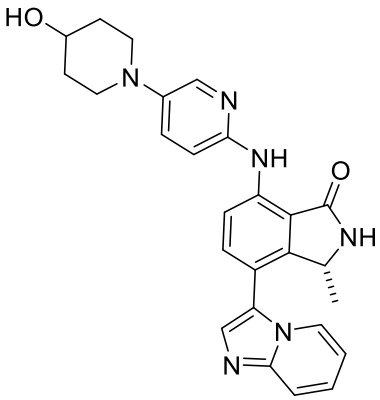
I-315



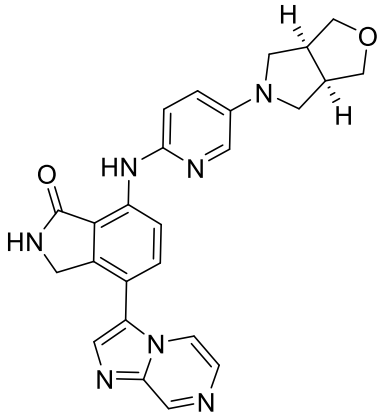
I-316



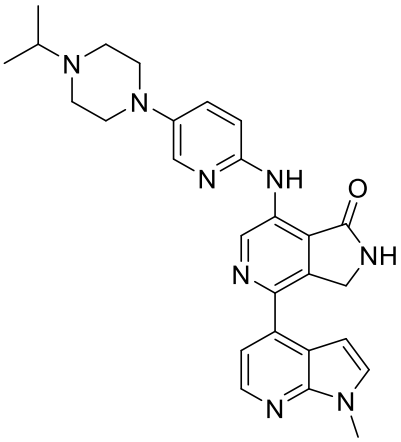
I-317



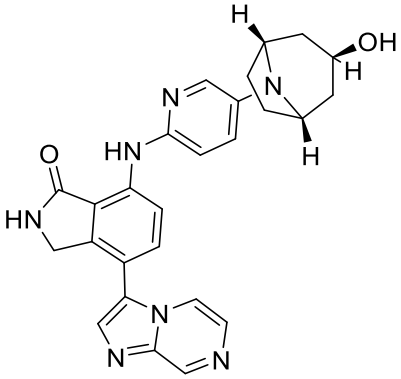
I-318



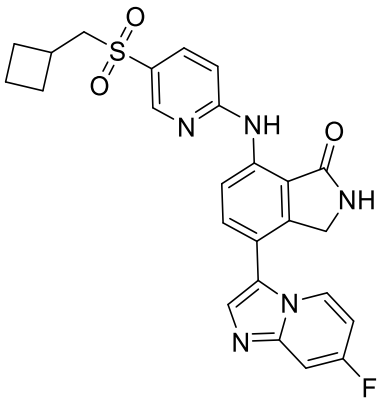
I-319



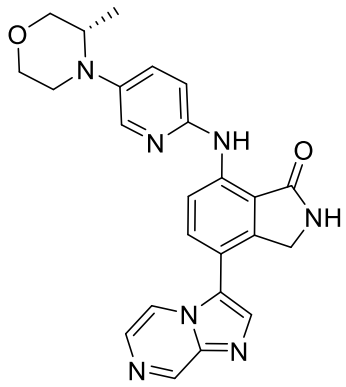
I-320



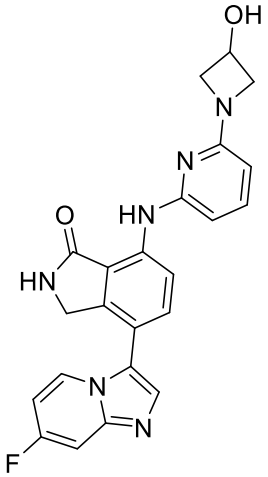
I-321



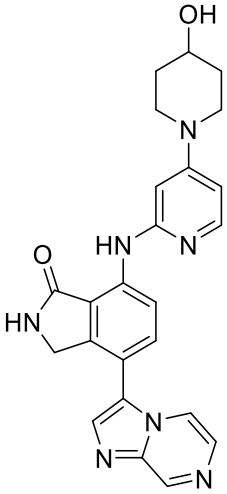
I-322



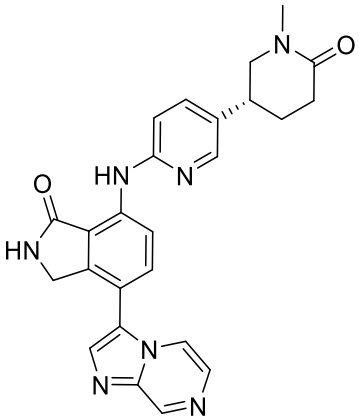
I-323



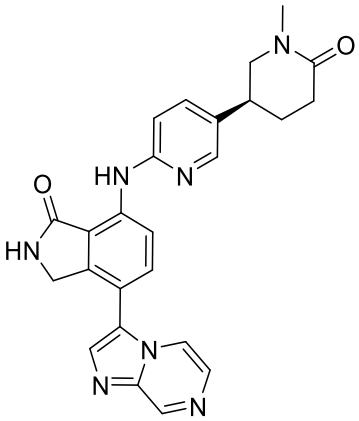
I-324



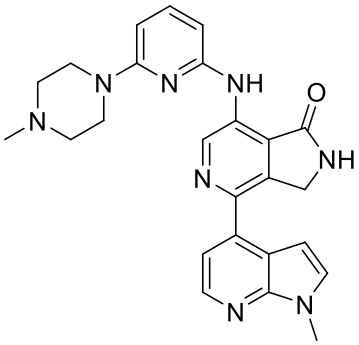
I-325



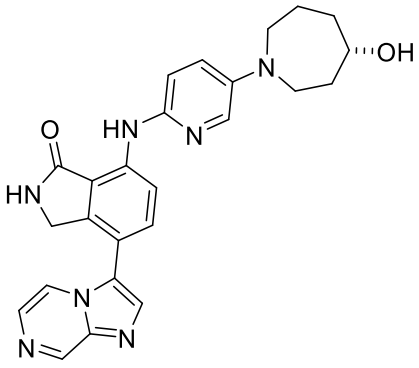
I-326



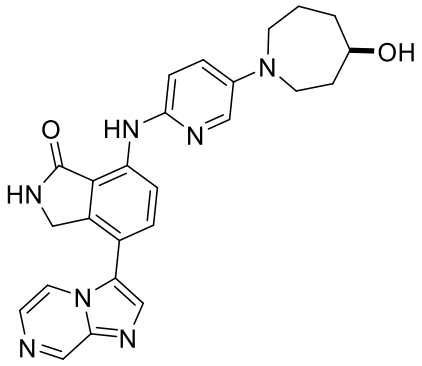
I-327



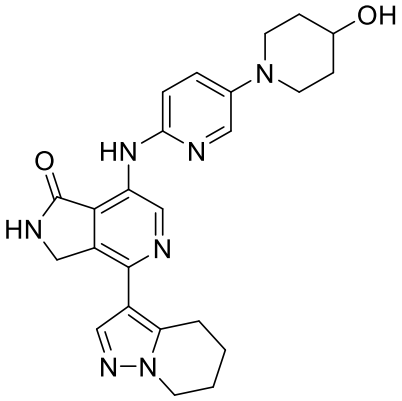
I-328



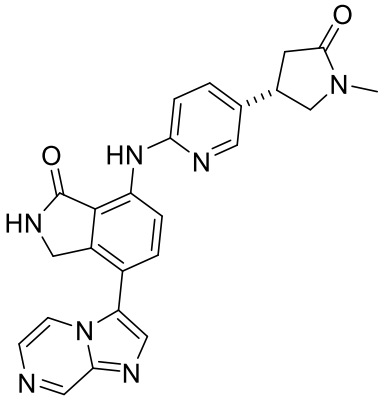
I-329



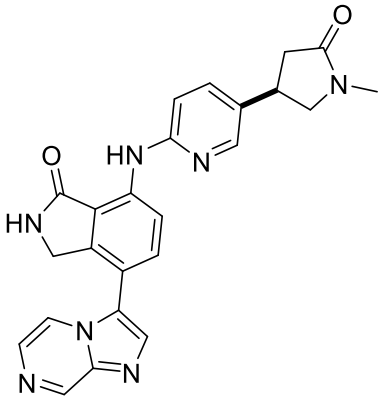
I-330



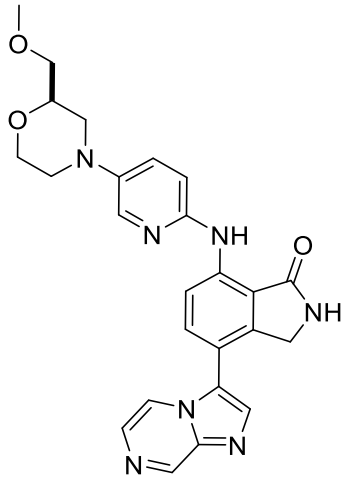
I-331



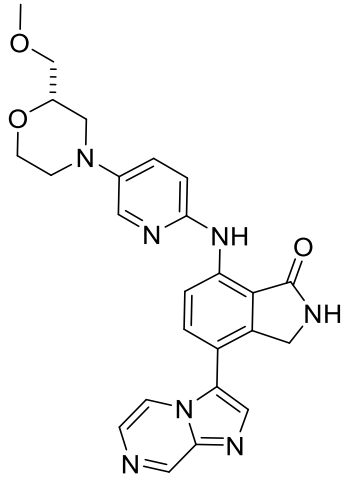
I-332



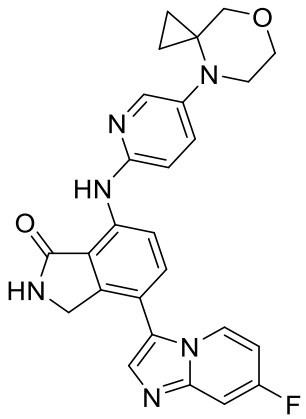
I-333



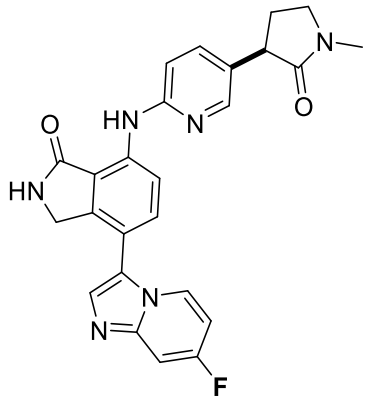
I-334



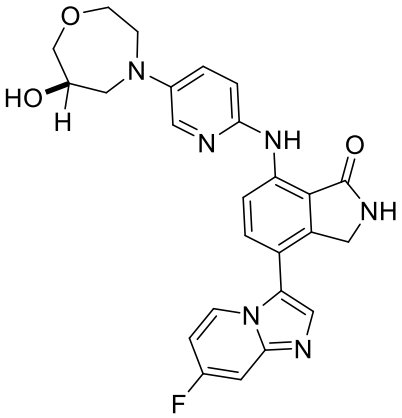
I-335



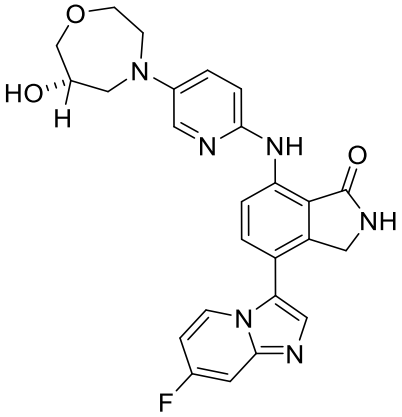
I-336



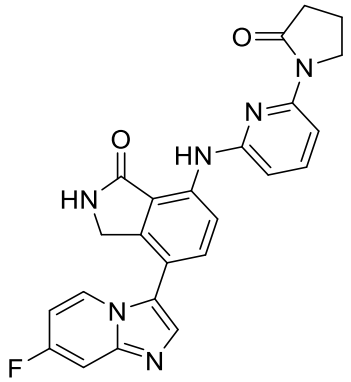
I-338



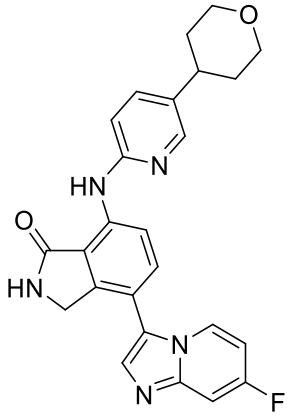
I-339



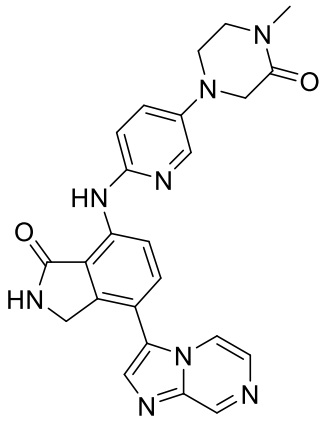
I-340



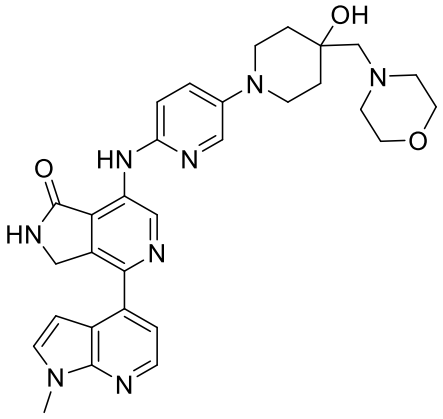
I-341



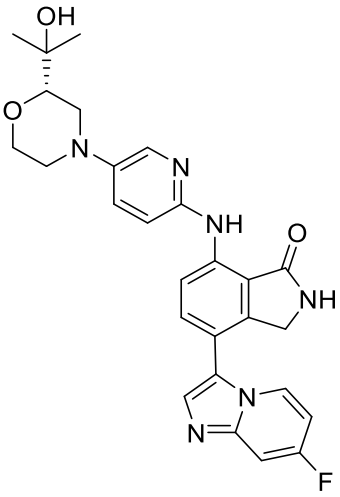
I-342



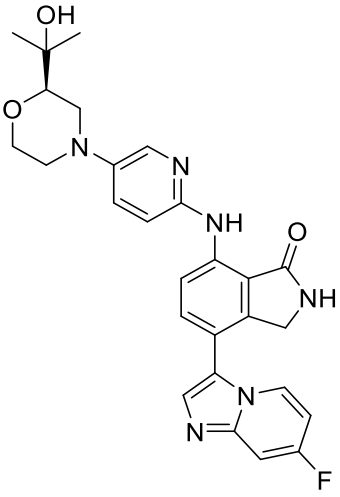
I-343



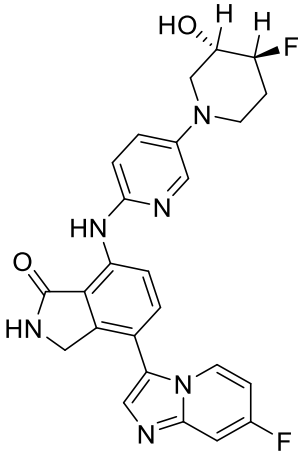
I-344



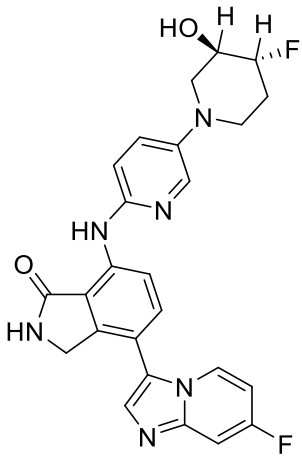
I-345



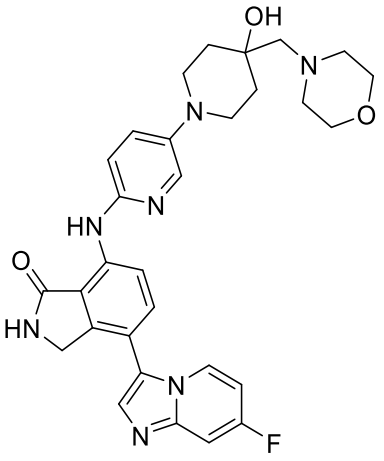
I-346



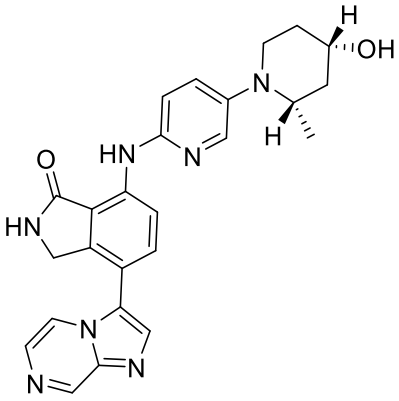
I-347



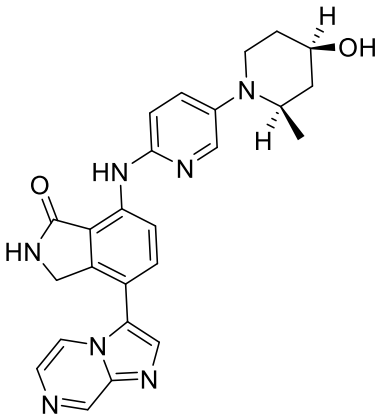
I-348



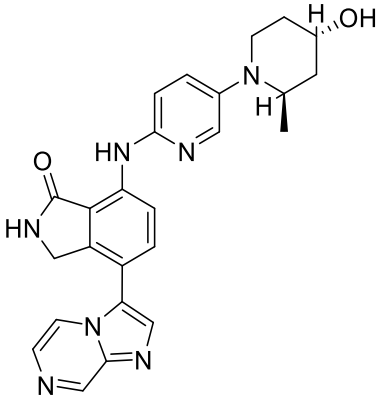
I-349



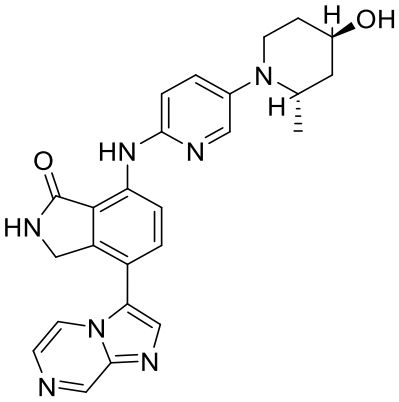
I-350



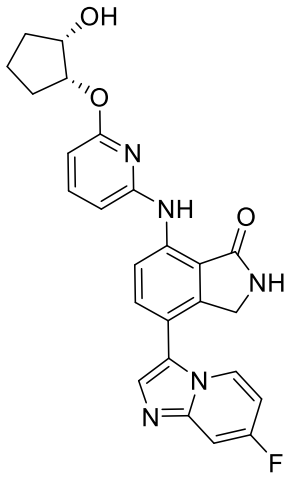
I-351



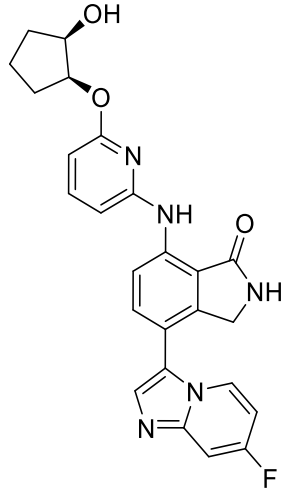
I-352



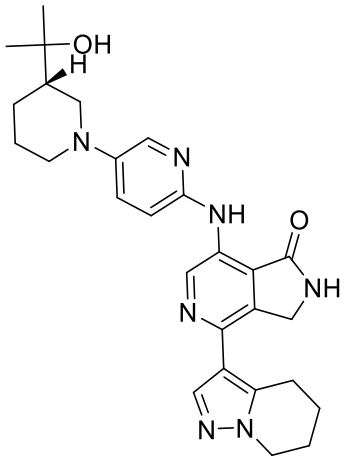
I-353



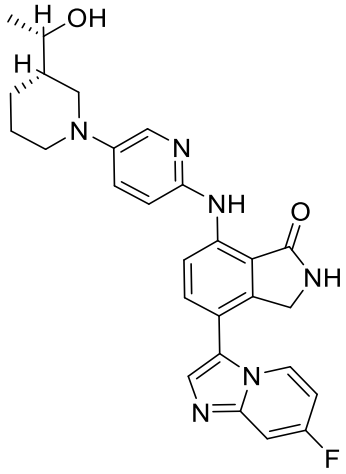
I-354



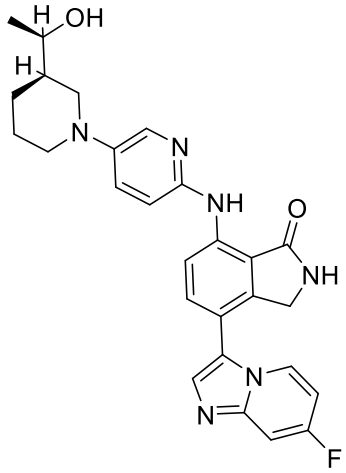
I-355



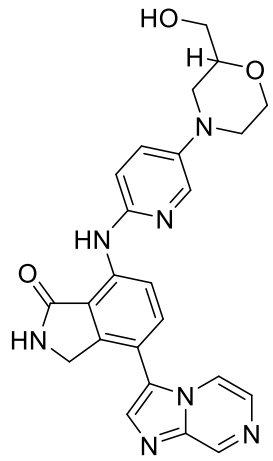
I-356



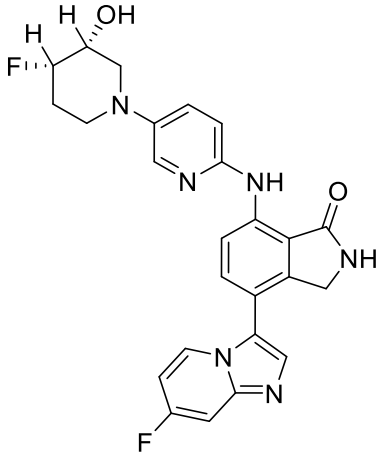
I-357



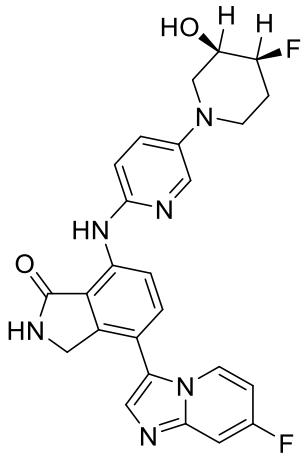
I-358



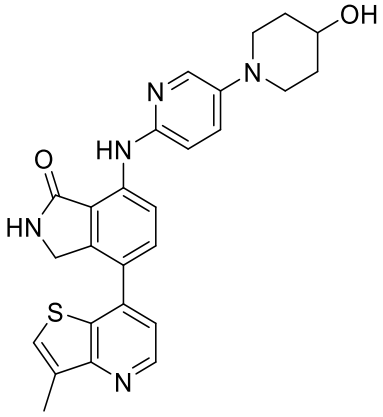
I-359



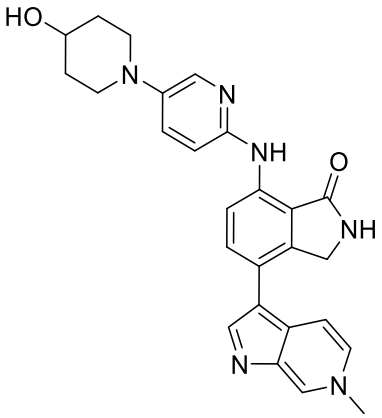
I-360



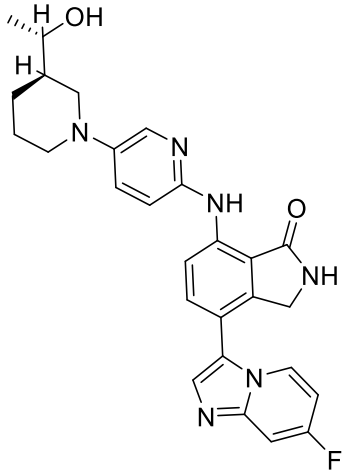
I-361



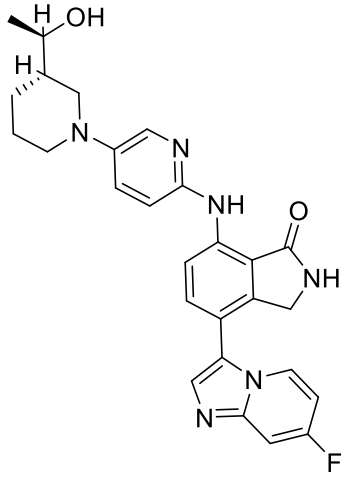
I-362



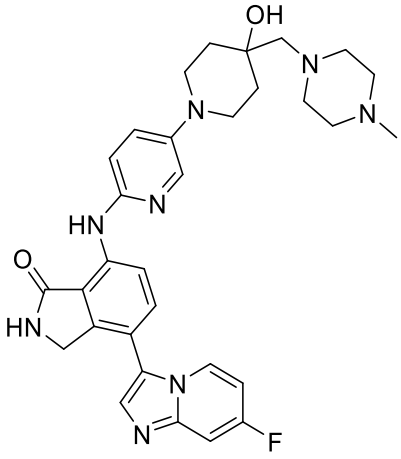
I-363



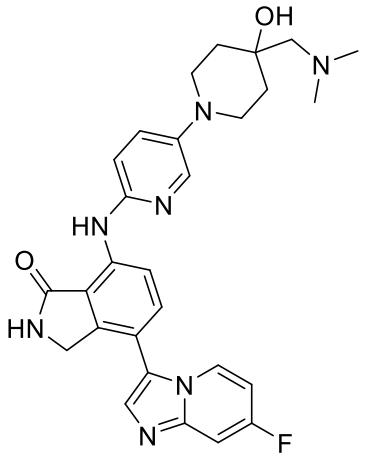
I-364



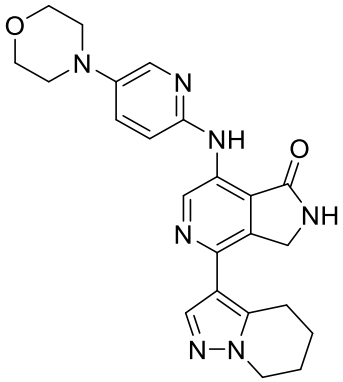
I-365



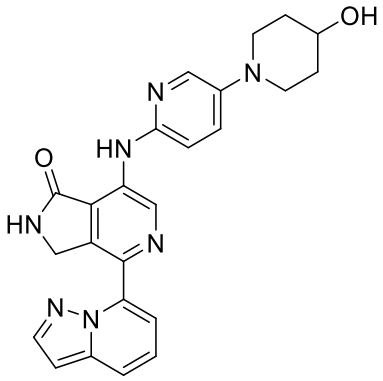
I-366



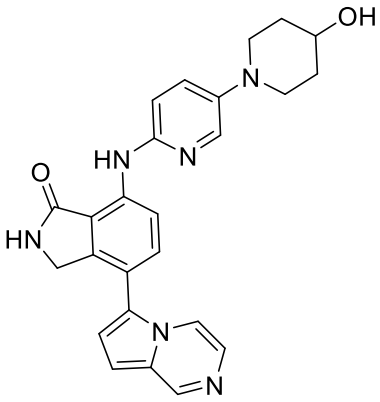
I-367



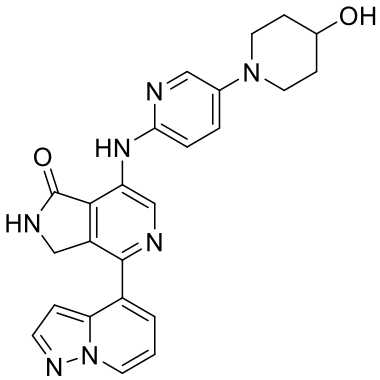
I-368



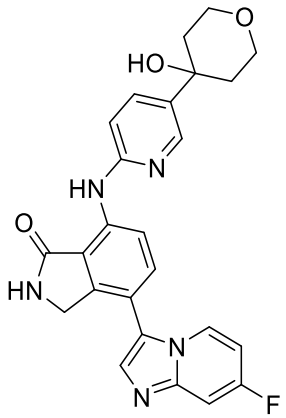
I-369



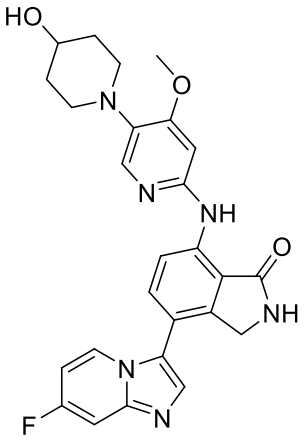
I-370



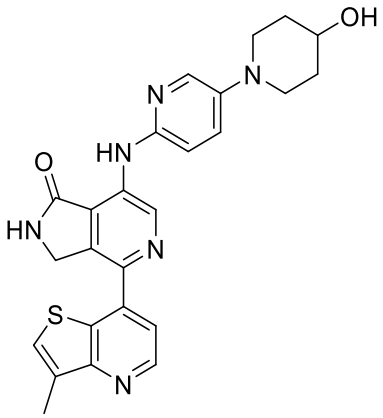
I-371



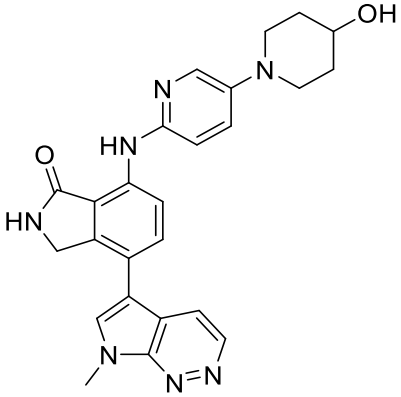
I-372



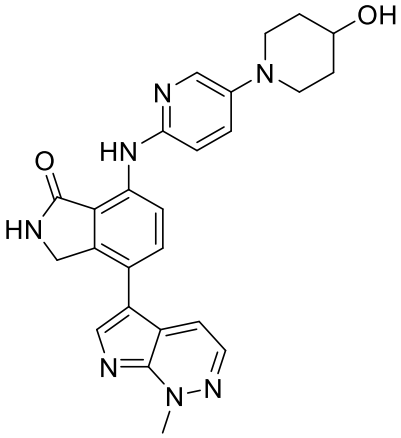
I-373



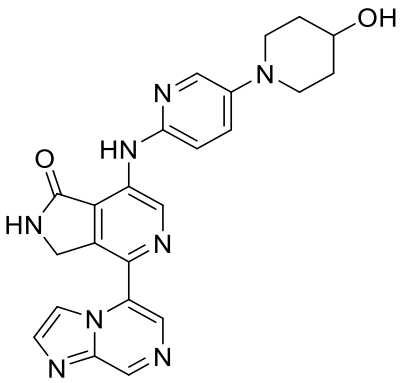
I-374



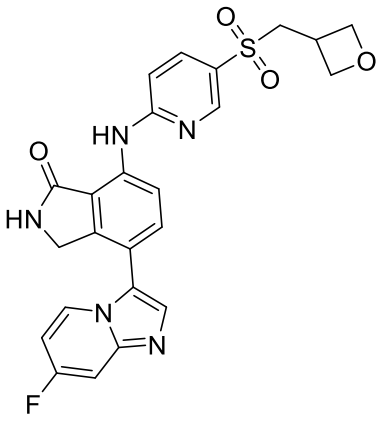
I-375



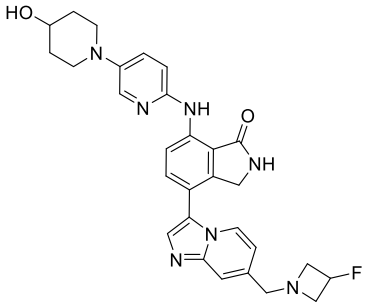
I-376



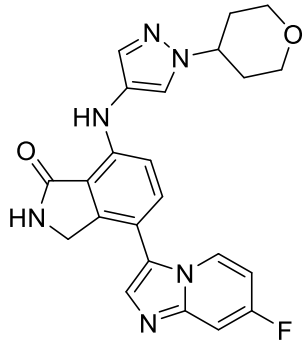
I-377



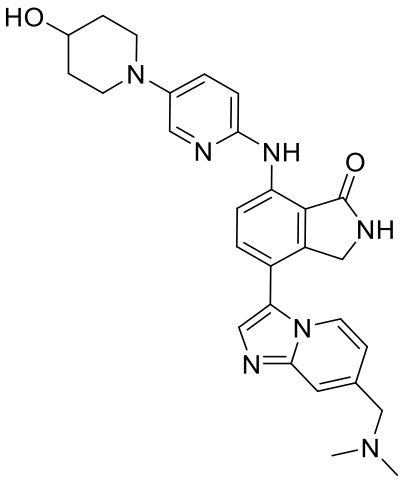
I-378



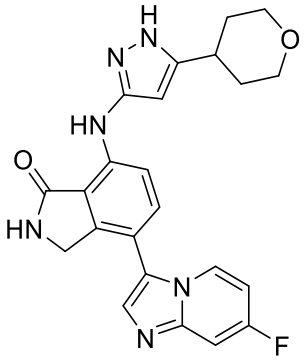
I-379



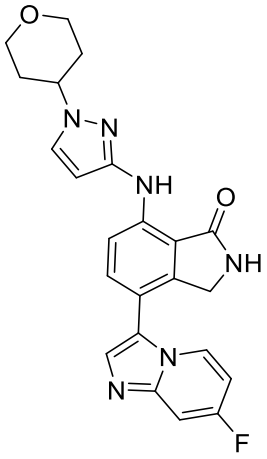
I-380



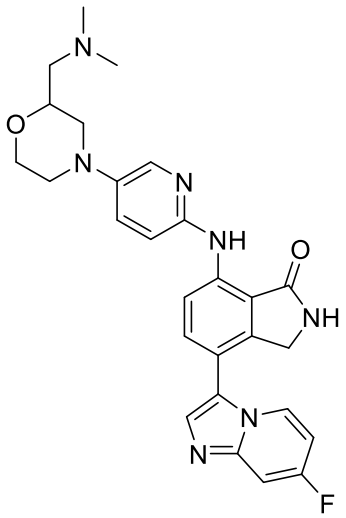
I-381



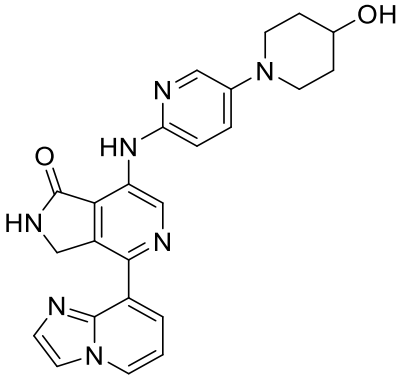
I-382



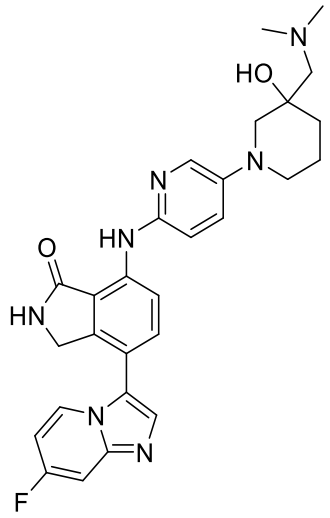
I-383



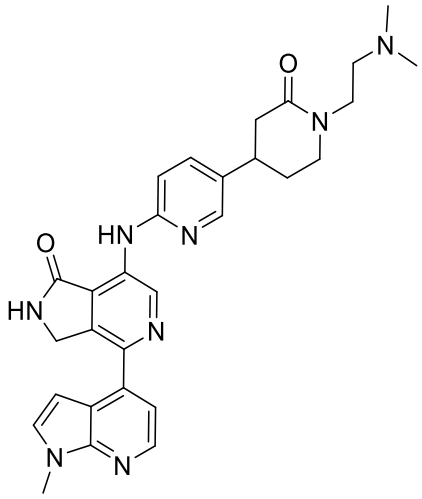
I-384



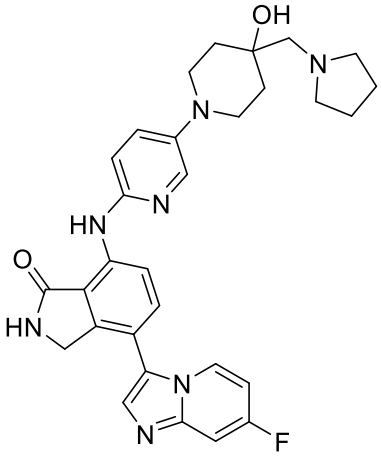
I-385



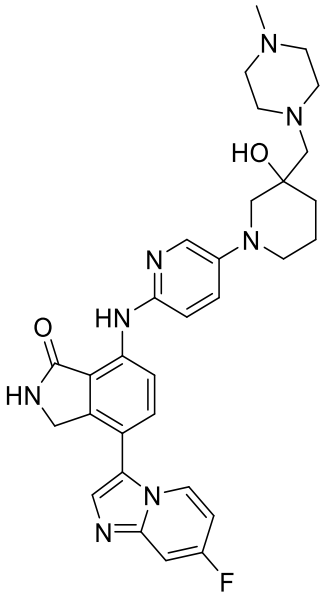
I-386



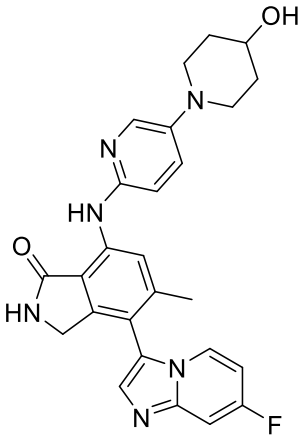
I-387



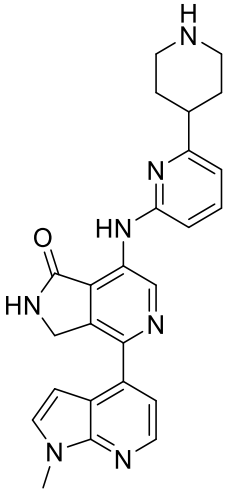
I-388



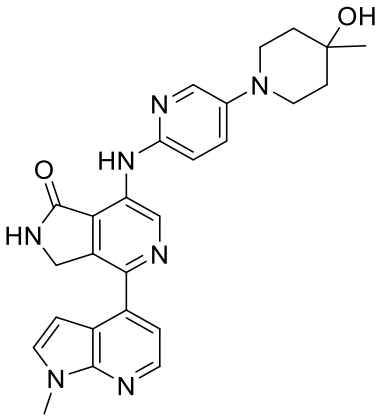
I-389



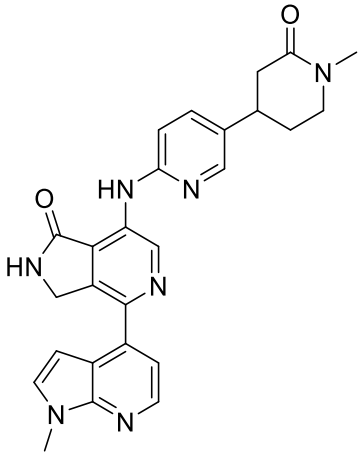
I-390



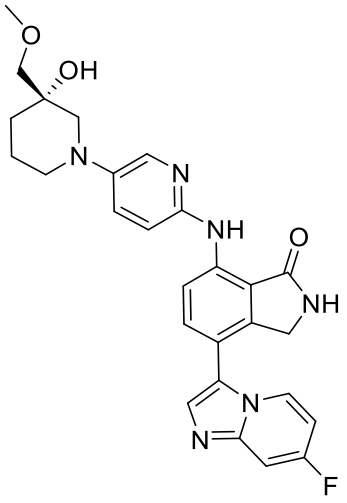
I-391



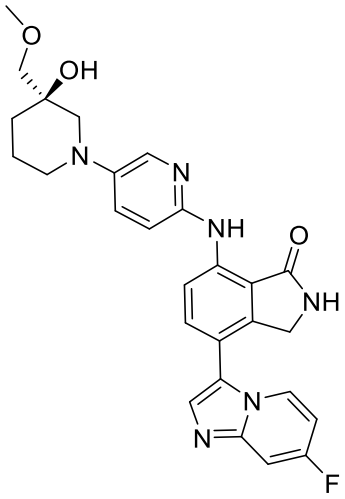
I-392



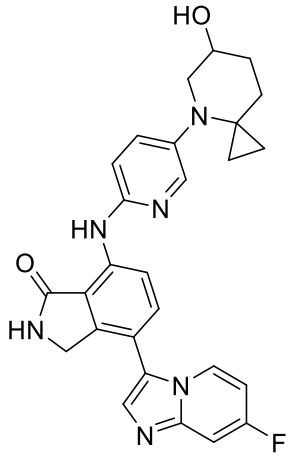
I-393



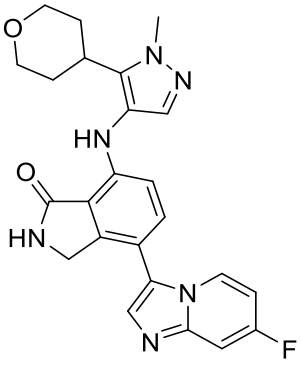
I-394



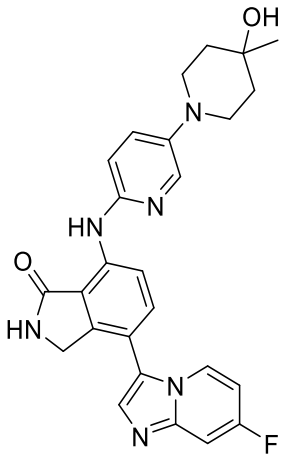
I-395



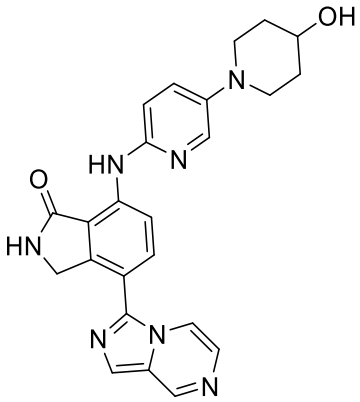
I-396



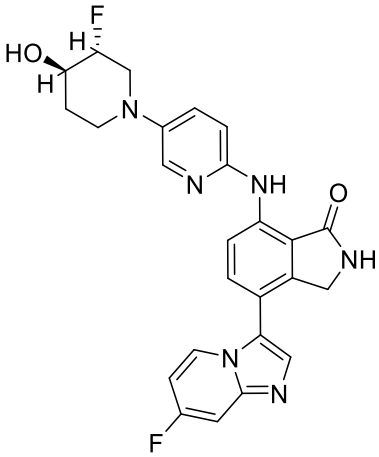
I-397



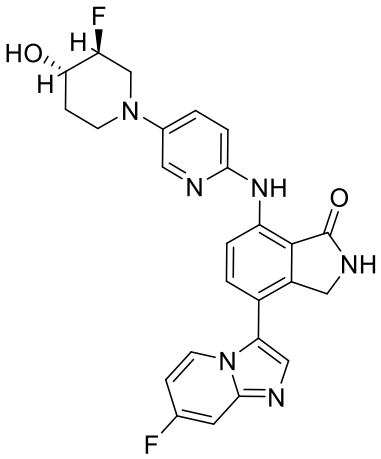
I-398



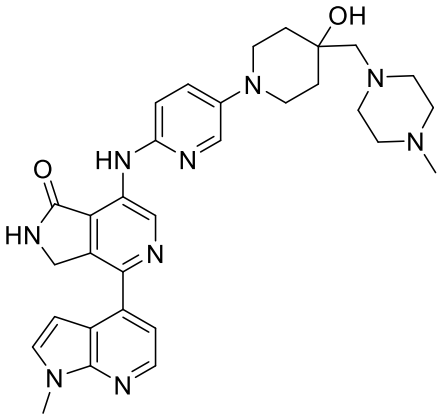
I-399



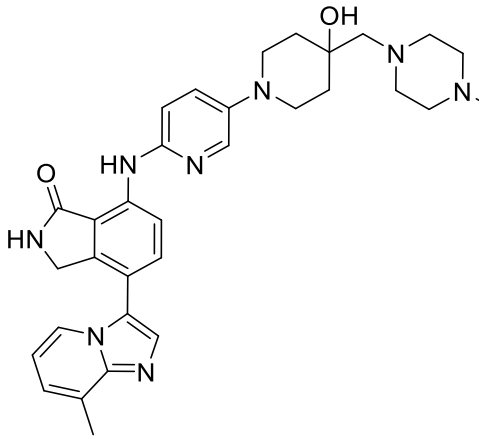
I-400



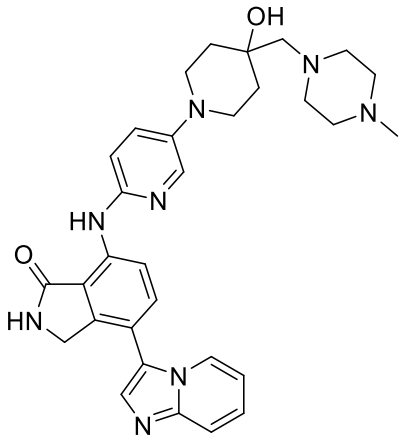
I-401



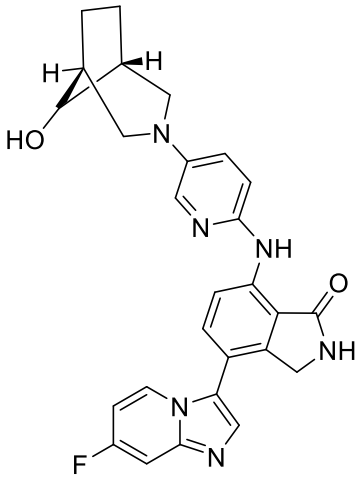
I-402



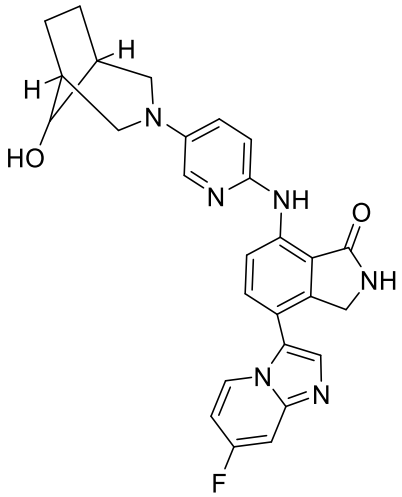
I-403



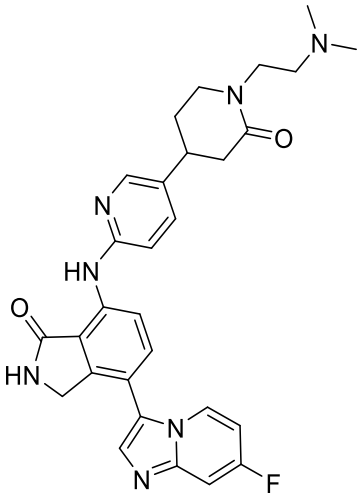
I-404



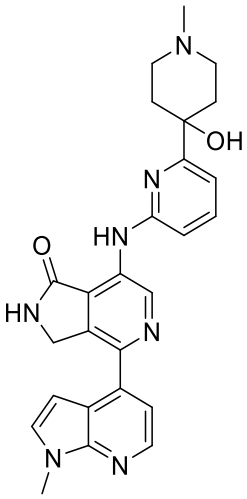
I-405



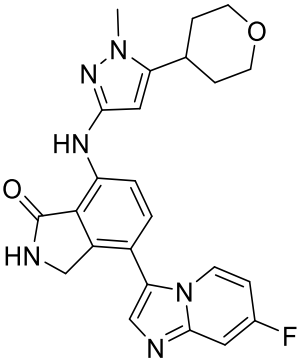
I-406



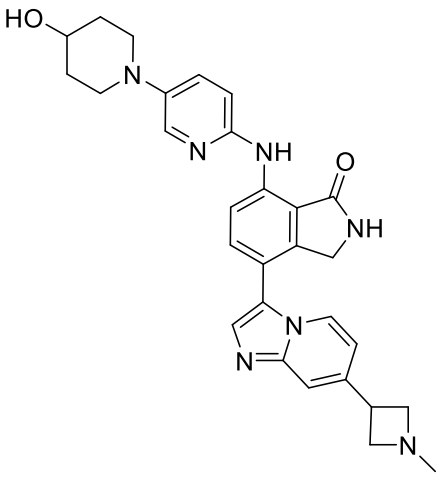
I-407



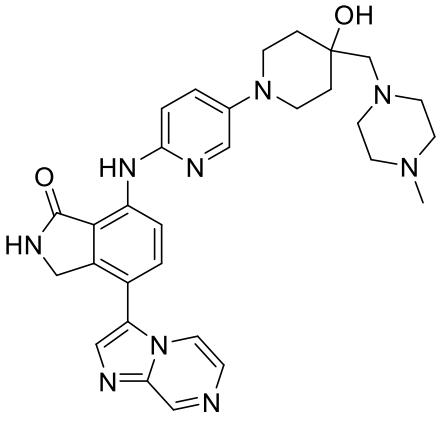
I-408



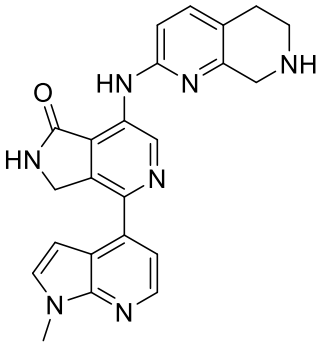
I-411



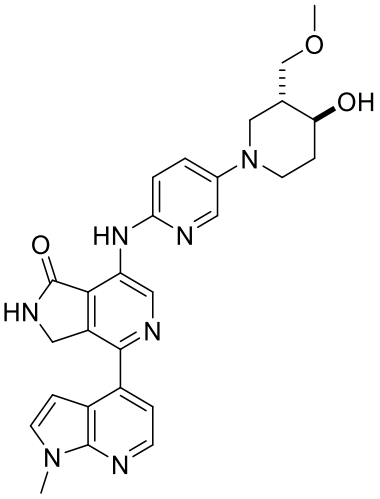
I-412



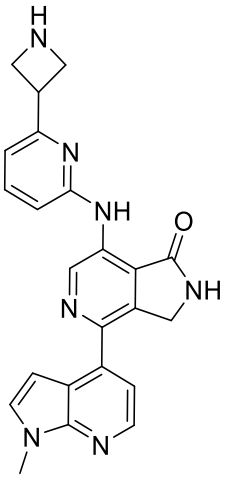
I-413



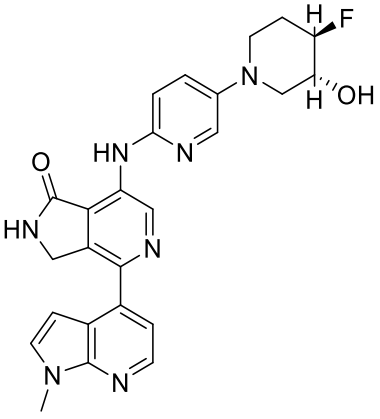
I-414



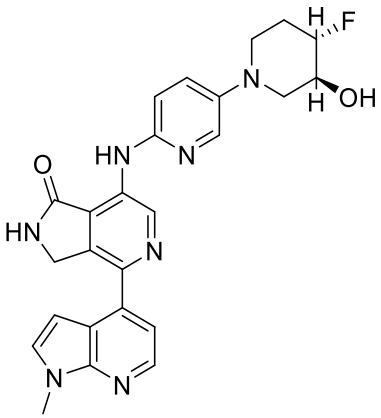
I-415



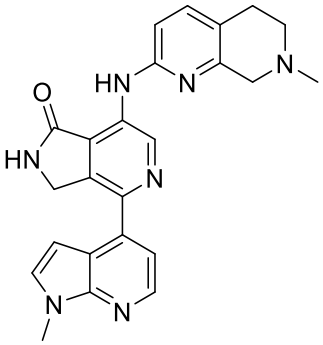
I-416



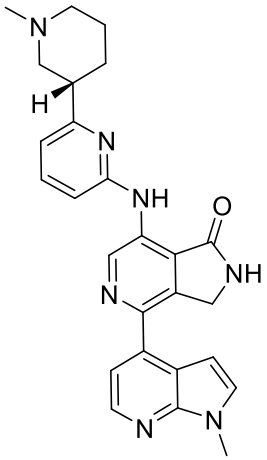
I-417



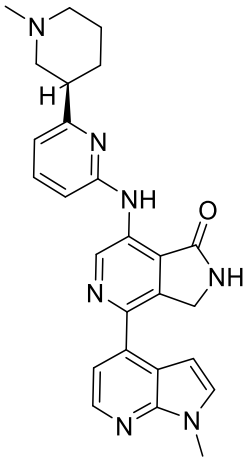
I-418



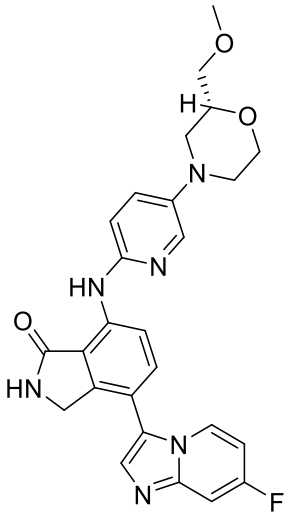
I-419



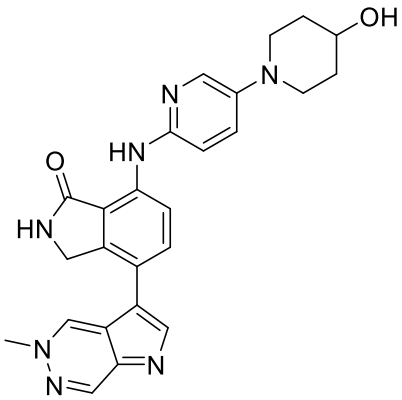
I-420



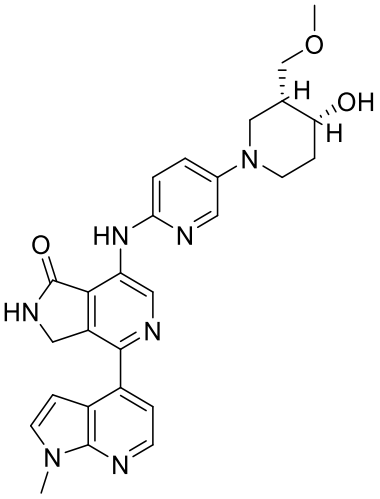
I-421



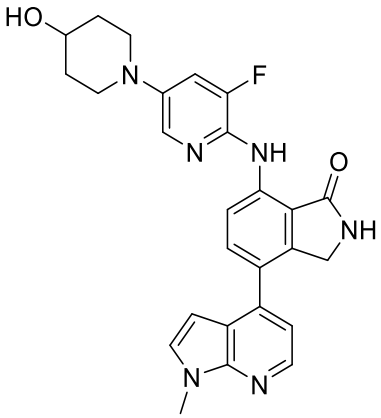
I-422



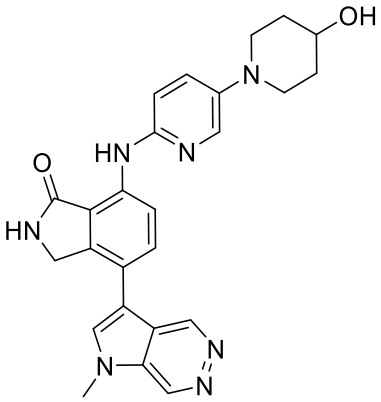
I-423



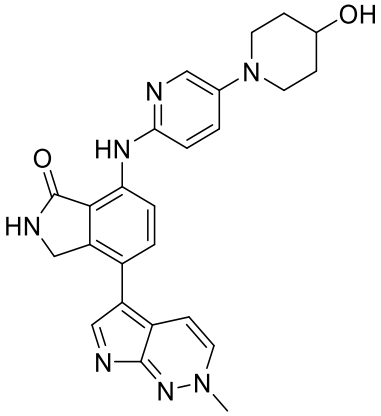
I-424



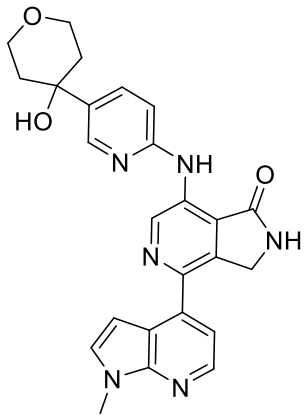
I-425



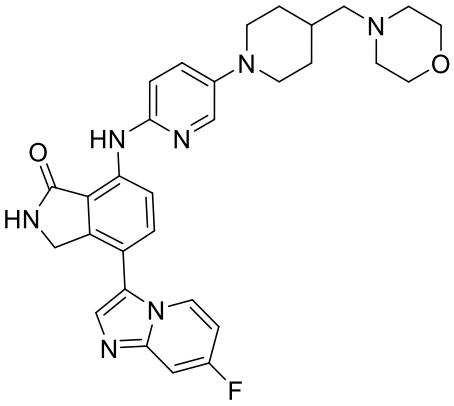
I-426



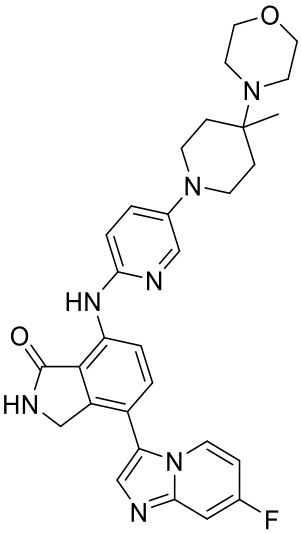
I-427



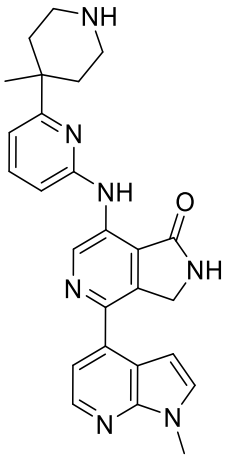
I-428



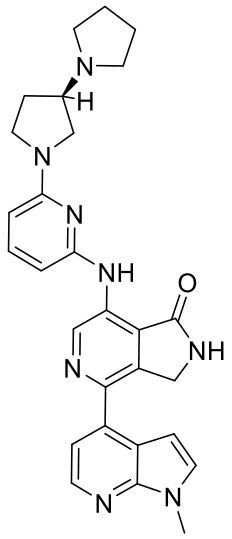
I-429



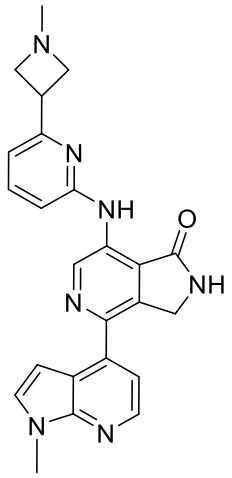
I-430



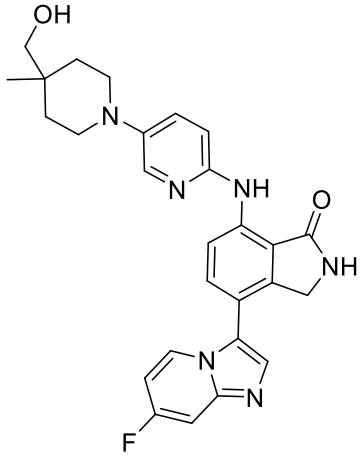
I-431



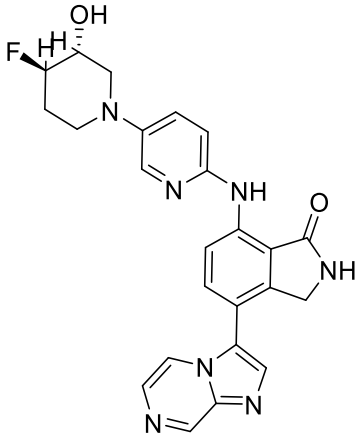
I-432



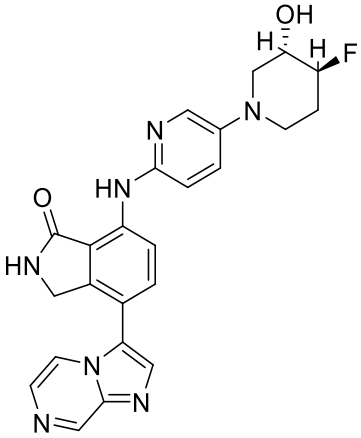
I-433



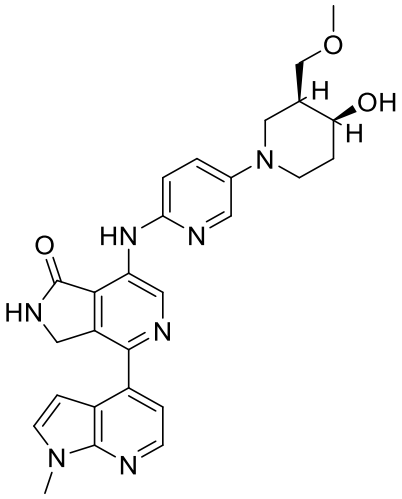
I-434



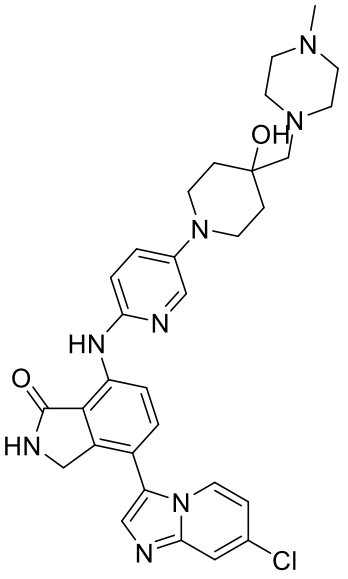
I-435



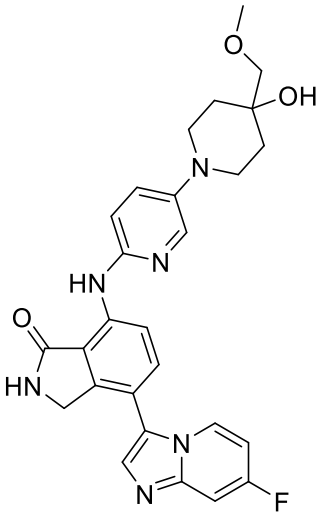
I-436



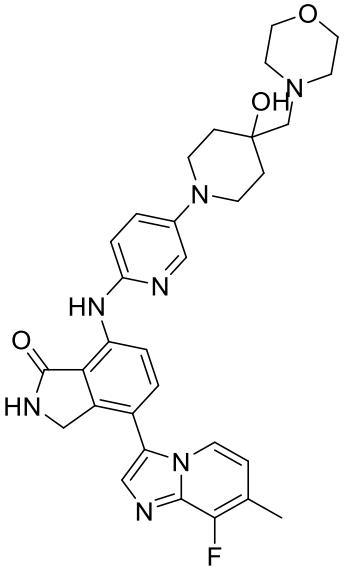
I-437



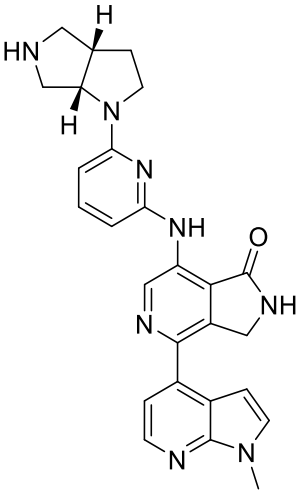
I-438



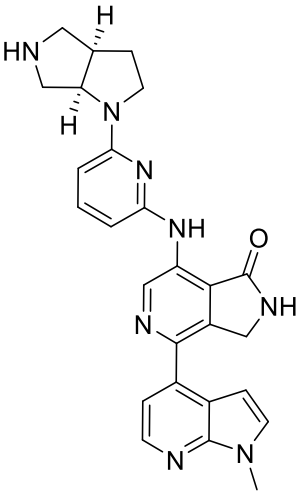
I-439



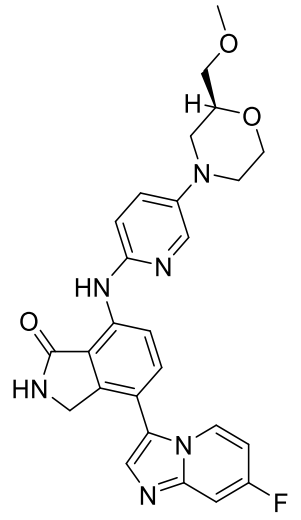
I-440



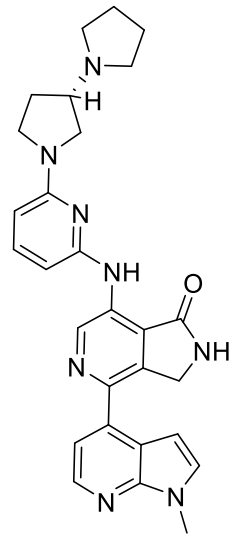
I-441



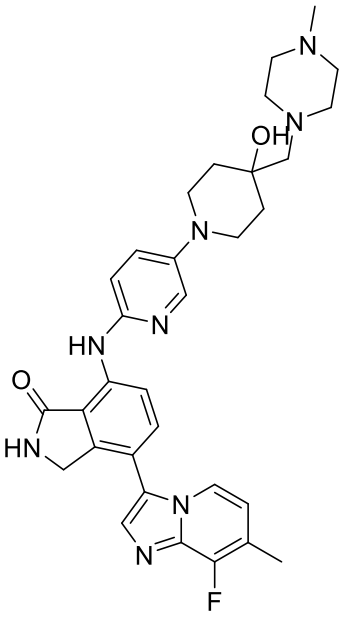
I-442



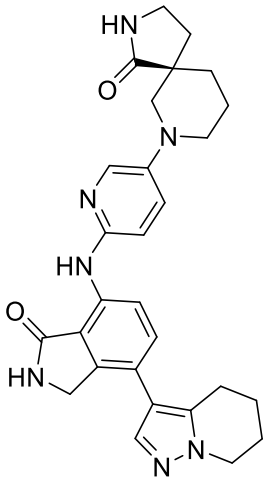
I-443



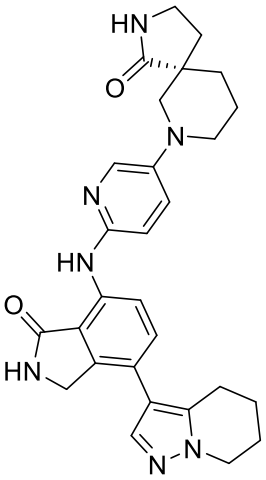
I-444



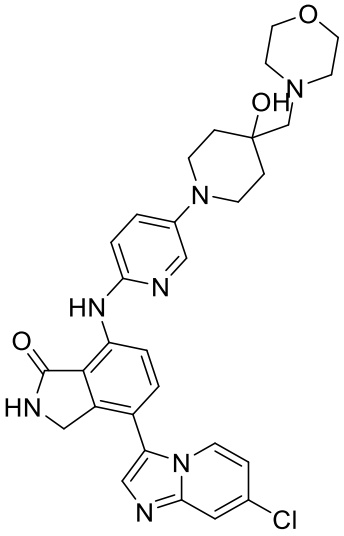
I-445



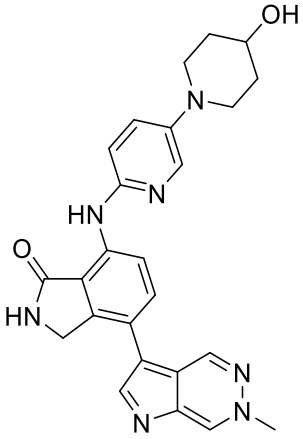
I-446



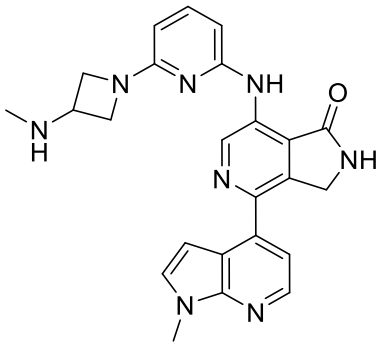
I-447



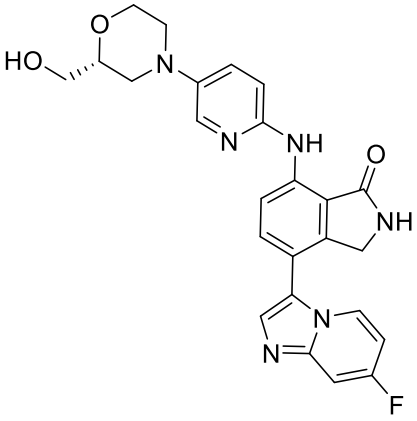
I-448



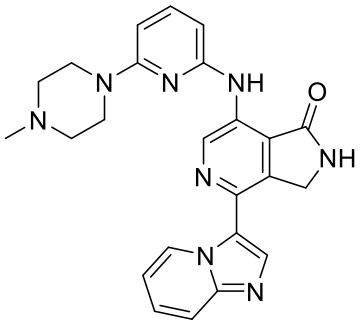
I-449



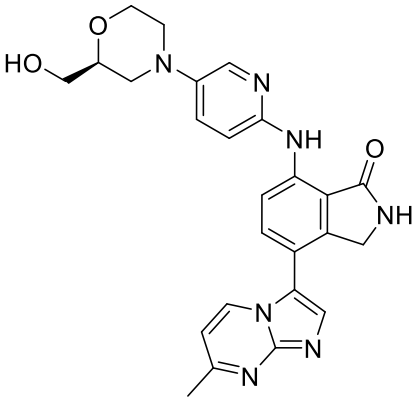
I-450



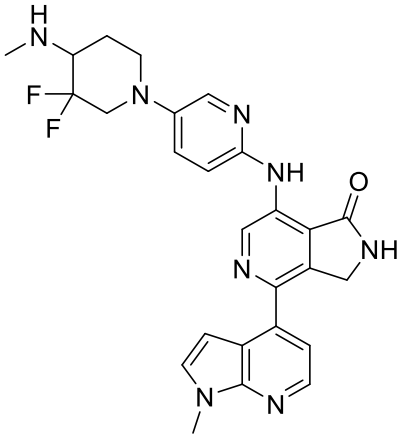
I-451



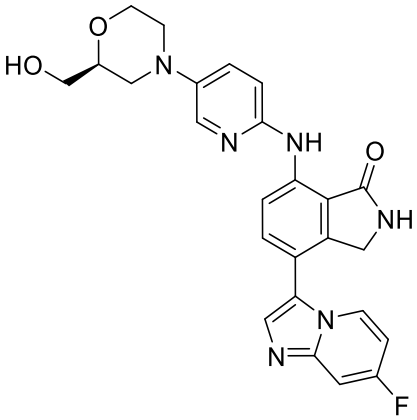
I-452



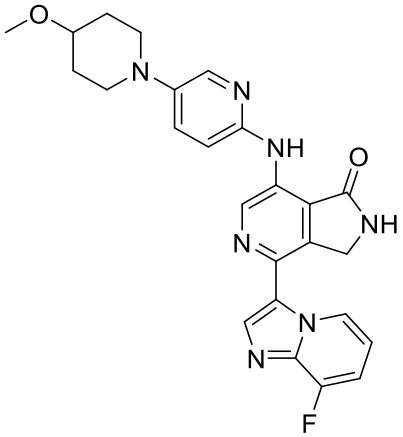
I-453



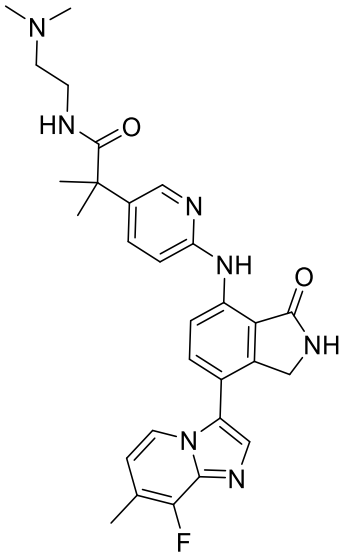
I-454



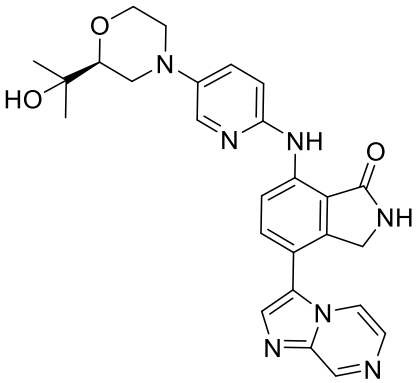
I-455



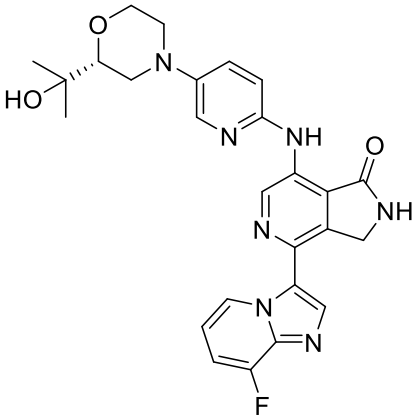
I-456



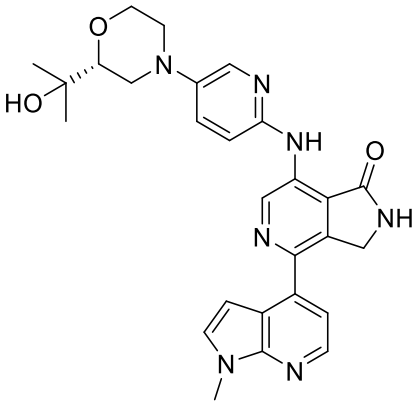
I-457



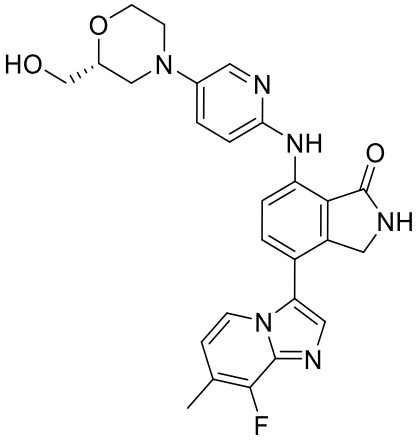
I-458



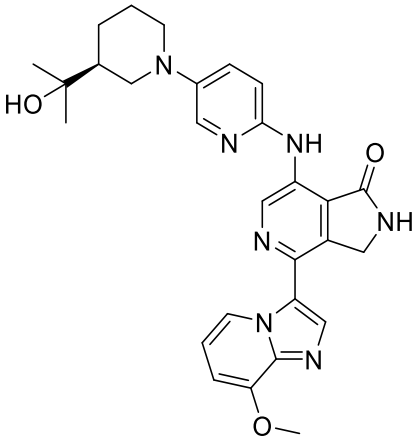
I-459



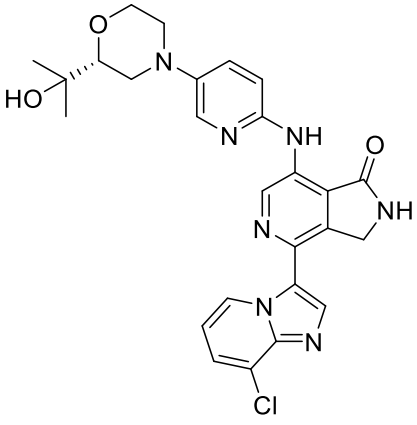
I-460



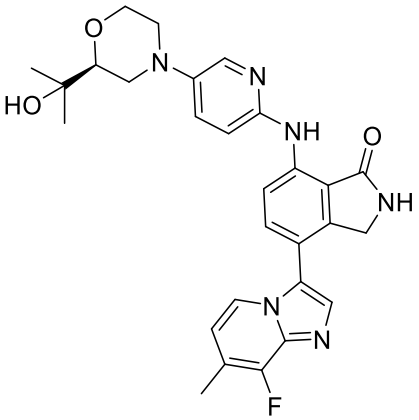
I-461



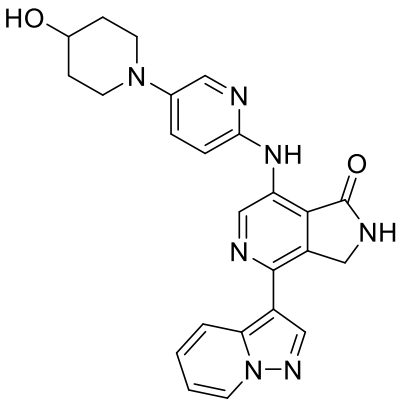
I-462



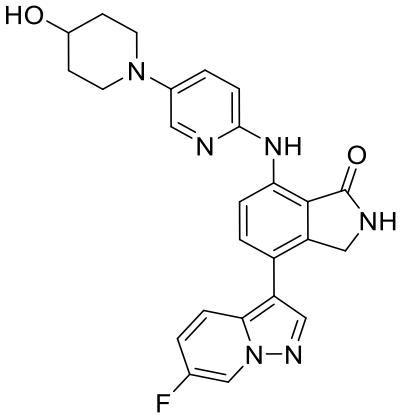
I-463



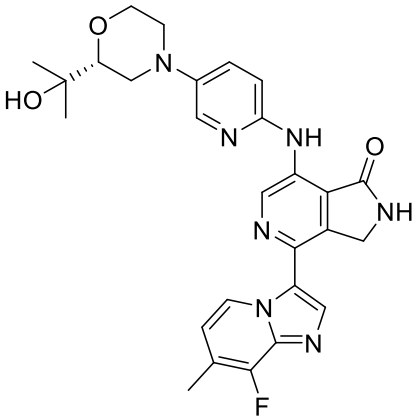
I-464



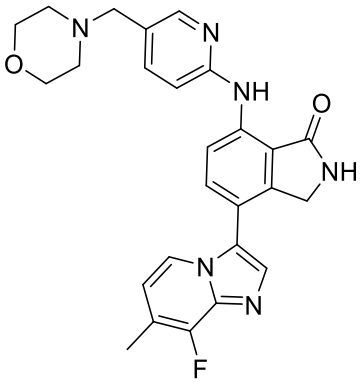
I-465



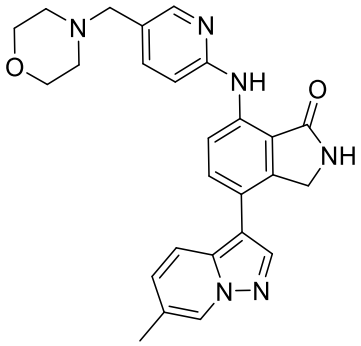
I-467



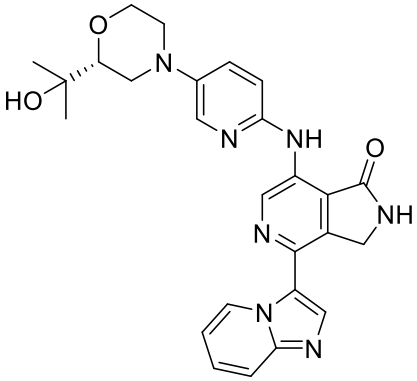
I-468



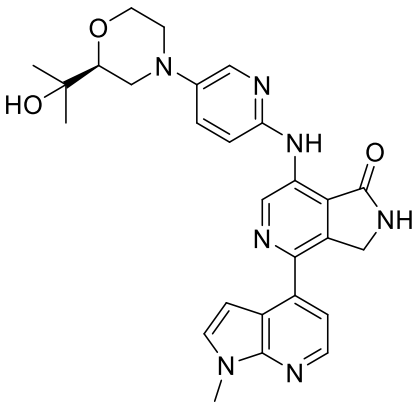
I-469



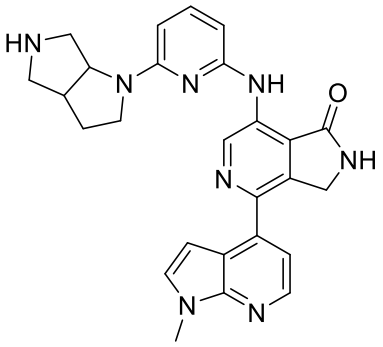
I-470



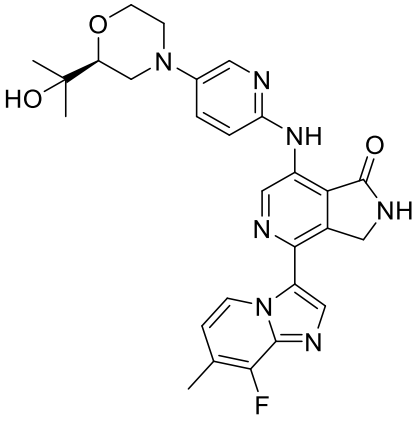
I-471



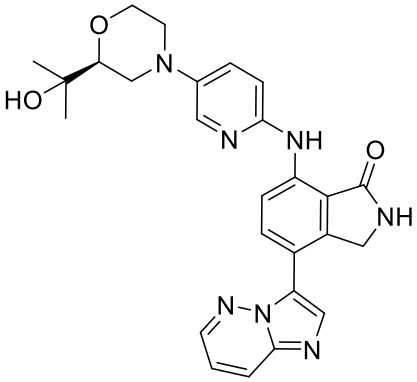
I-472



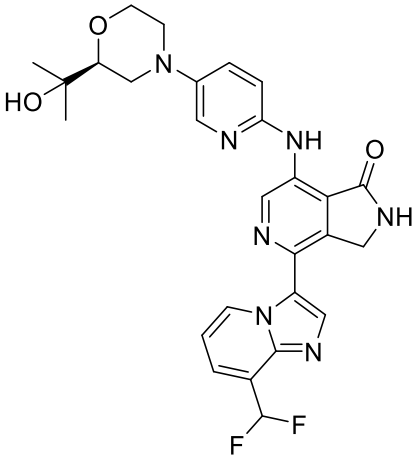
I-473



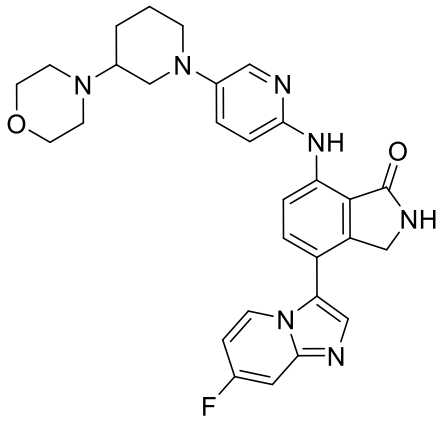
I-474



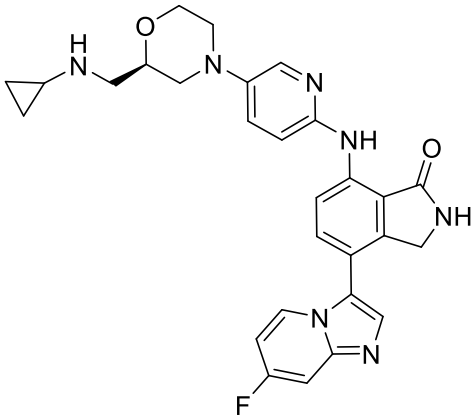
I-475



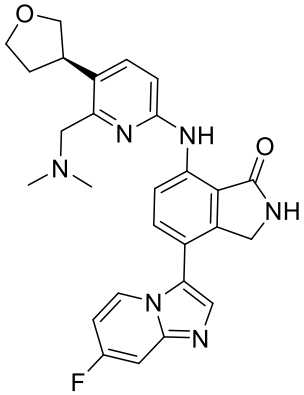
I-476



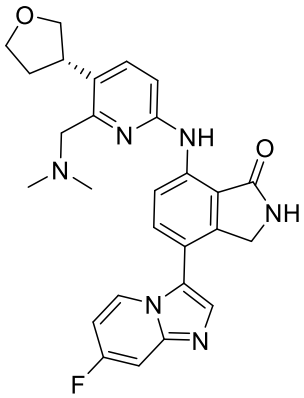
I-477



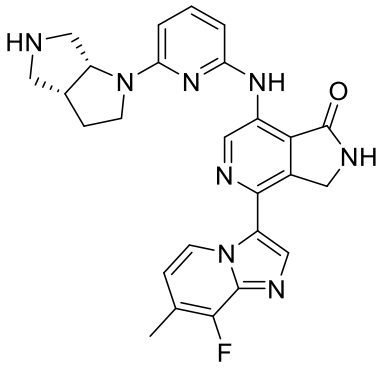
I-478



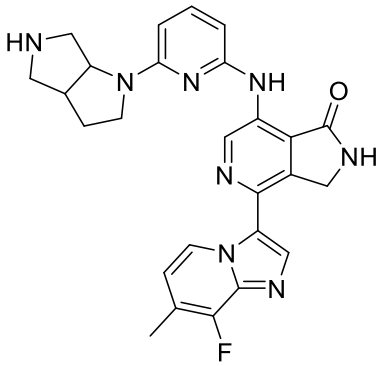
I-479



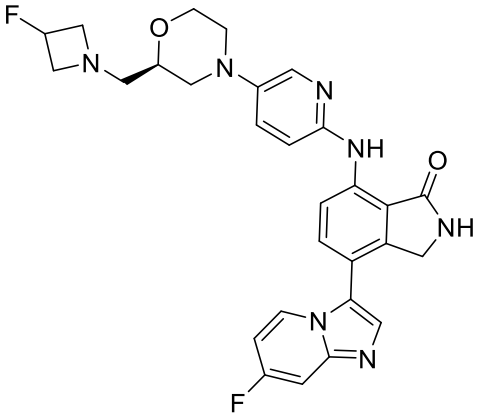
I-480



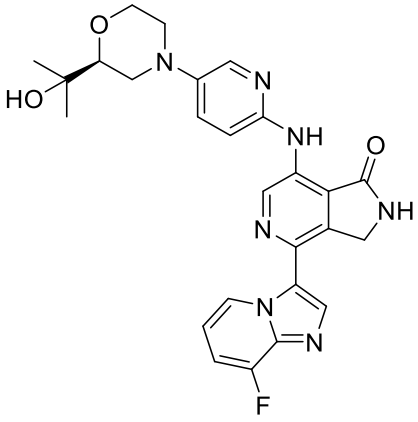
I-481



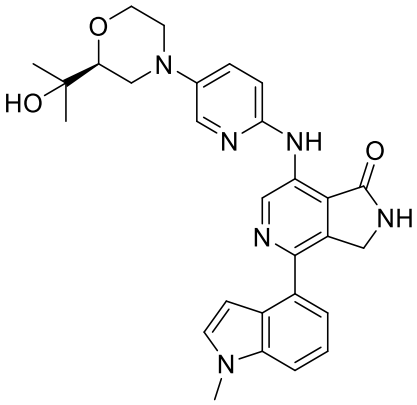
I-482



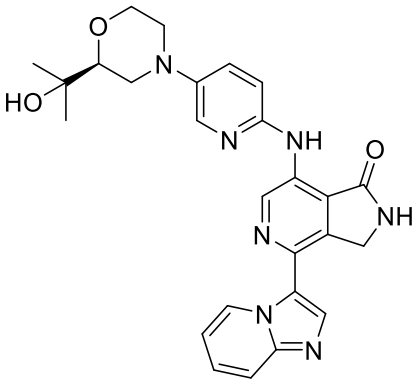
I-483



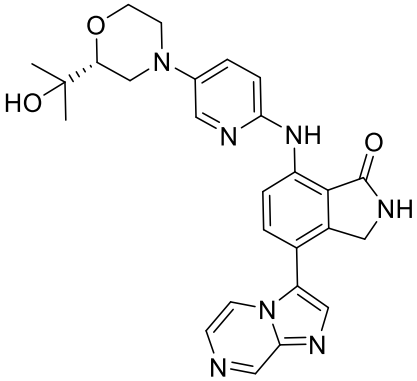
I-484



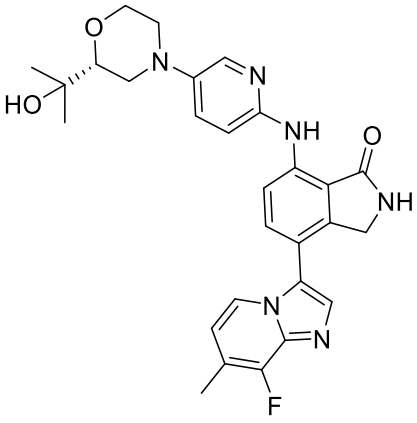
I-485



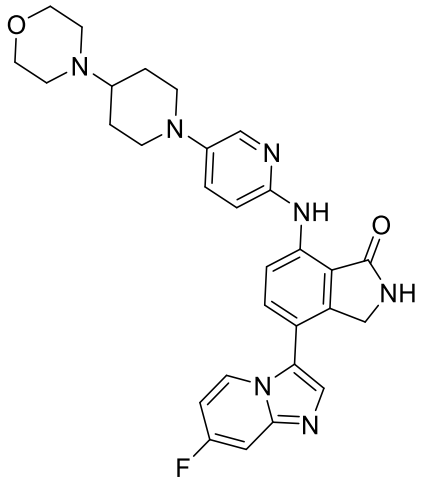
I-486



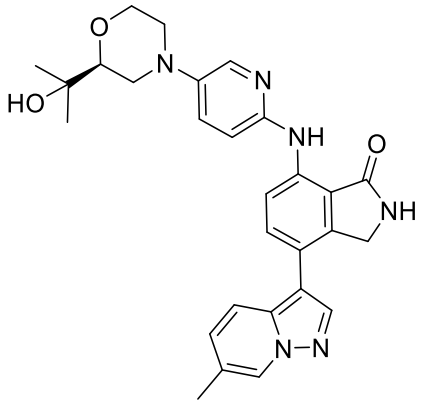
I-487



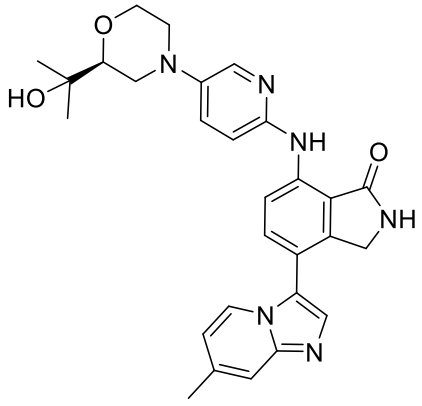
I-488



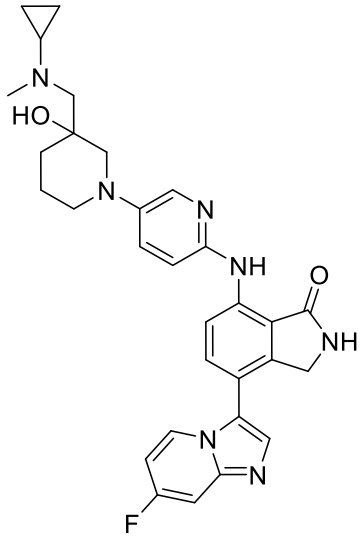
I-489



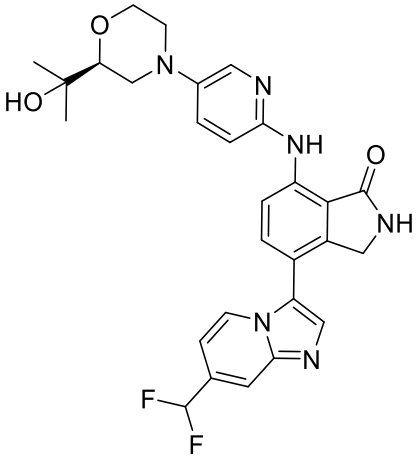
I-490



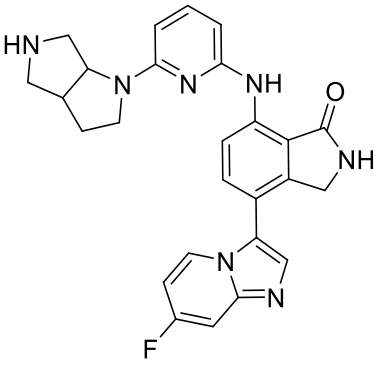
I-491



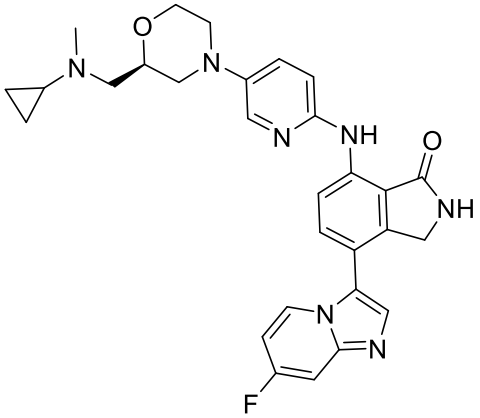
I-492



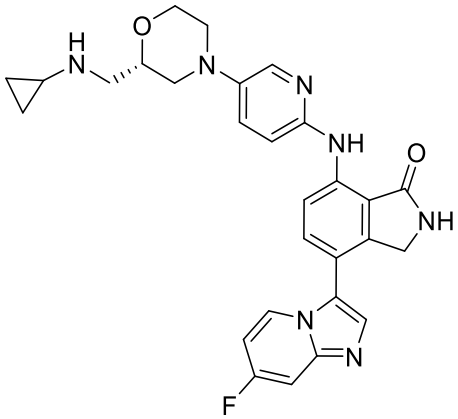
I-493



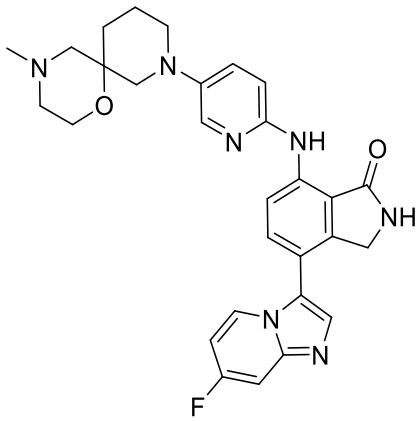
I-494



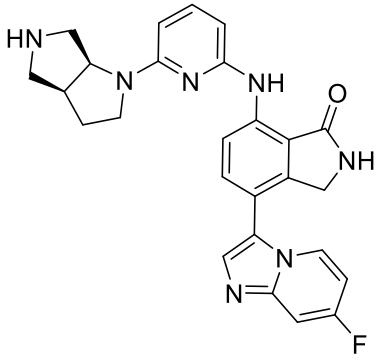
I-495



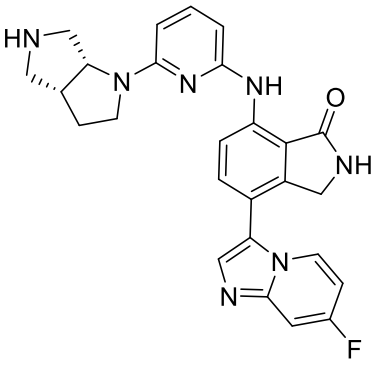
I-496



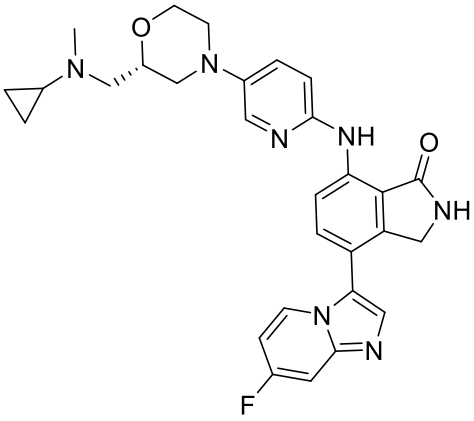
I-497



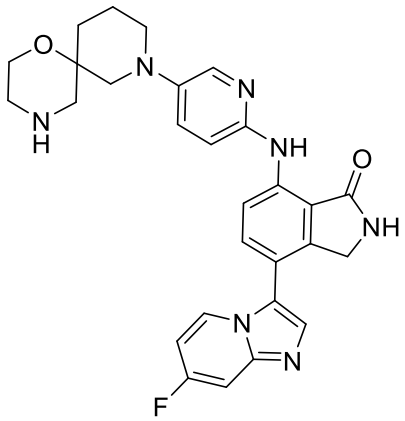
I-498



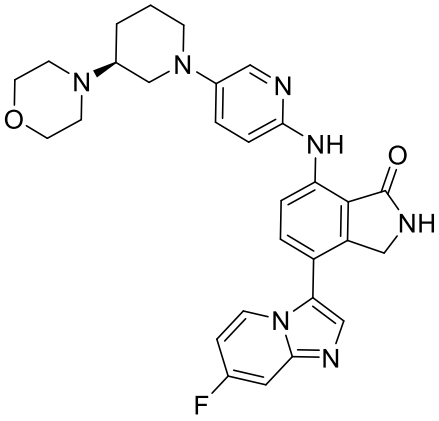
I-499



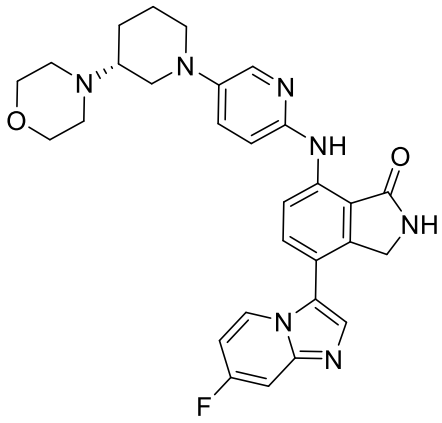
I-500



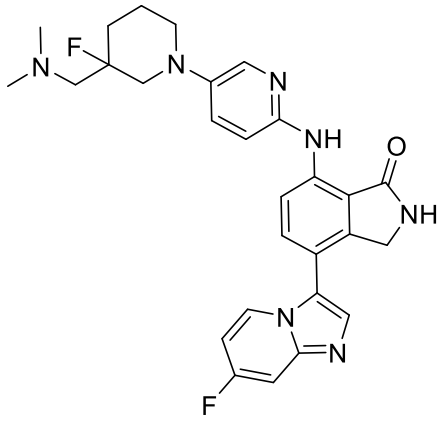
I-501



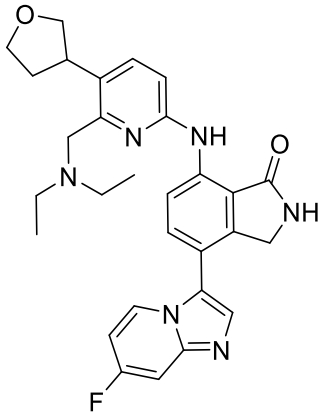
I-502



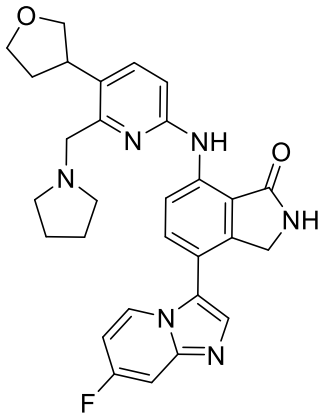
I-503



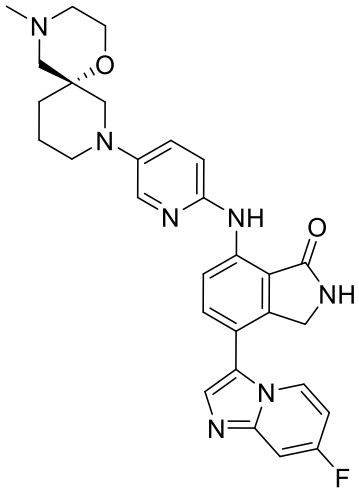
I-504



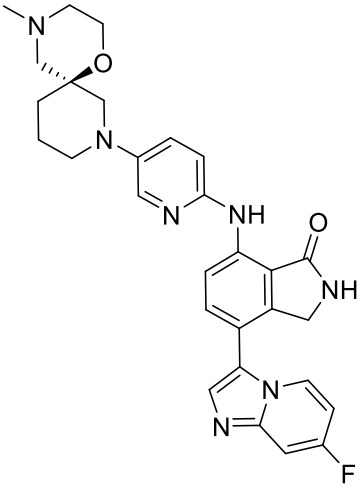
I-505



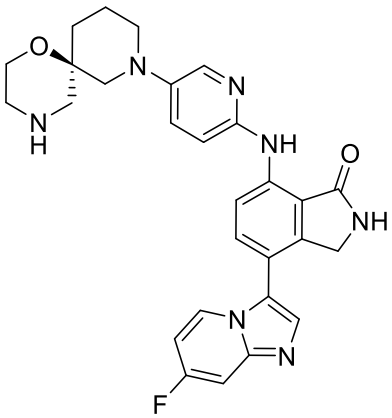
I-506a



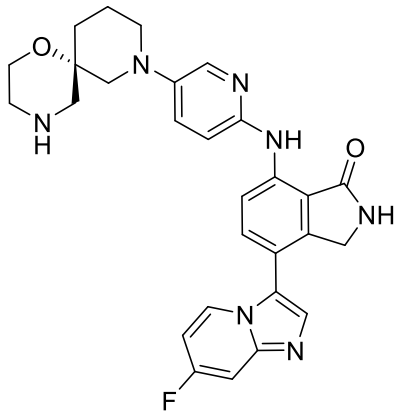
I-506



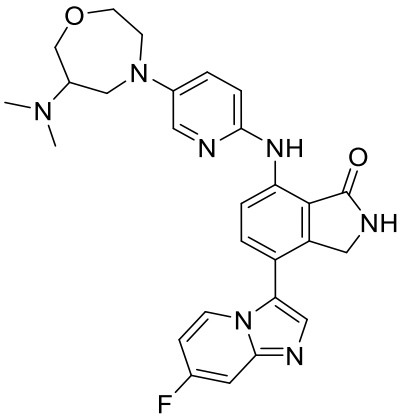
I-507



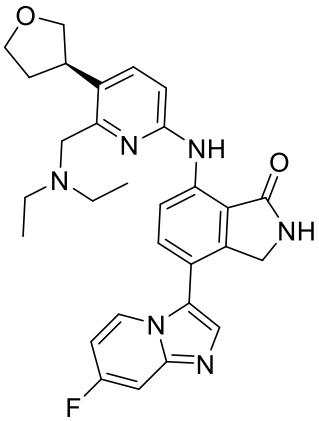
I-508



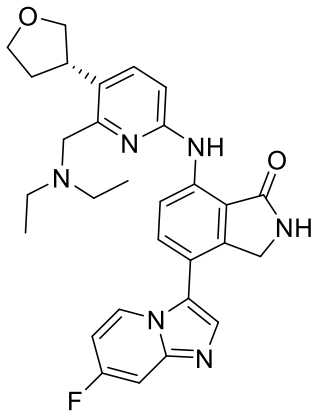
I-509



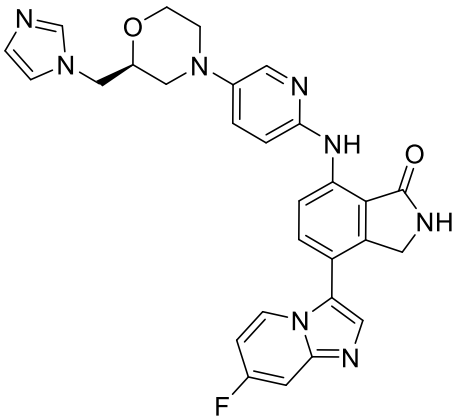
I-510



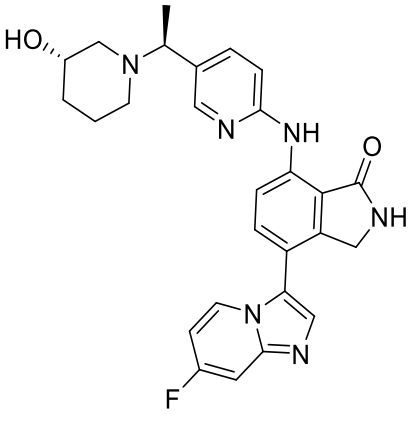
I-511



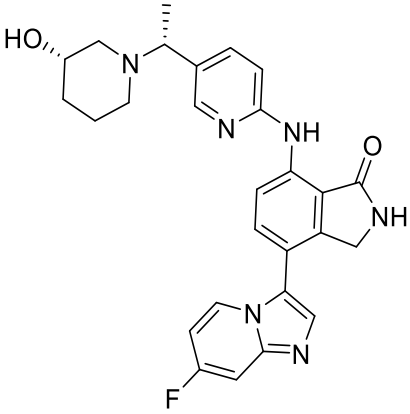
I-512



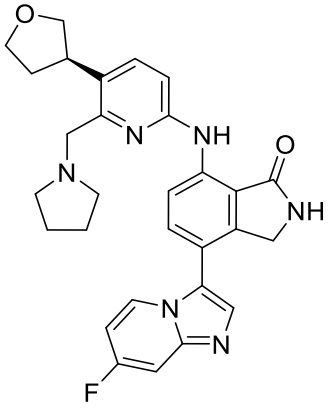
I-513



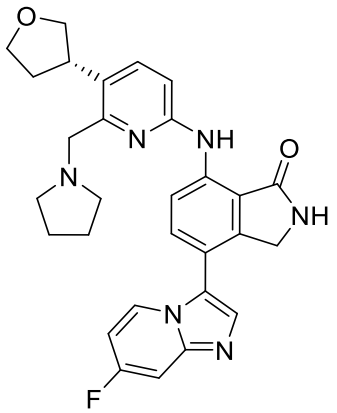
I-514



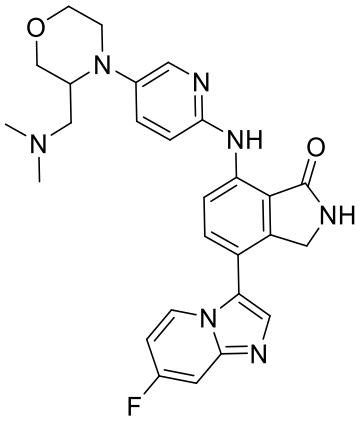
I-515



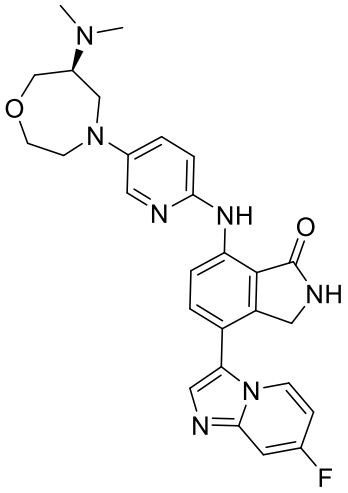
I-516



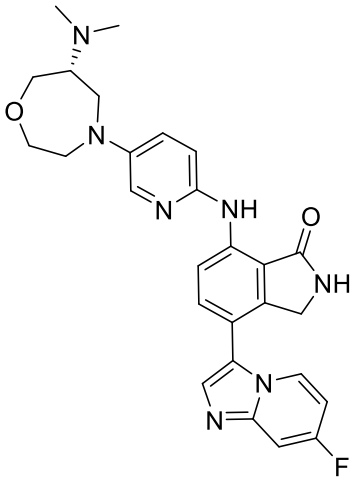
I-517



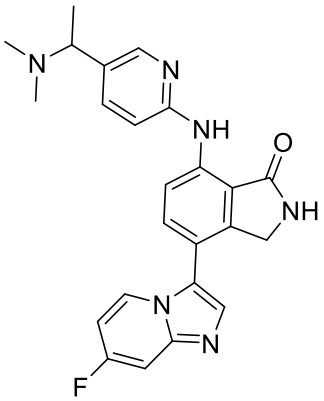
I-518



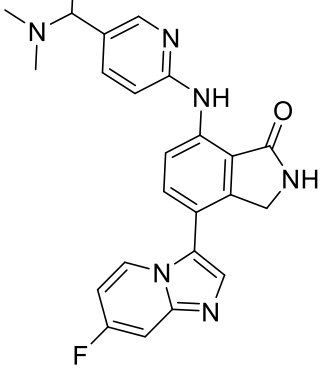
I-519



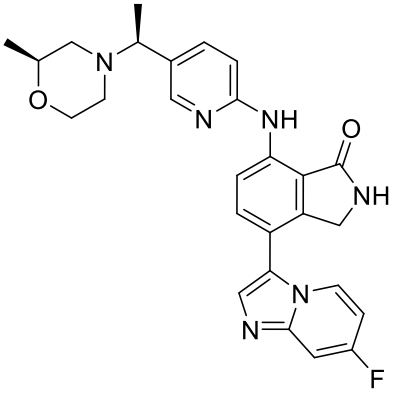
I-520



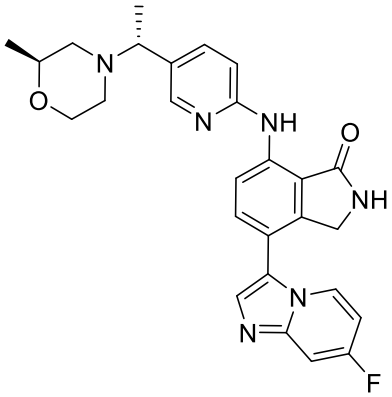
I-521



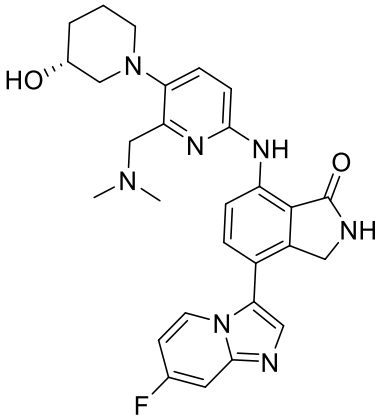
I-522



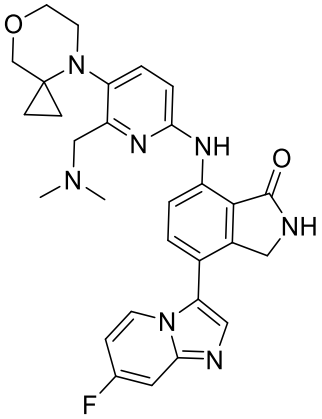
I-523



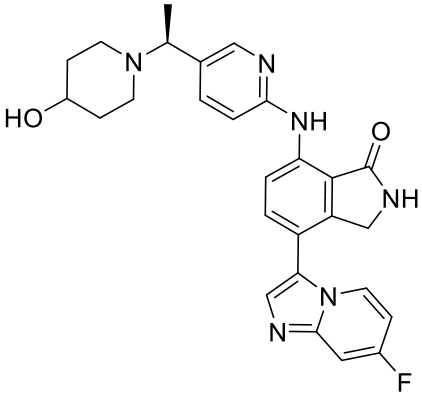
I-524



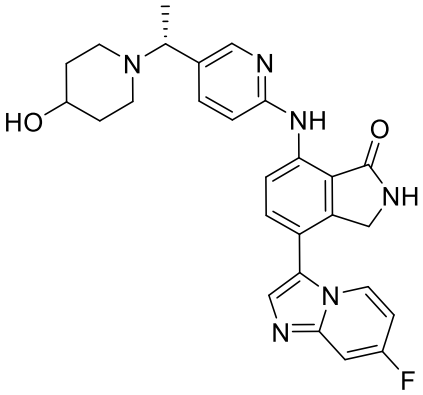
I-525



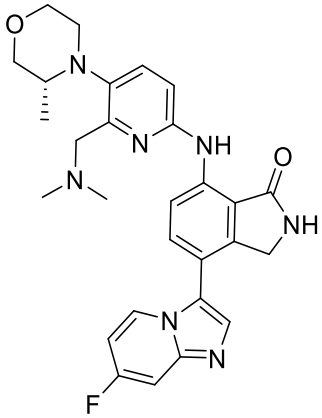
I-526



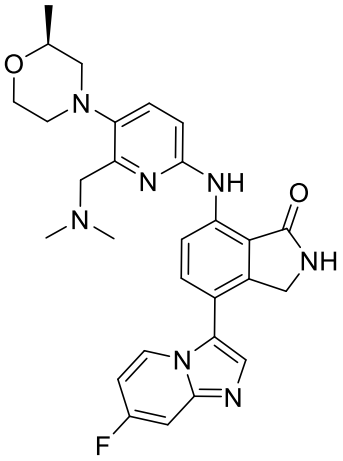
I-527



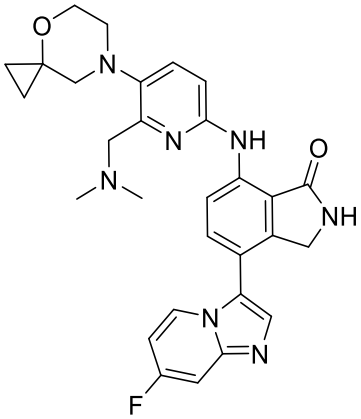
I-528



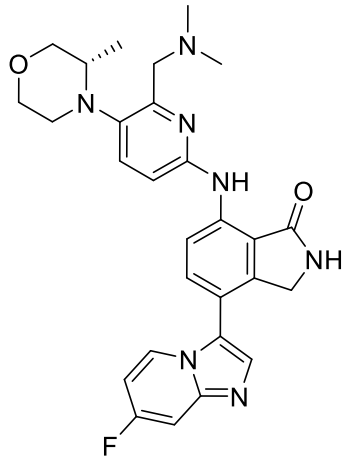
I-529



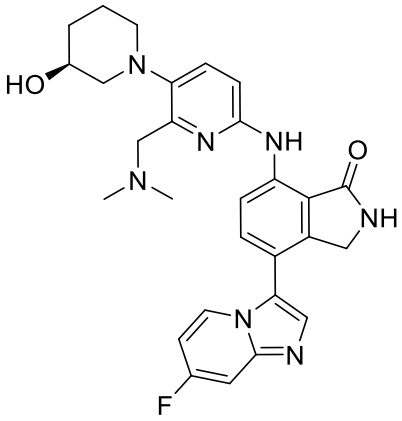
I-530



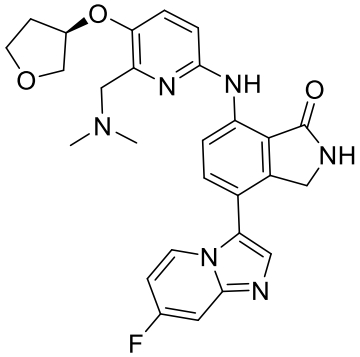
I-531



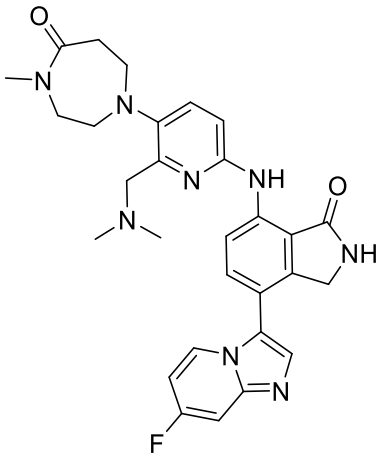
I-532



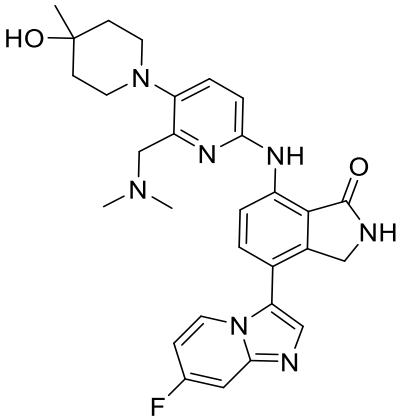
I-533



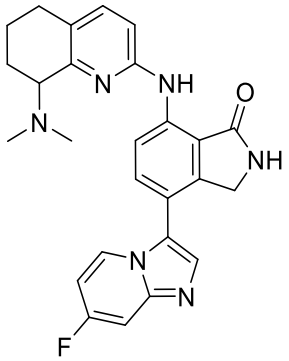
I-534



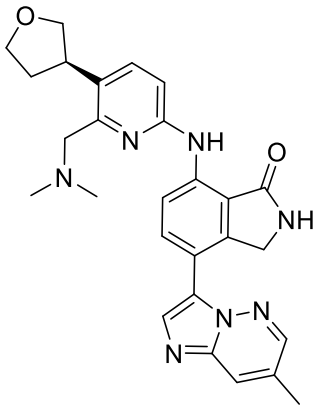
I-535



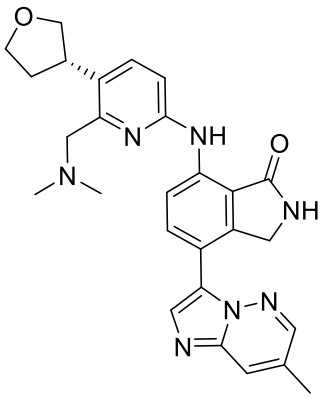
I-536



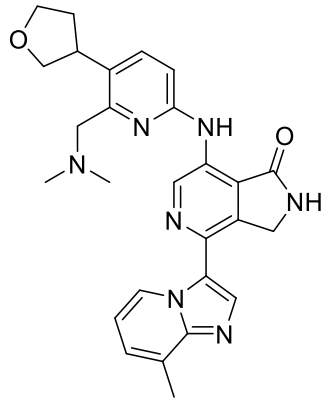
I-537



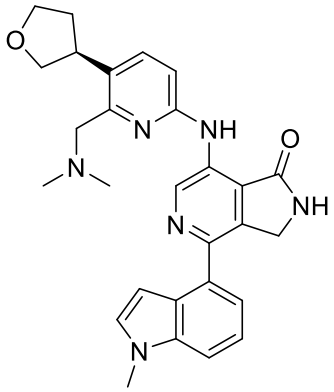
I-538



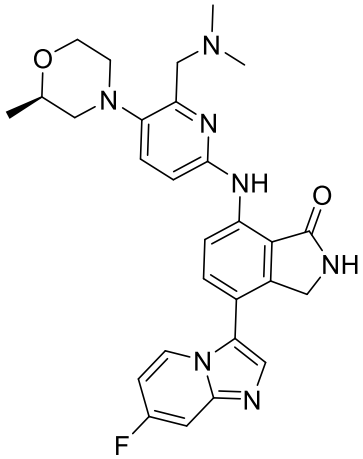
I-539



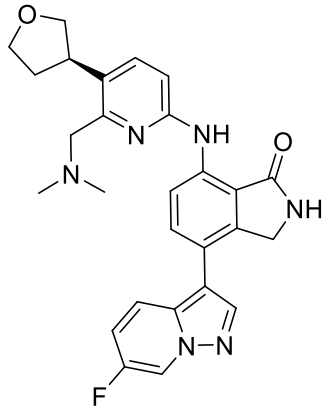
I-540



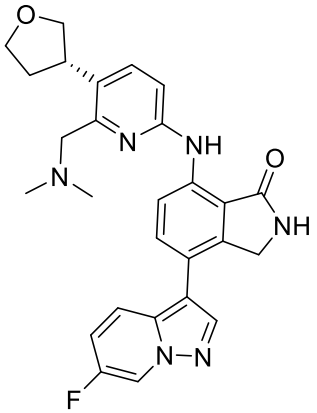
I-541



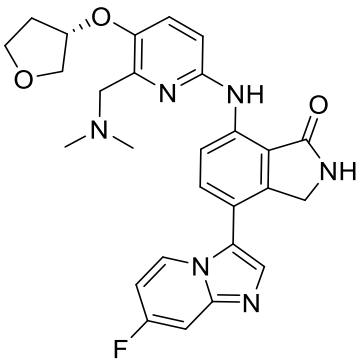
I-542



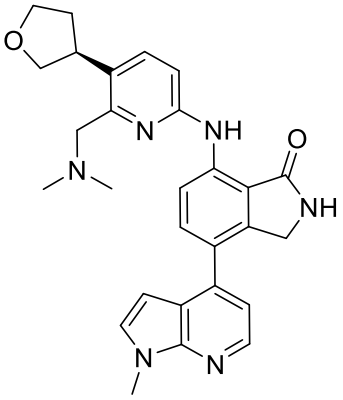
I-543



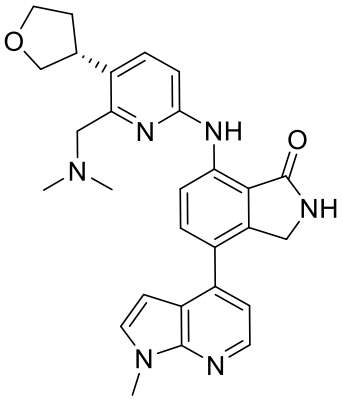
I-544



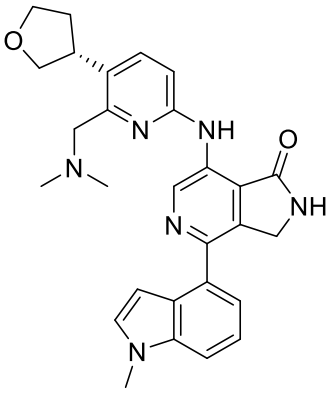
I-545



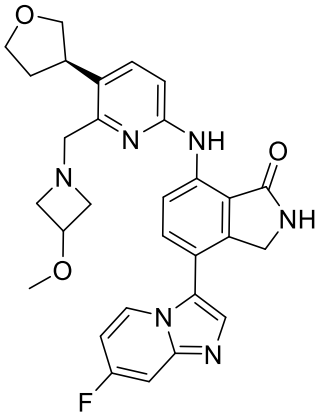
I-546



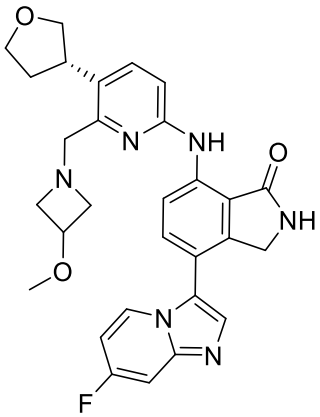
I-547



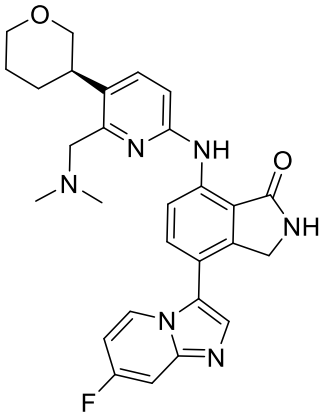
I-548



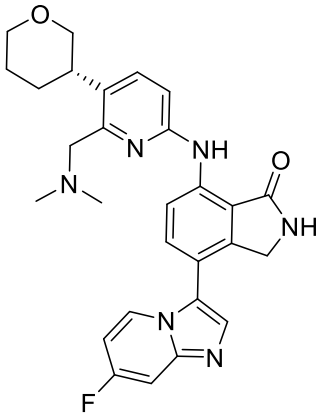
I-549



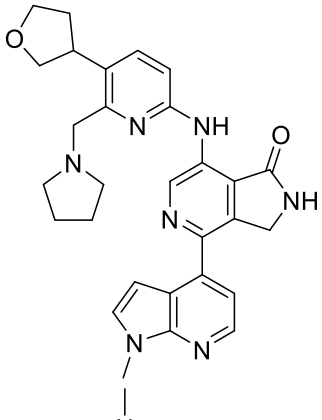
I-550



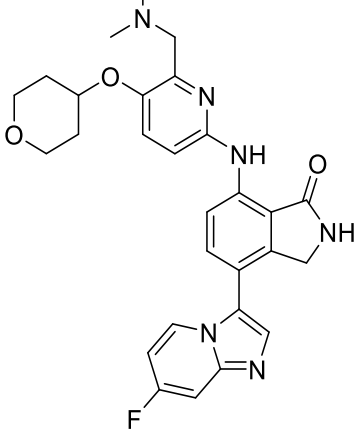
I-551



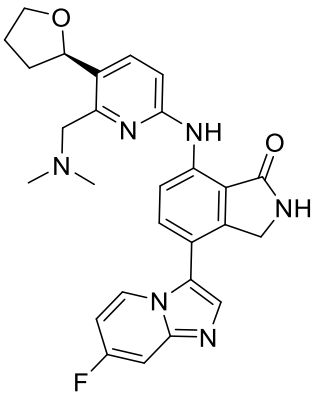
I-552



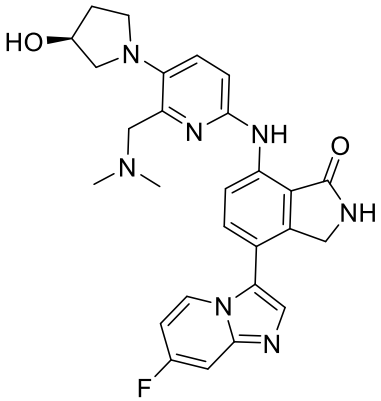
I-553



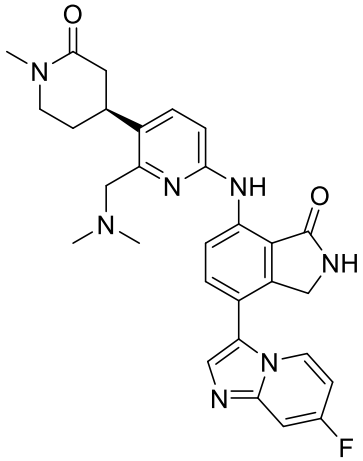
I-554



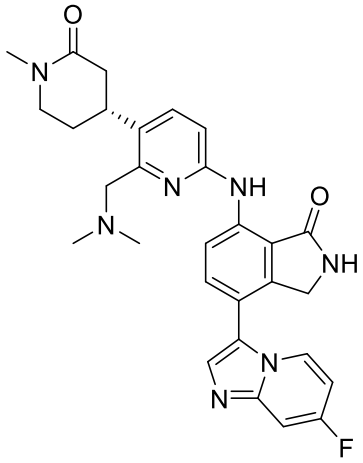
I-555



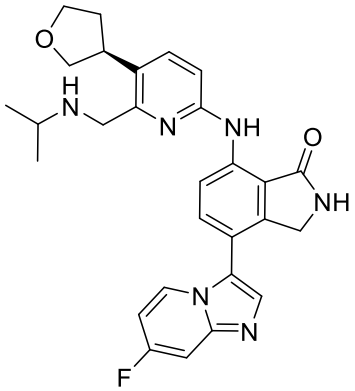
I-556



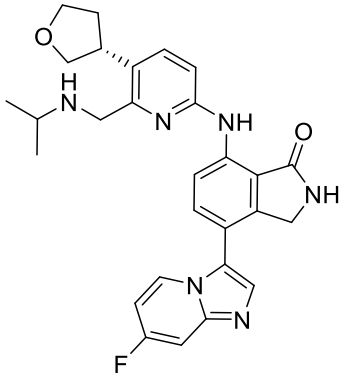
I-557



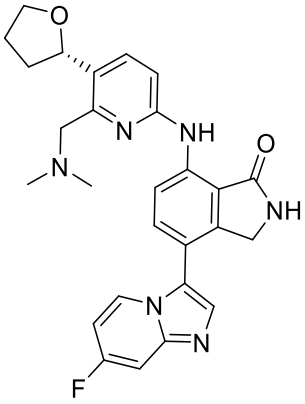
I-558



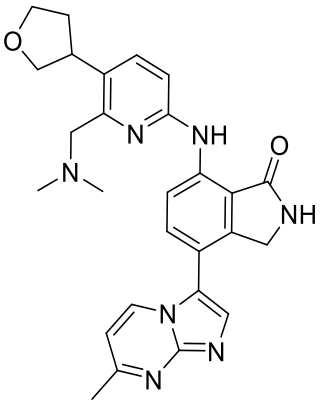
I-559



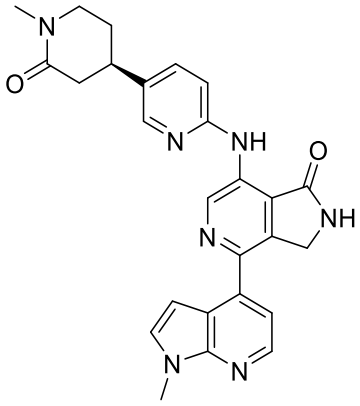
I-560



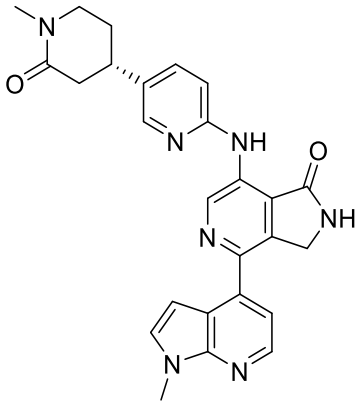
I-561



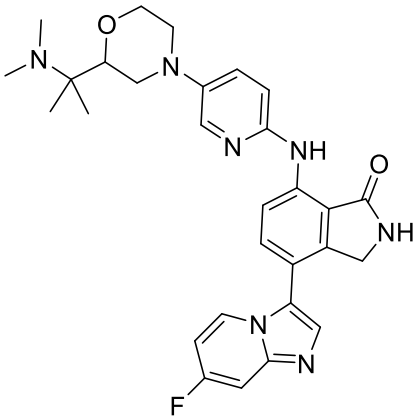
I-562



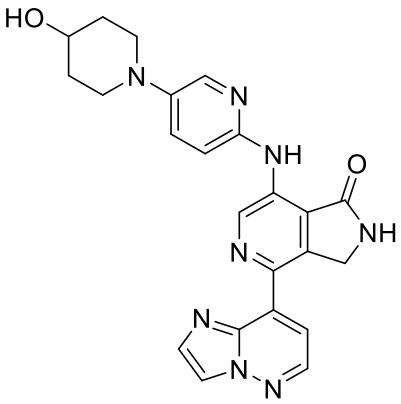
I-563



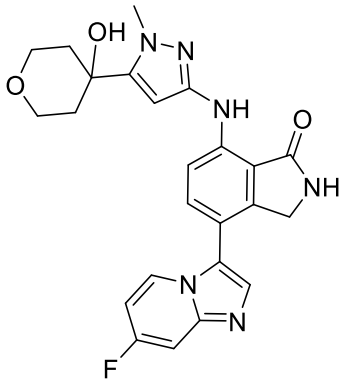
I-564



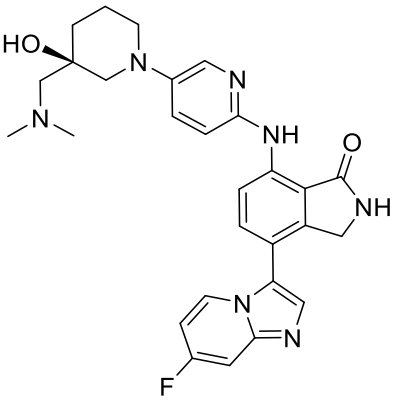
I-565



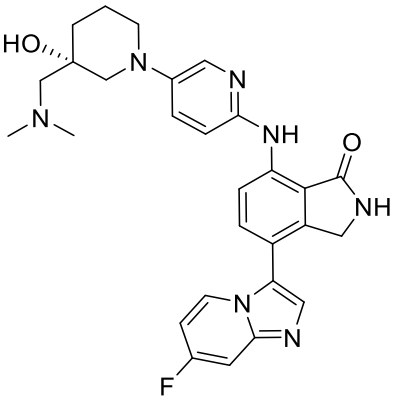
I-566



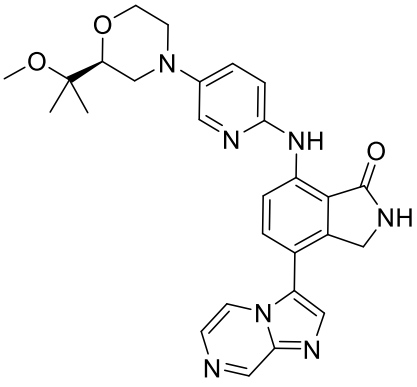
I-567



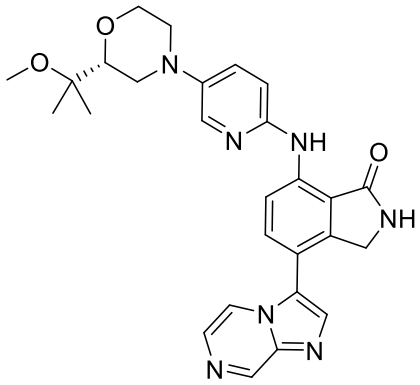
I-568



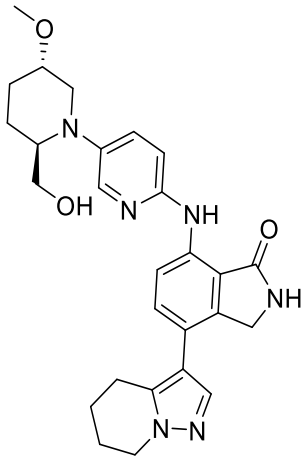
I-569



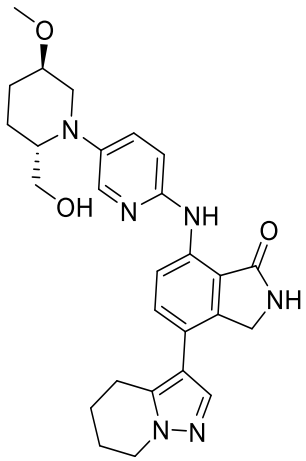
I-570



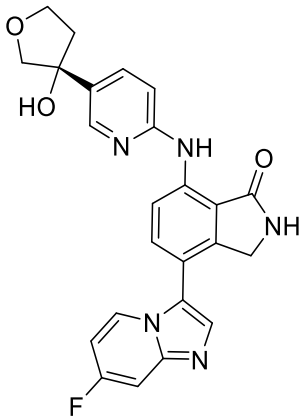
I-571



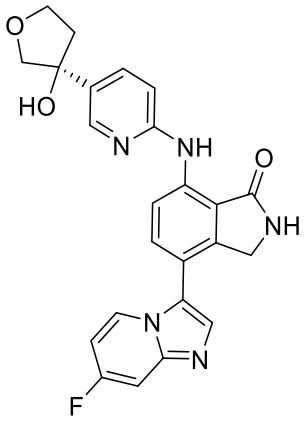
I-572



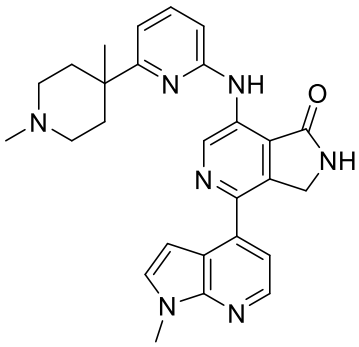
I-573



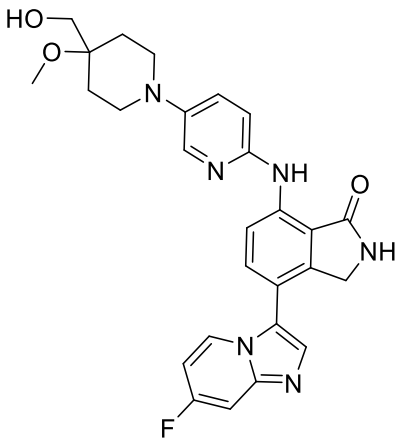
I-574



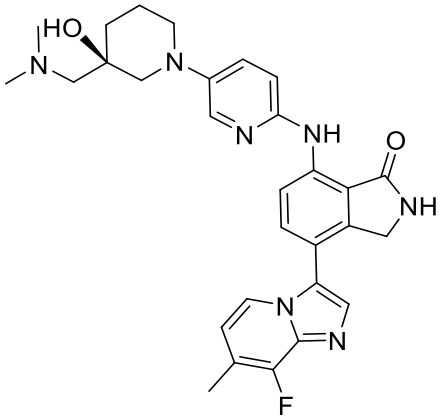
I-575



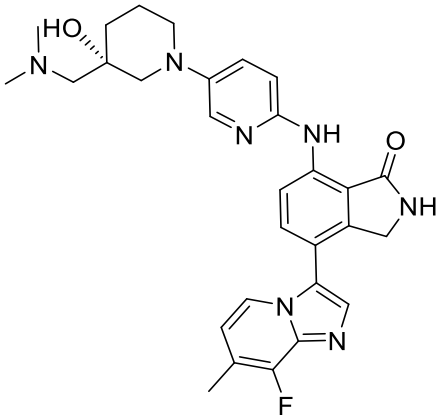
I-576



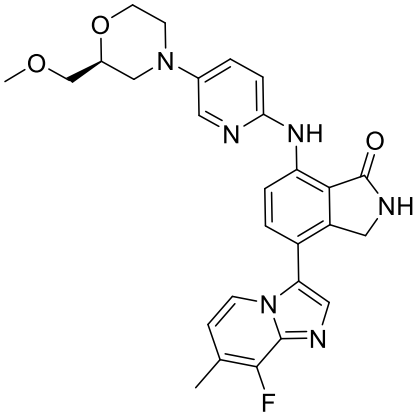
I-577



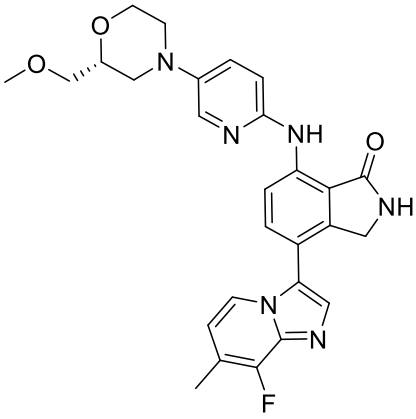
I-578



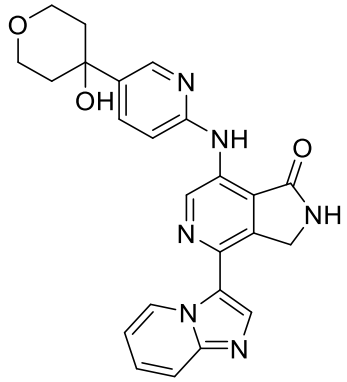
I-579



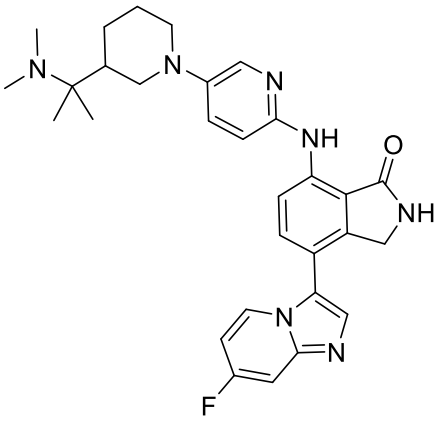
I-580



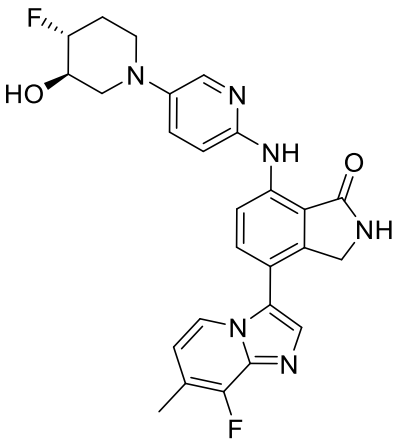
I-581



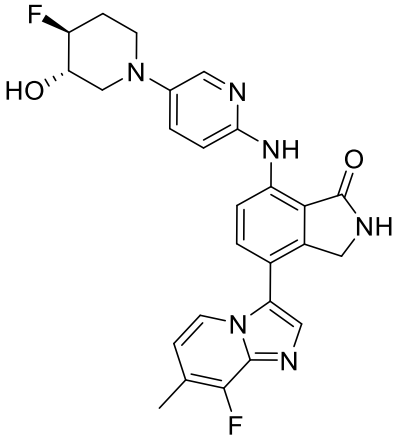
I-582



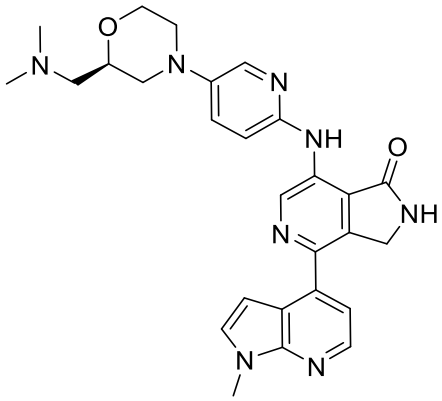
I-583



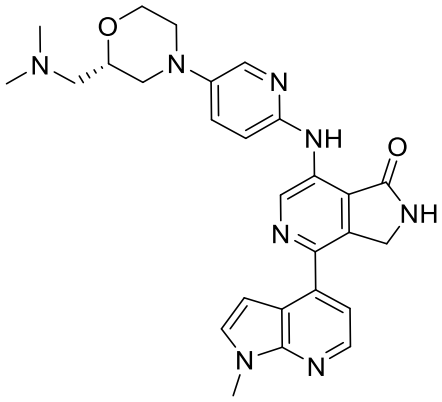
I-584



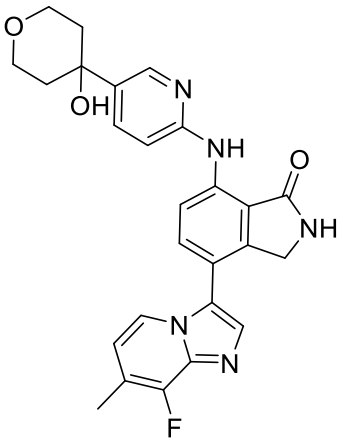
I-585



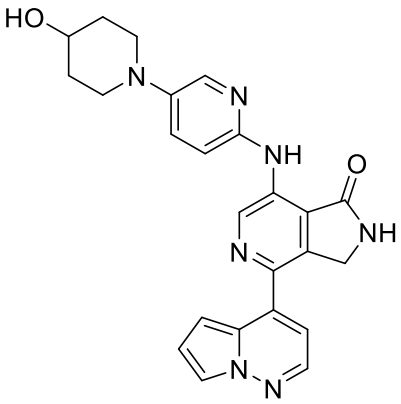
I-586



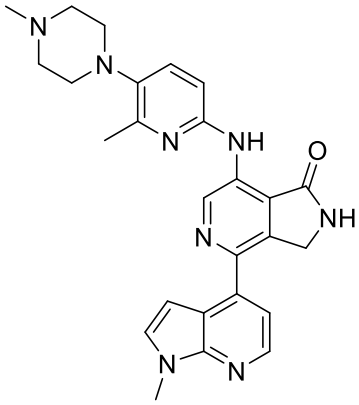
I-587



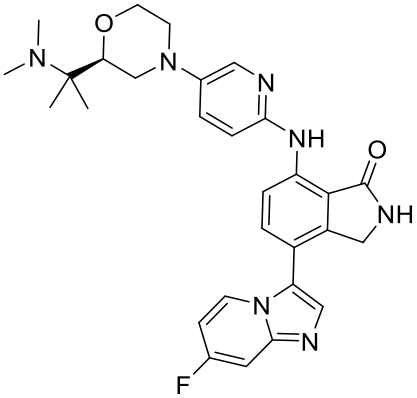
I-588



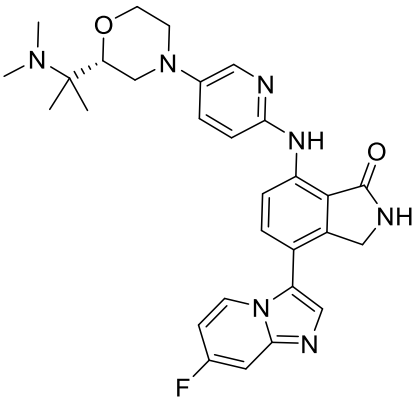
I-589



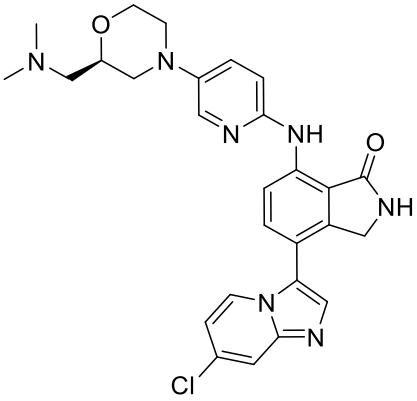
I-590



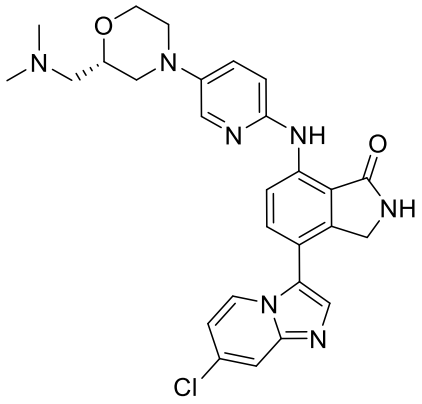
I-591



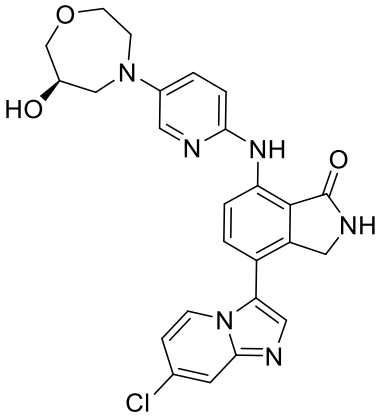
I-593



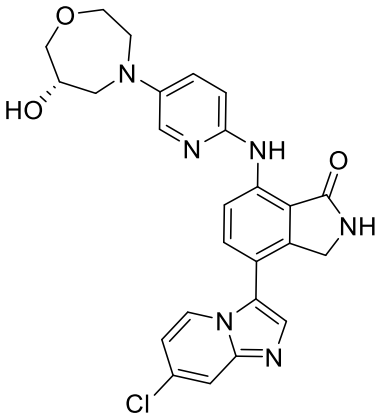
I-594



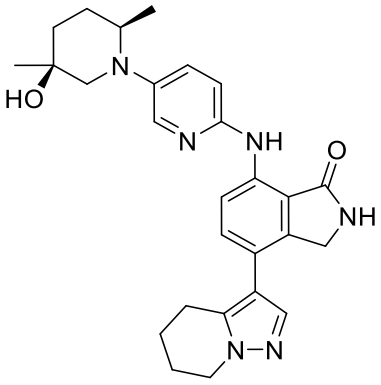
I-595



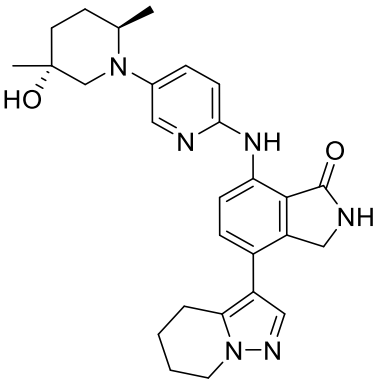
I-596



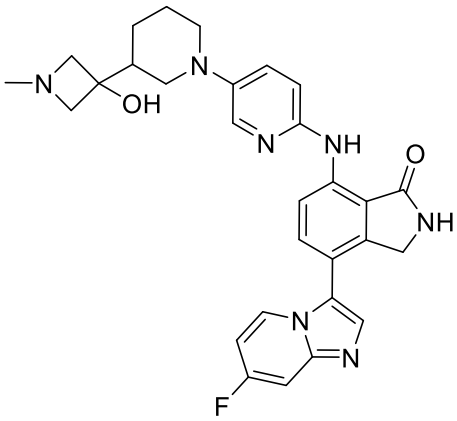
I-597



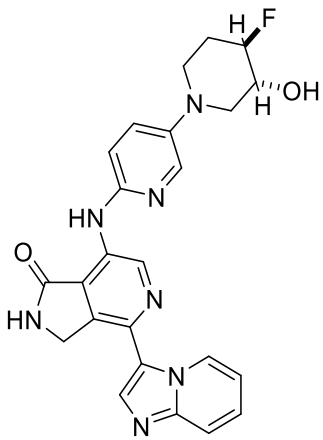
I-598



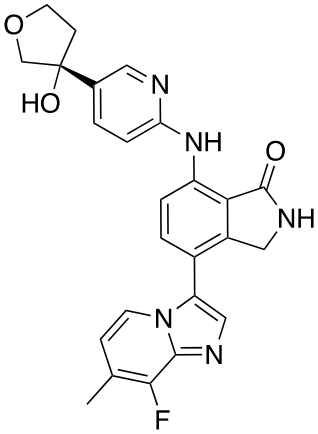
I-599



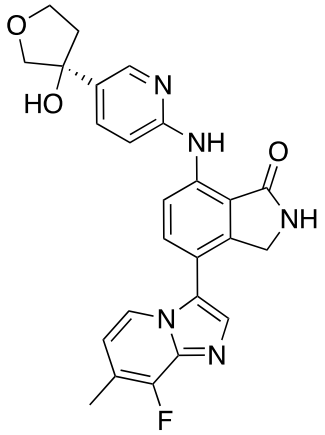
I-600



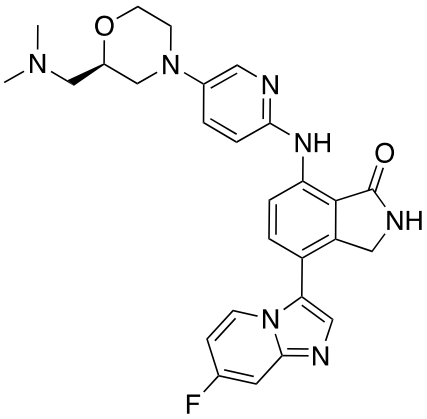
I-601



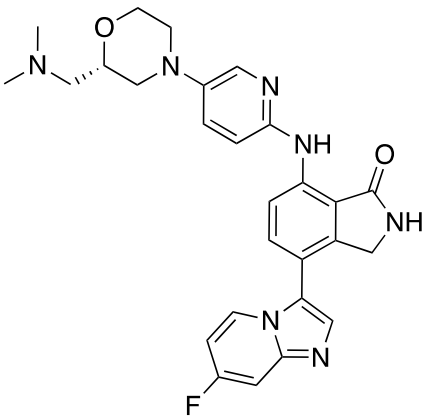
I-602



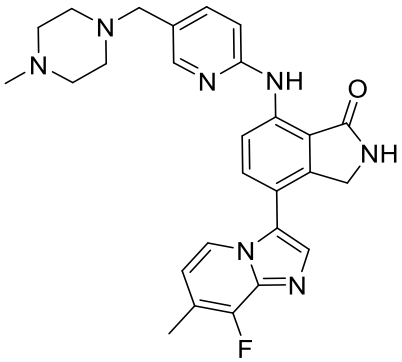
I-603



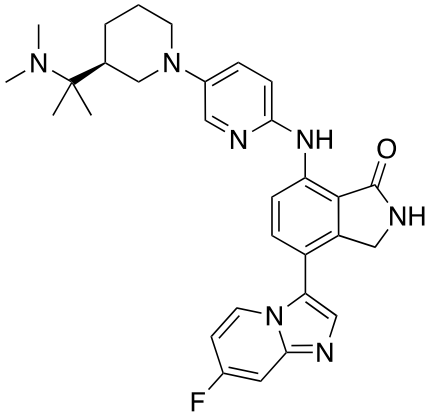
I-604



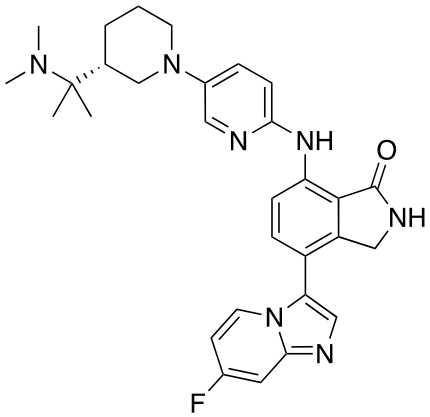
I-605



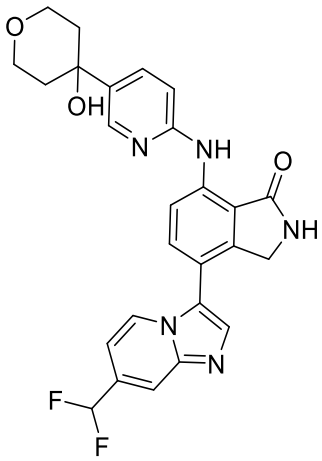
I-606



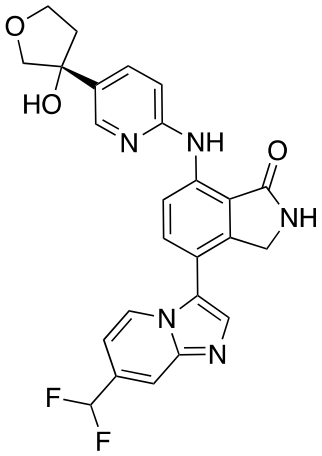
I-607



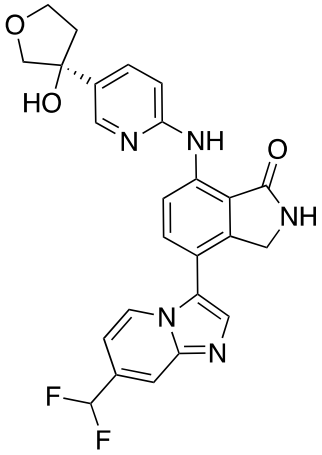
I-608



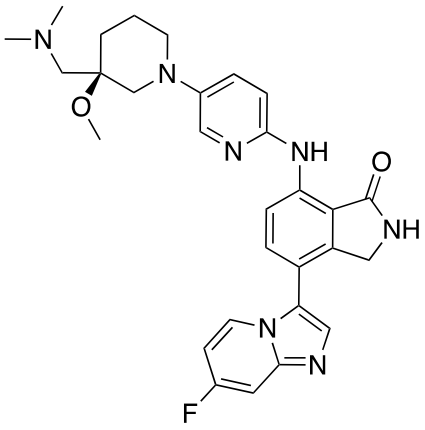
I-609



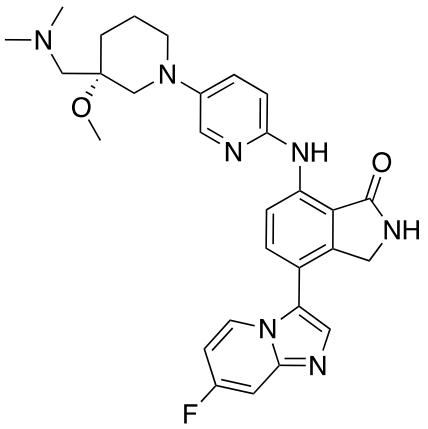
I-610



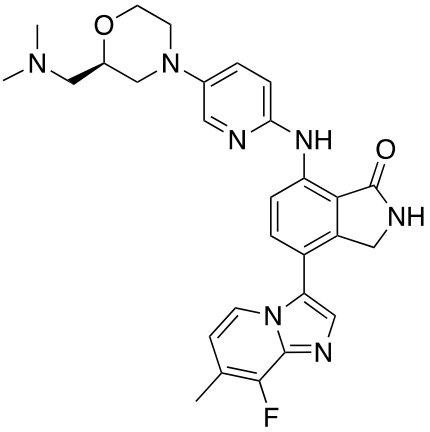
I-611



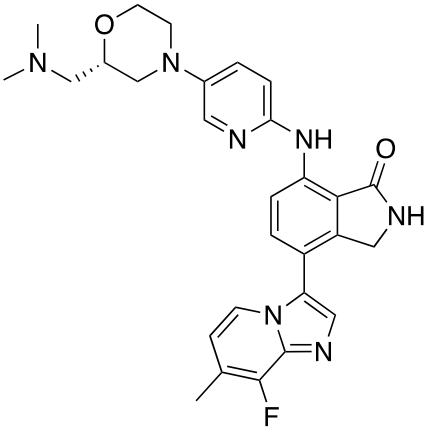
I-612



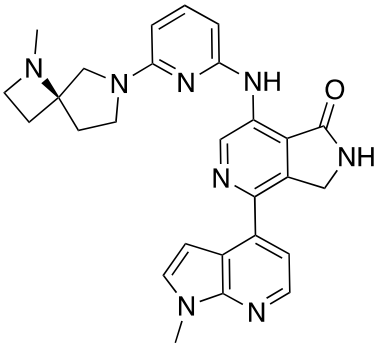
I-613



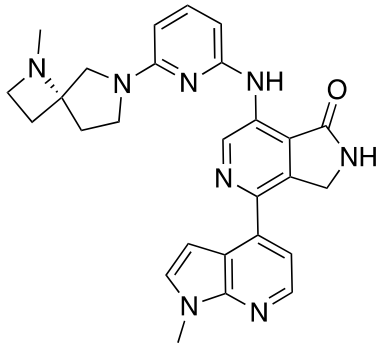
I-614



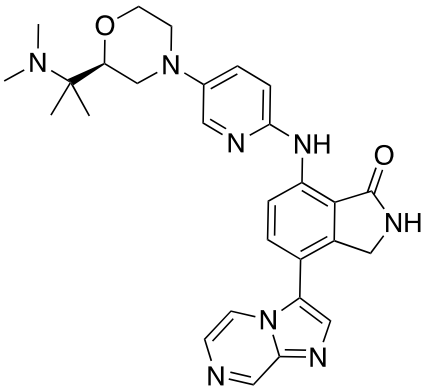
I-615



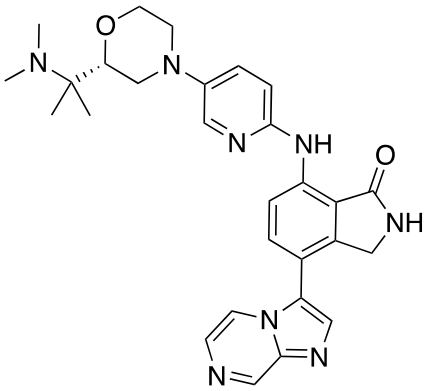
I-616



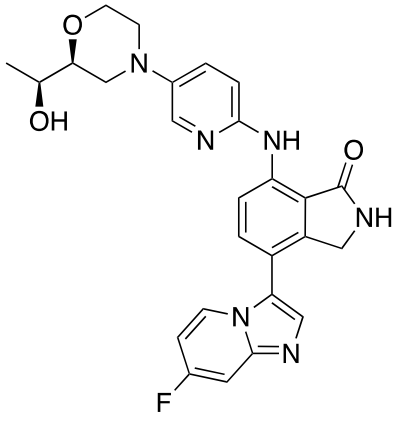
I-617



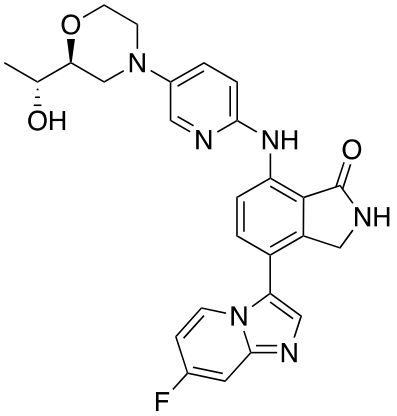
I-618



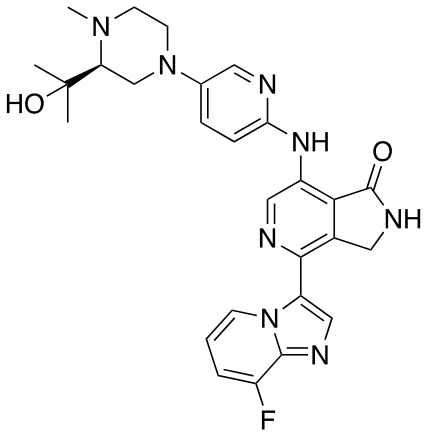
I-619



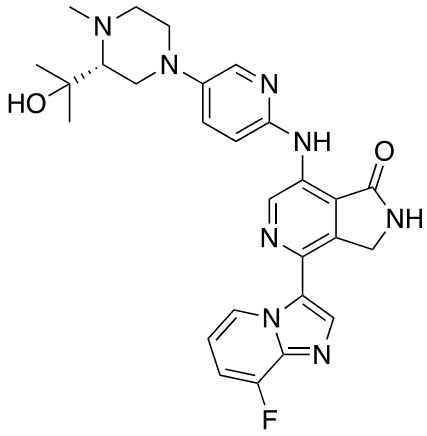
I-620



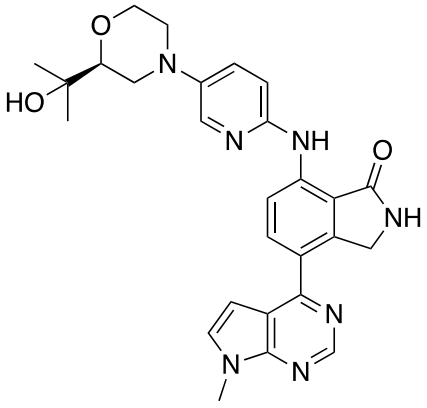
I-621



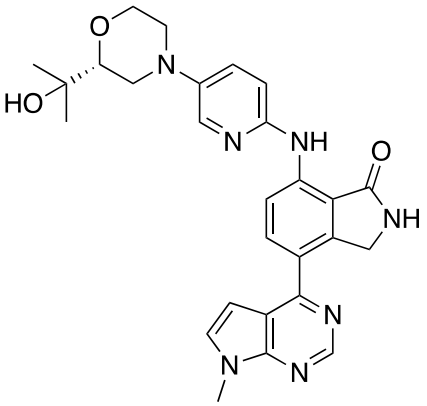
I-622



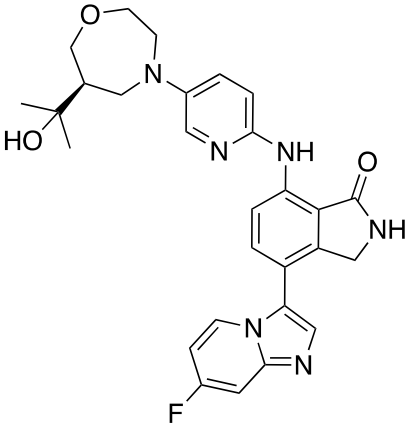
I-623



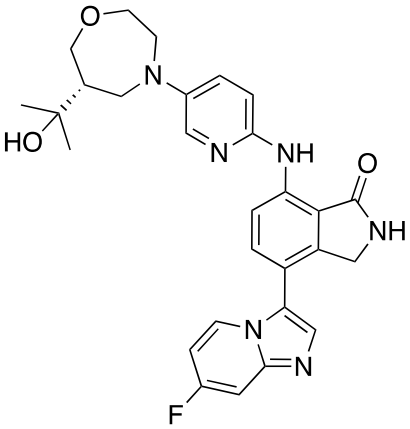
I-624



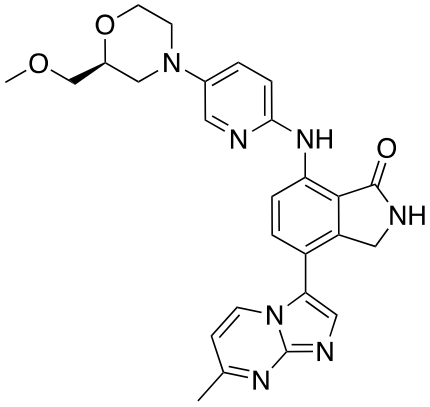
I-626



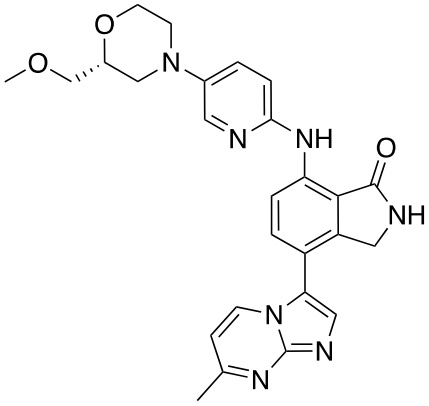
I-627



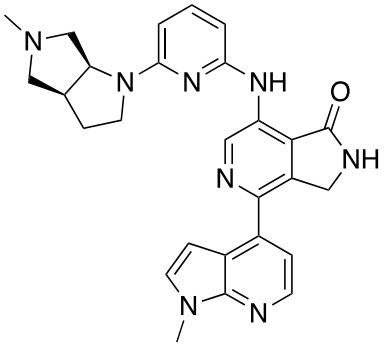
I-628



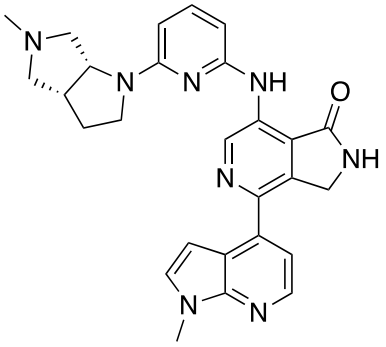
I-629



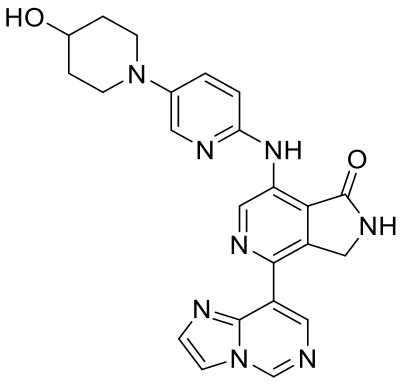
I-630



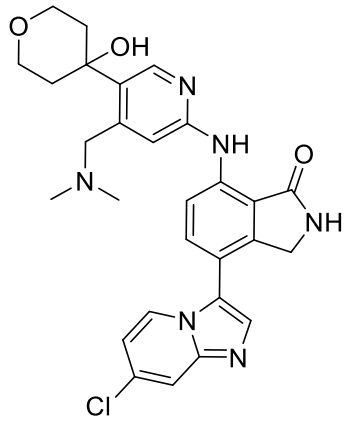
I-631



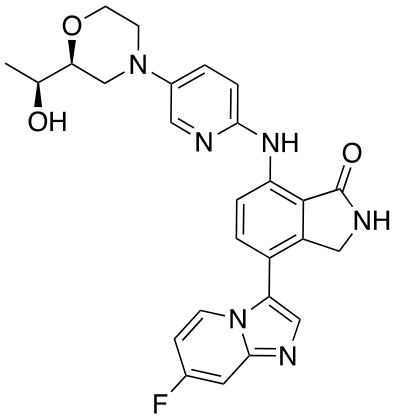
I-632



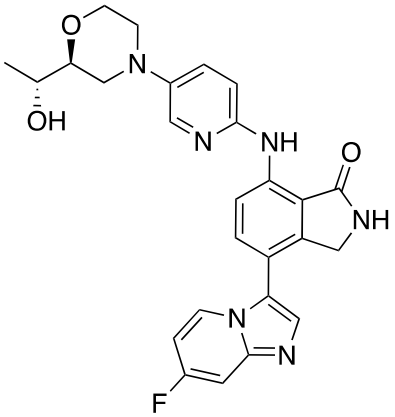
I-633



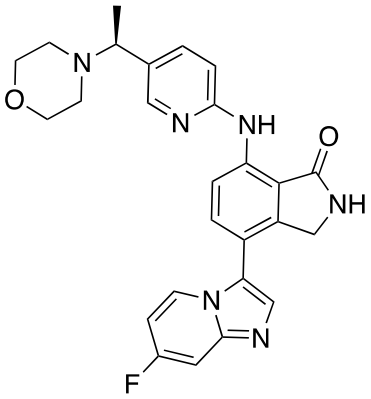
I-634



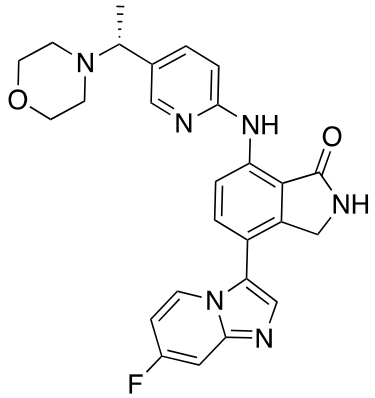
I-635



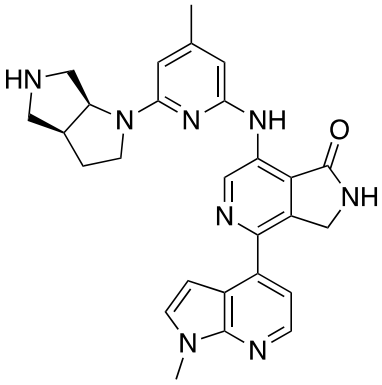
I-639



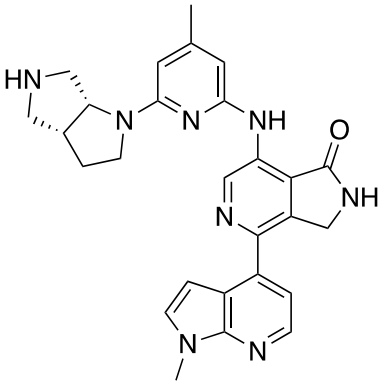
I-640



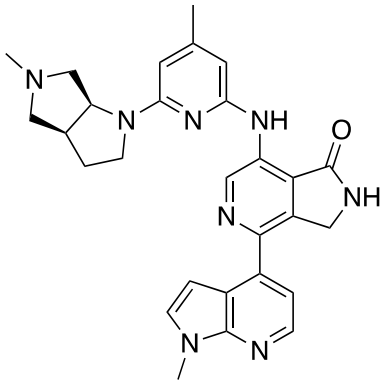
I-641



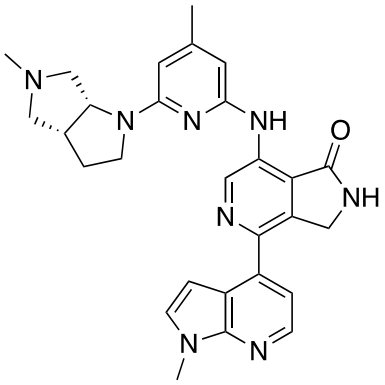
I-642



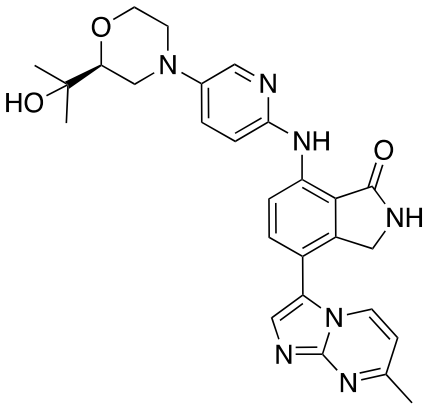
I-643



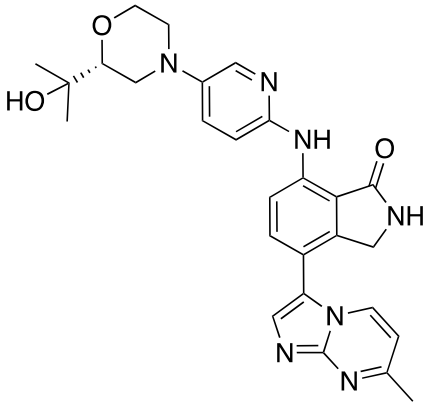
I-644



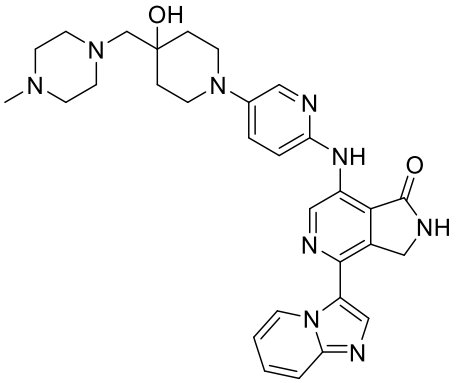
I-645



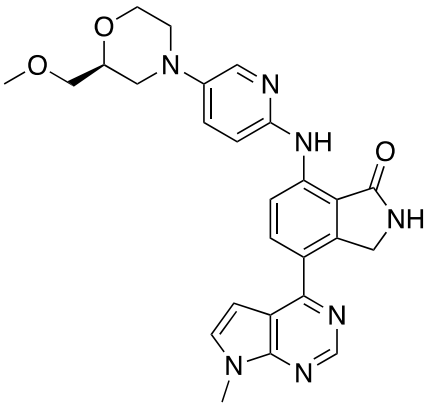
I-646



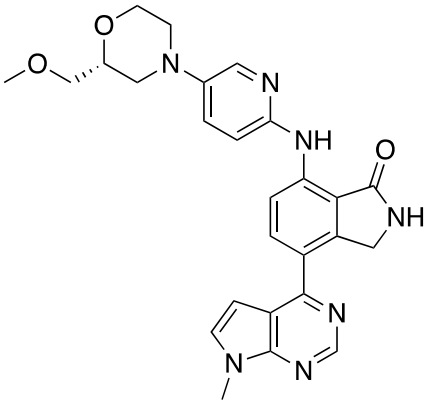
I-648



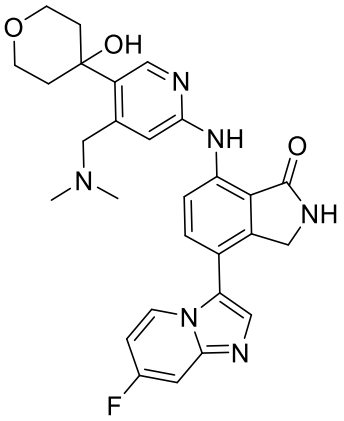
I-649



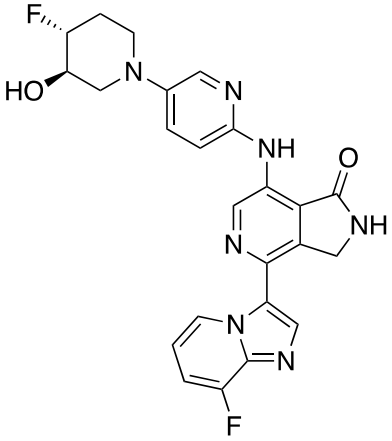
I-650



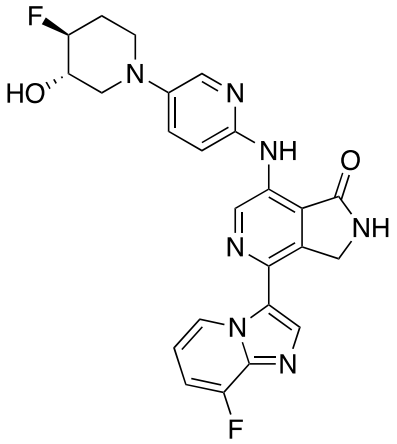
I-651



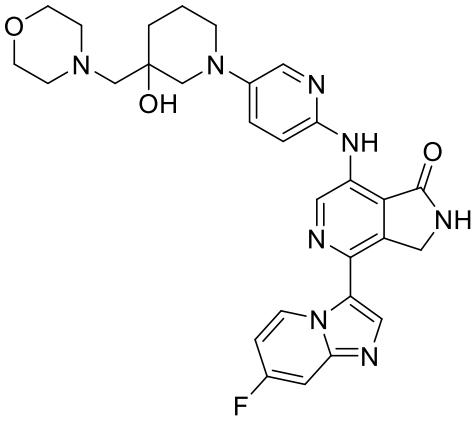
I-652



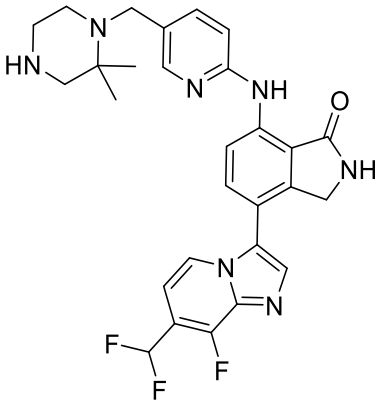
I-653



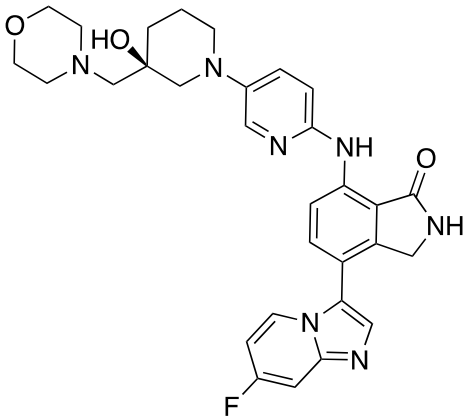
I-654



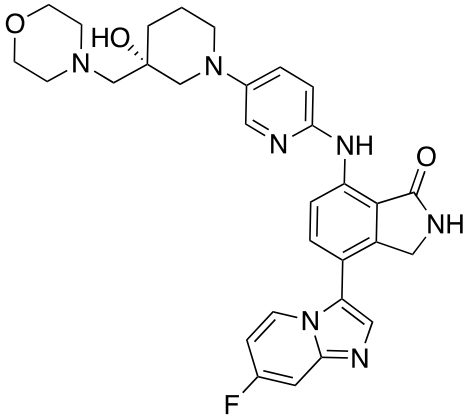
I-655



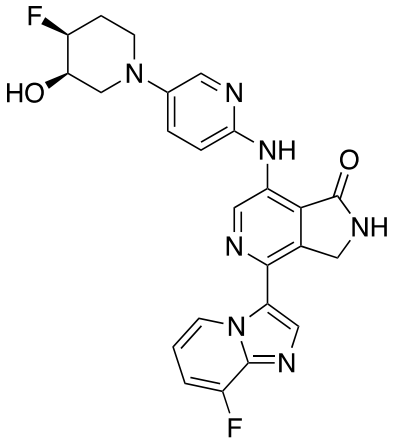
I-656



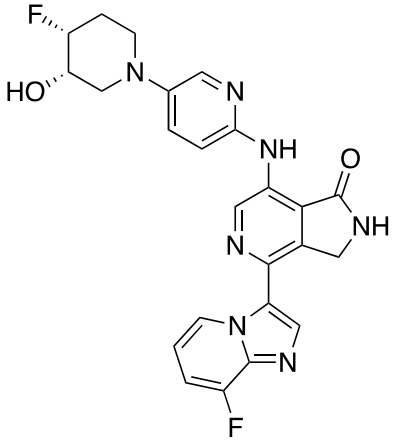
I-657



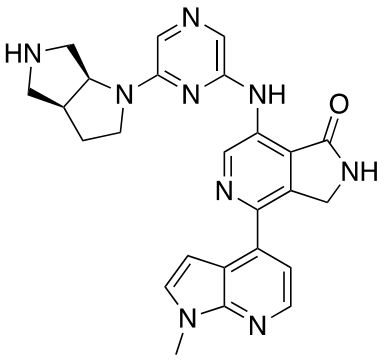
I-658



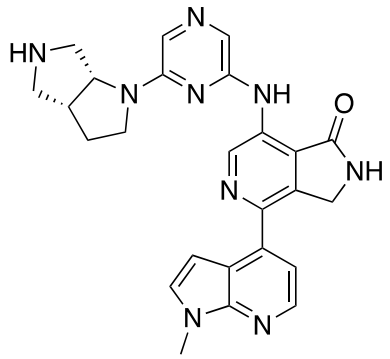
I-659



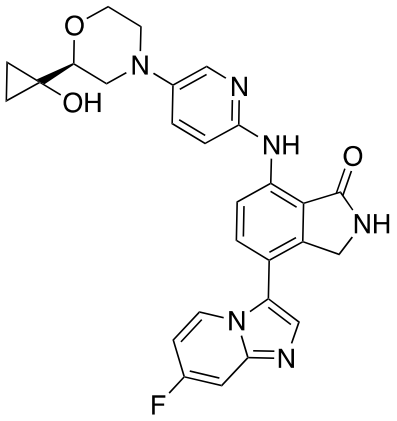
I-660



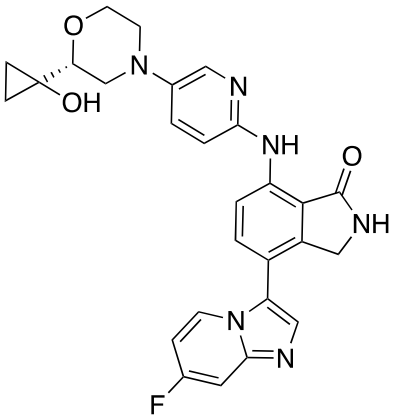
I-661



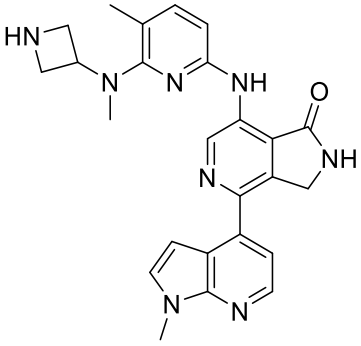
I-662



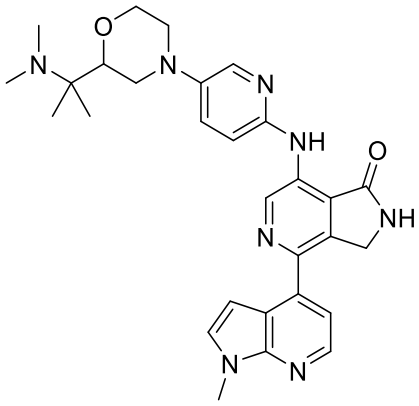
I-663



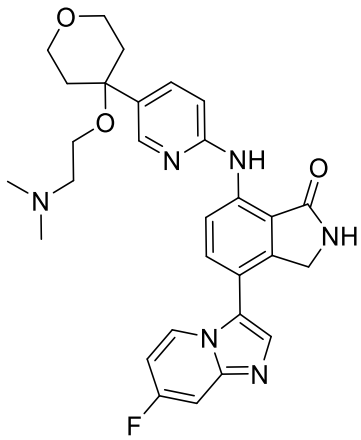
I-667



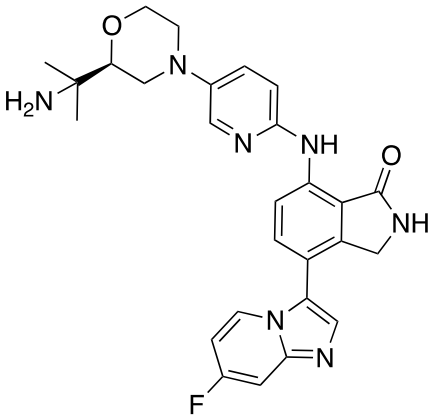
I-668



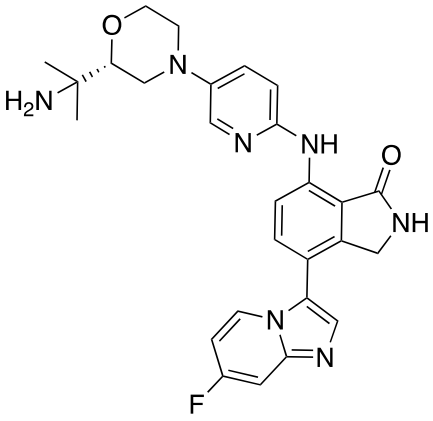
I-669



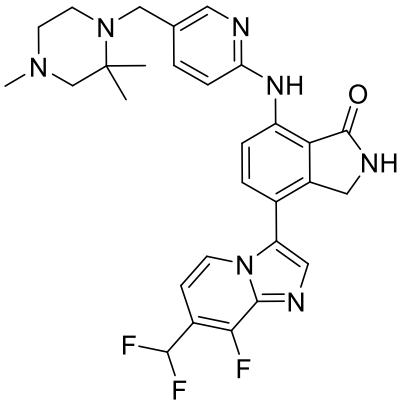
I-670



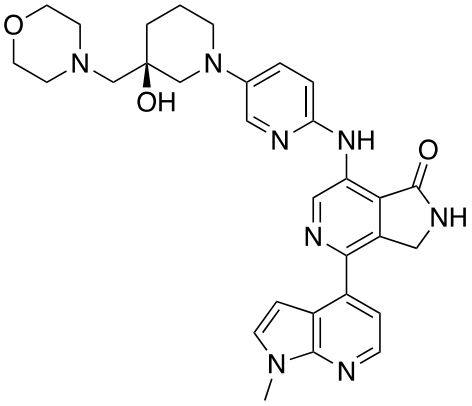
I-671



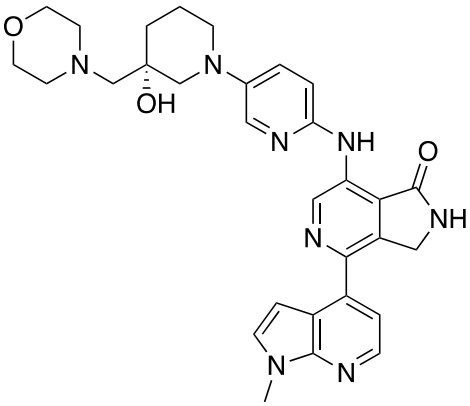
I-672



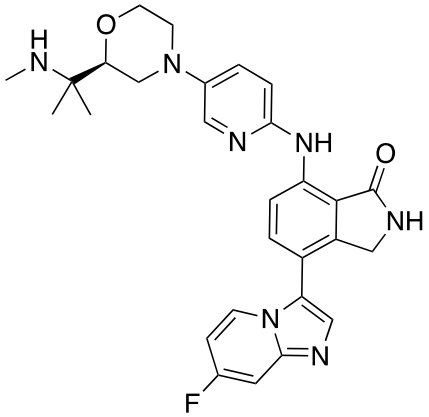
I-673



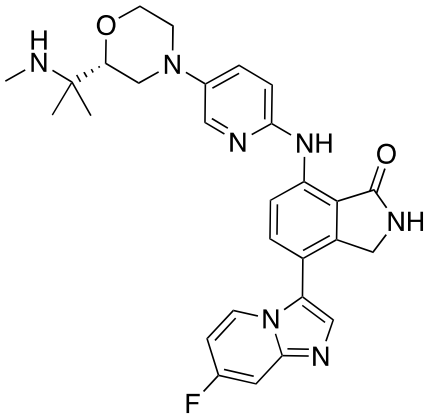
I-674



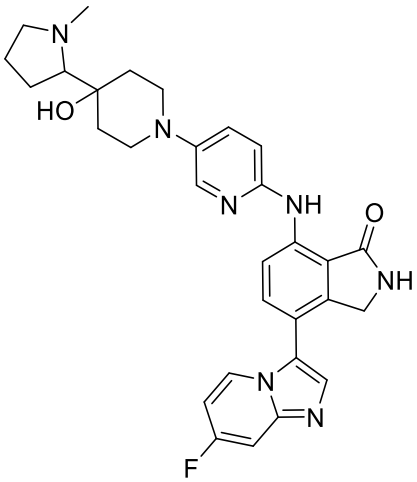
I-675



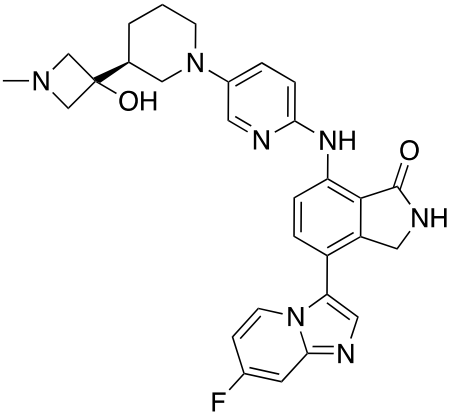
I-676



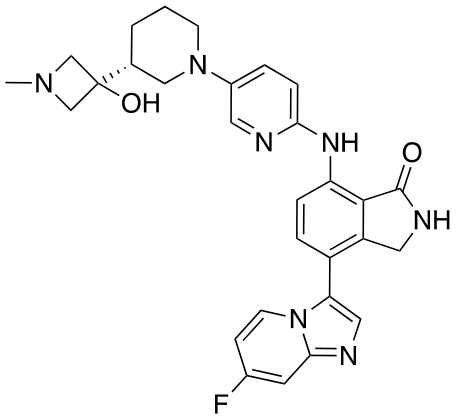
I-677



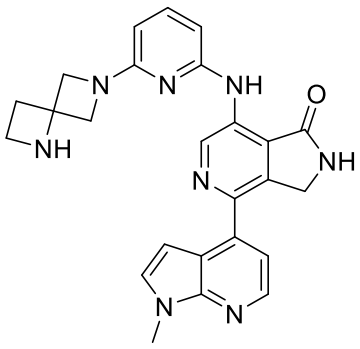
I-678



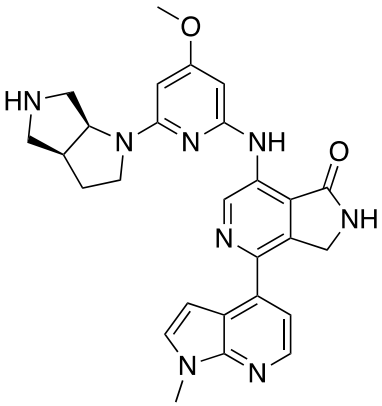
I-679



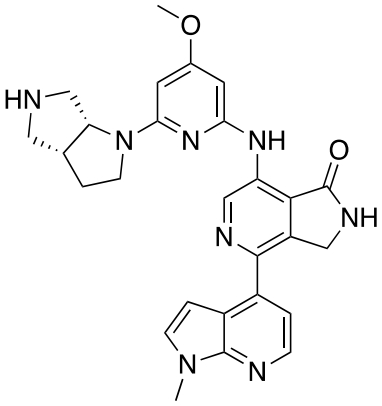
I-680



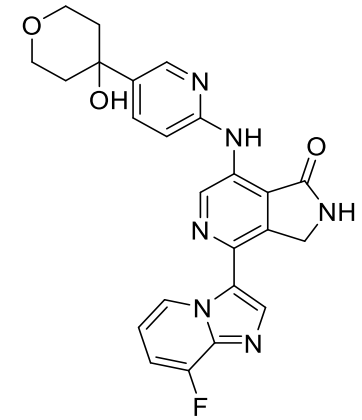
I-681



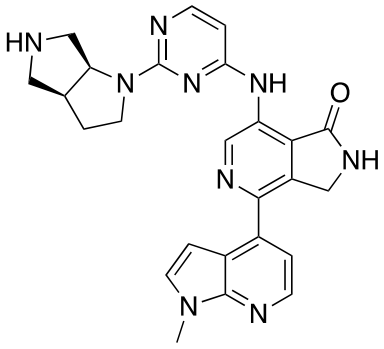
I-682



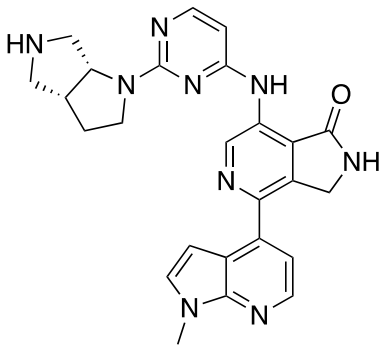
I-683



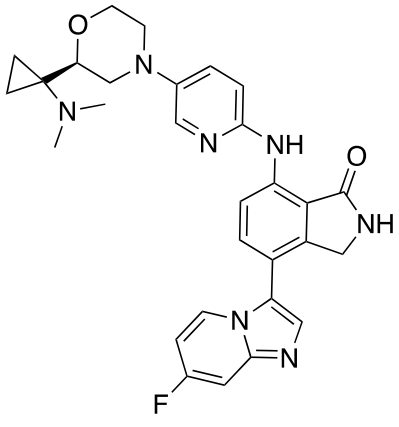
I-684



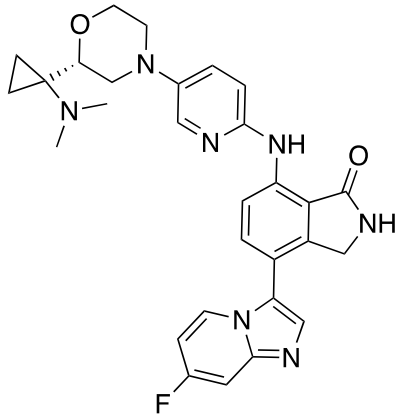
I-685



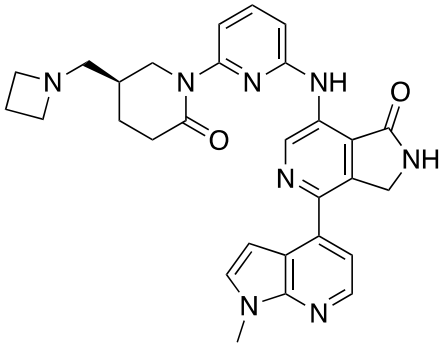
I-686



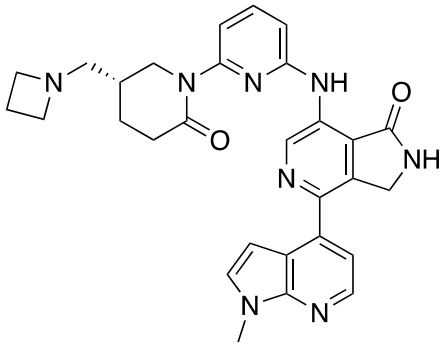
I-687



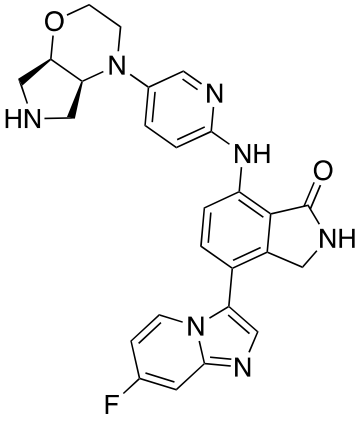
I-688



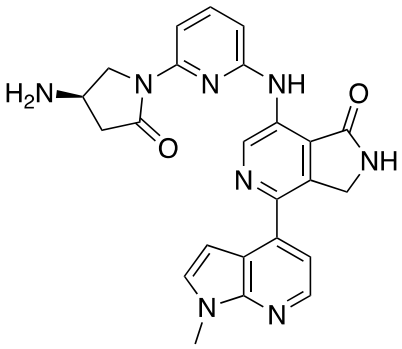
I-689



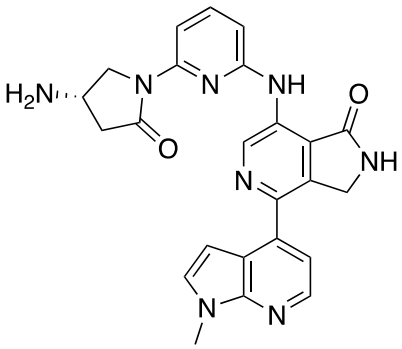
I-690



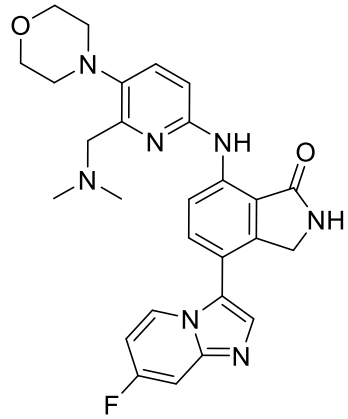
I-691



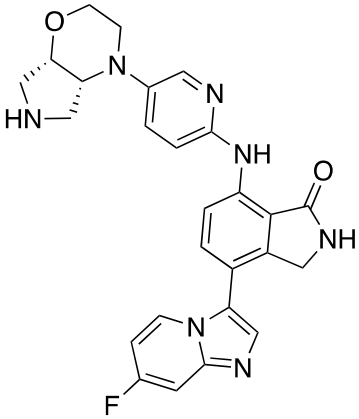
I-692



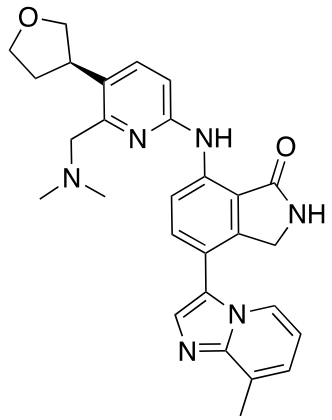
I-693



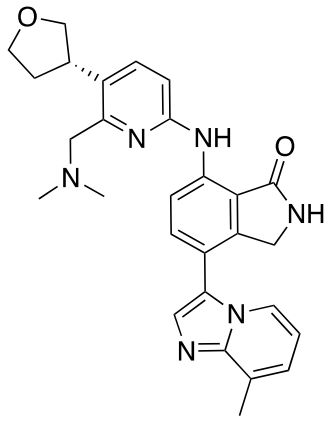
I-694



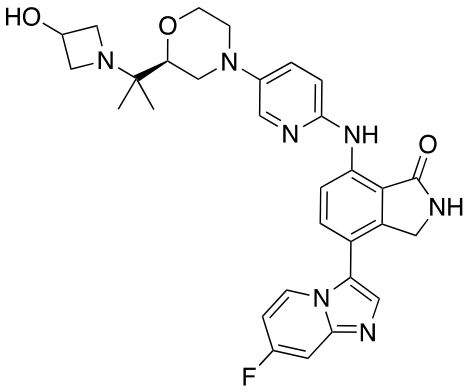
I-695



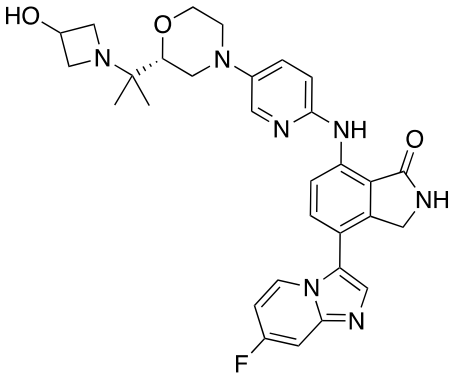
I-696



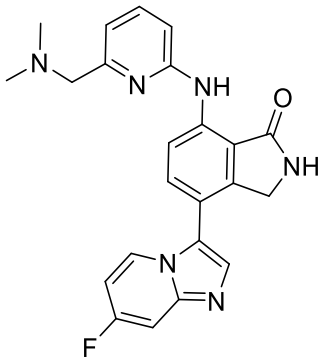
I-697



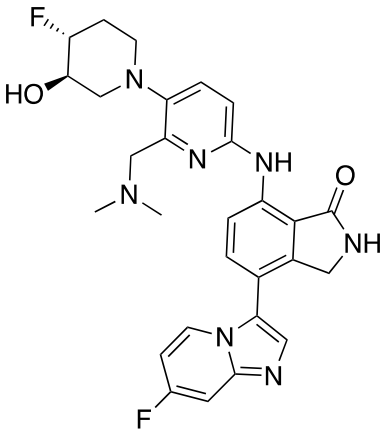
I-698



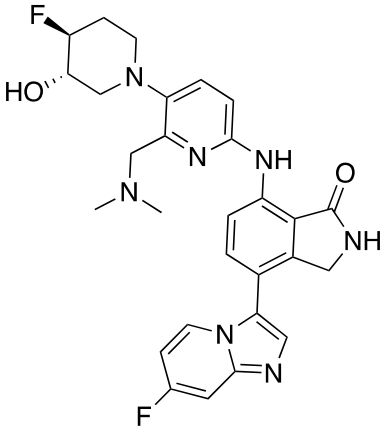
I-699



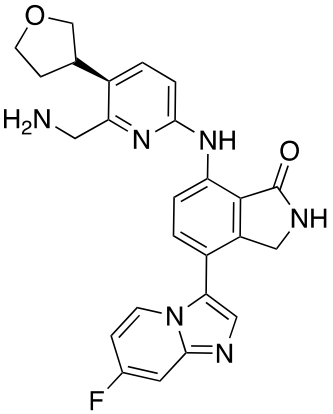
I-700



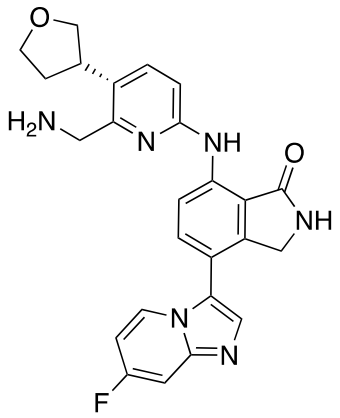
I-701



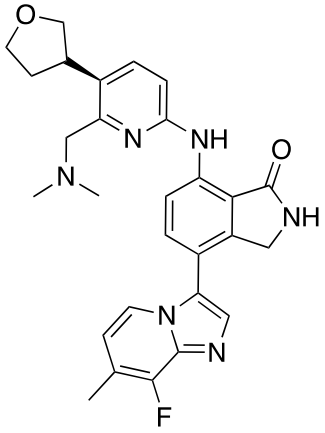
I-702



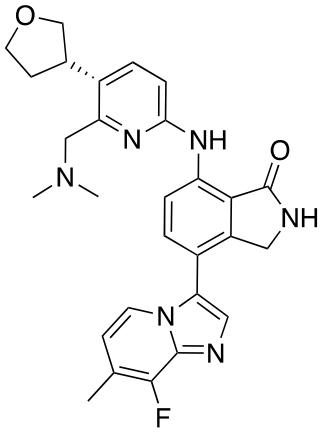
I-703



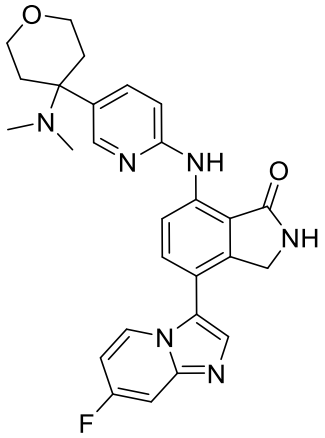
I-704



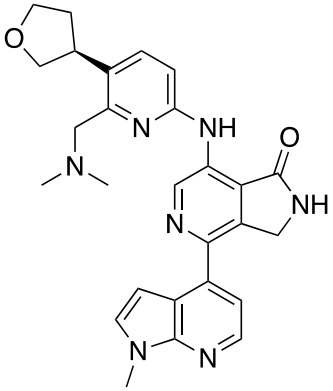
I-705



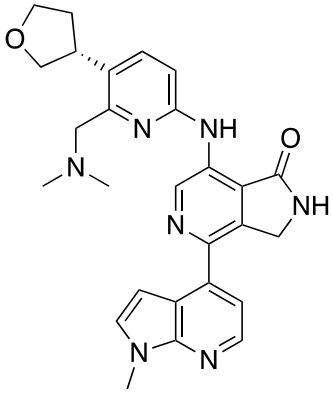
I-706



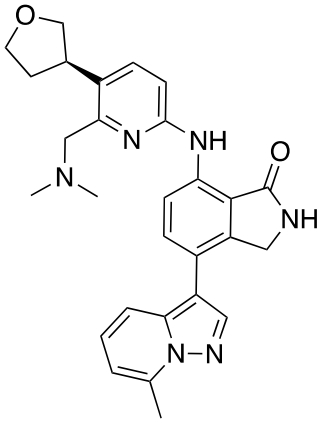
I-707



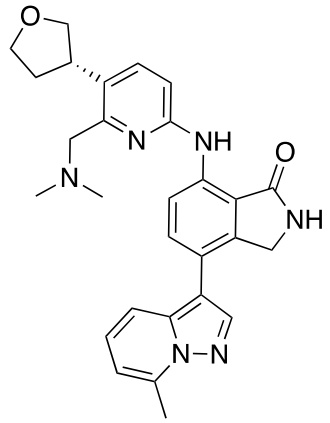
I-708



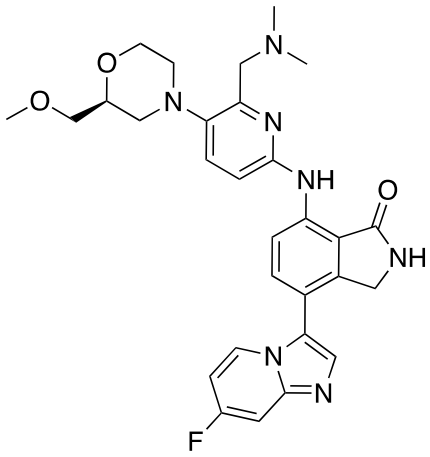
I-709



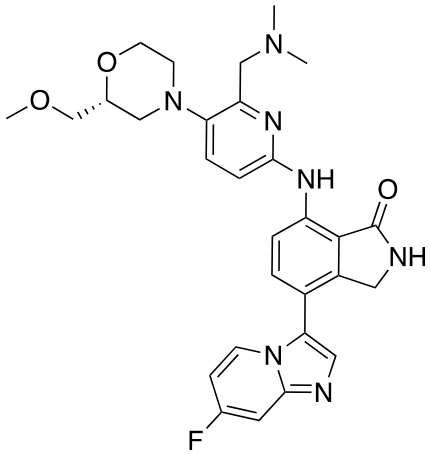
I-710



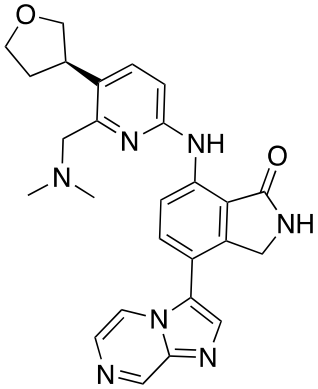
I-711



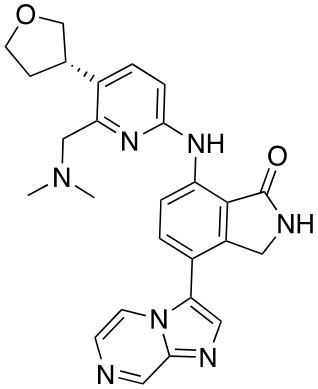
I-712



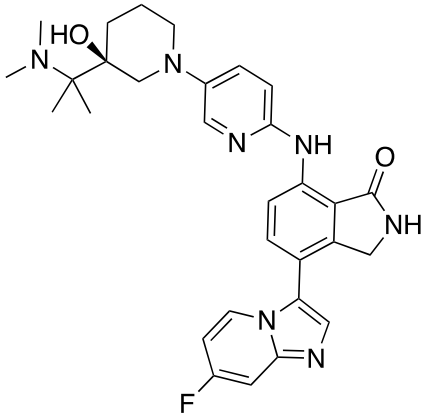
I-713



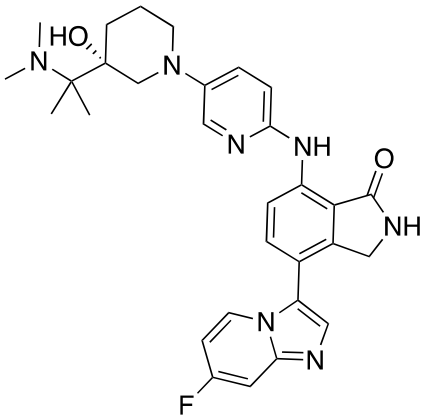
I-714



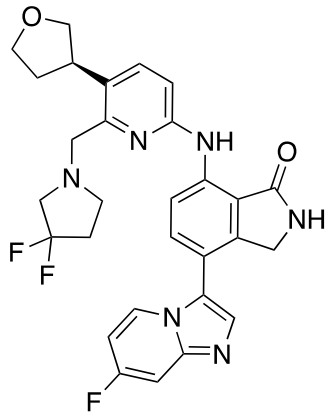
I-715



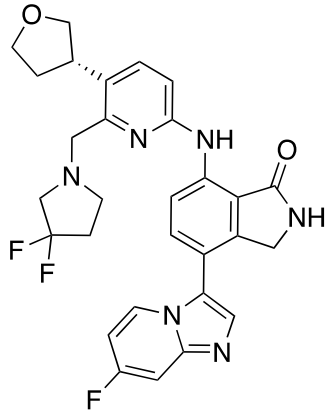
I-716



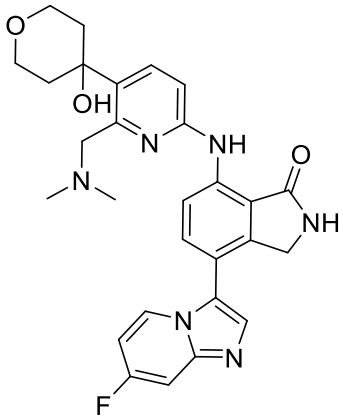
I-717



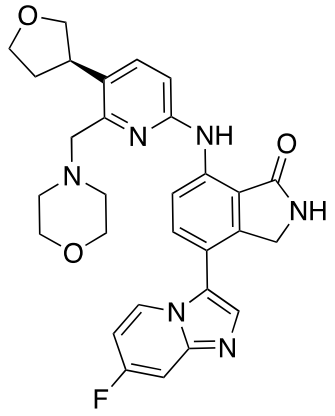
I-718



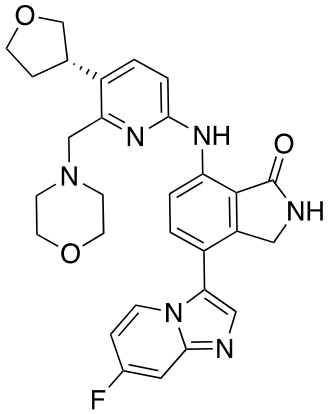
I-719



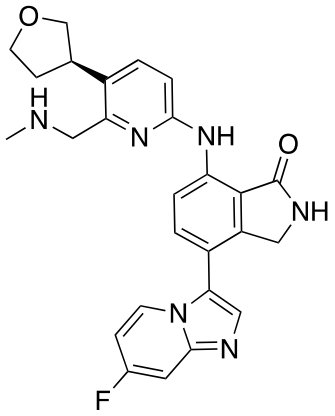
I-720



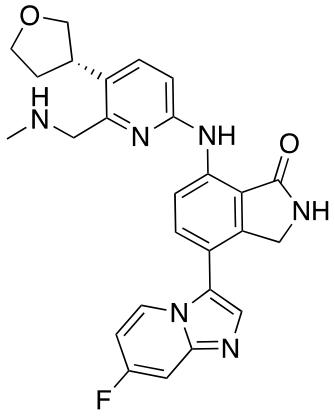
I-721



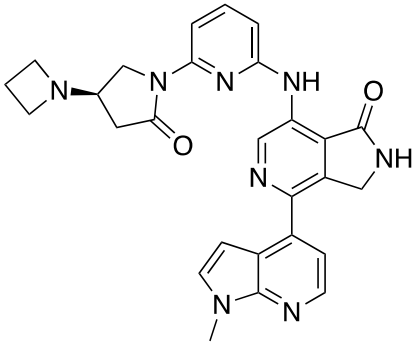
I-722



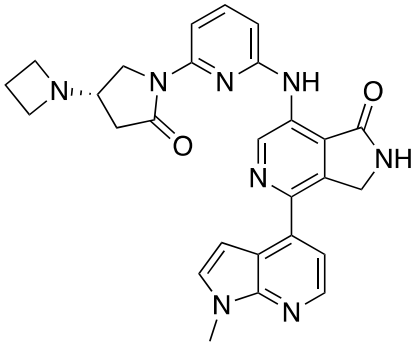
I-723



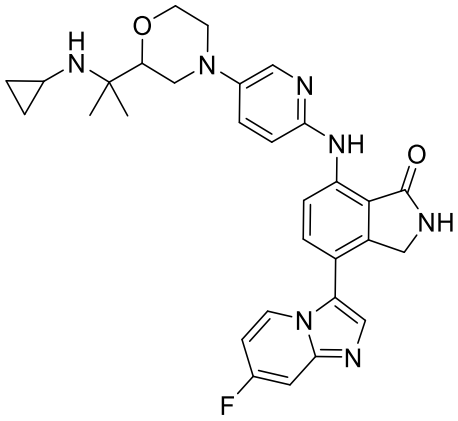
I-724



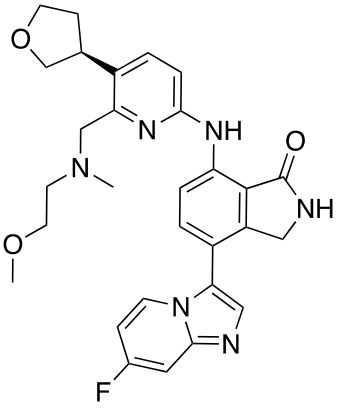
I-725



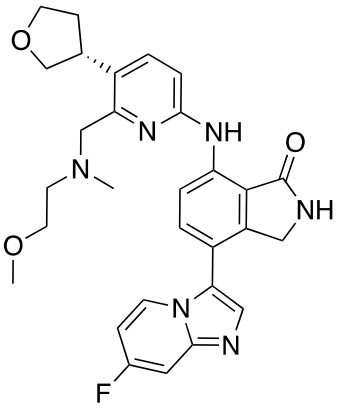
I-726



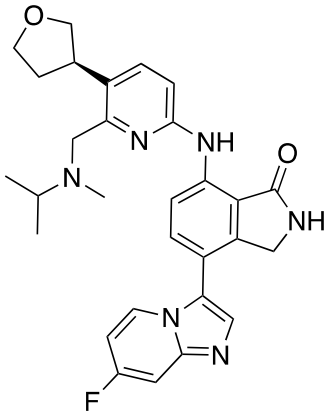
I-727



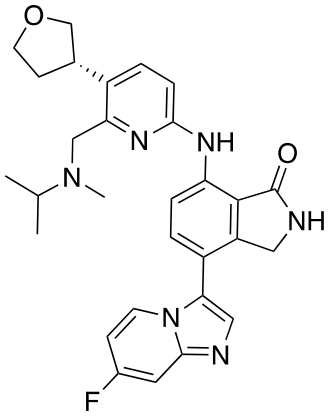
I-728



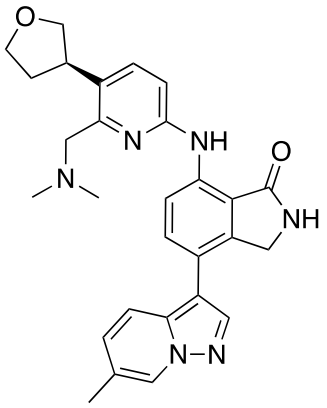
I-729



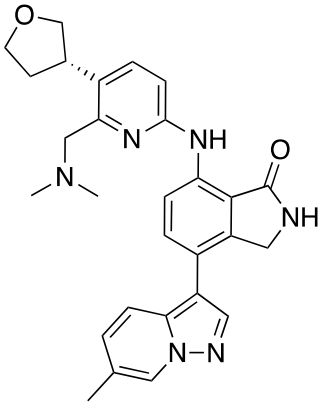
I-730



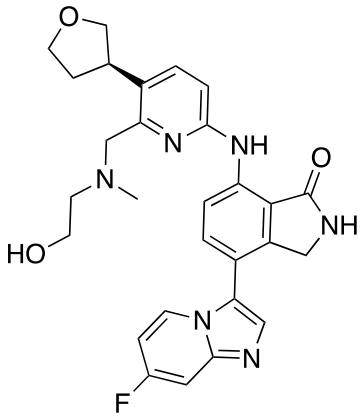
I-731



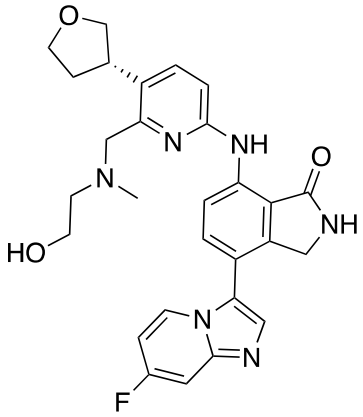
I-732



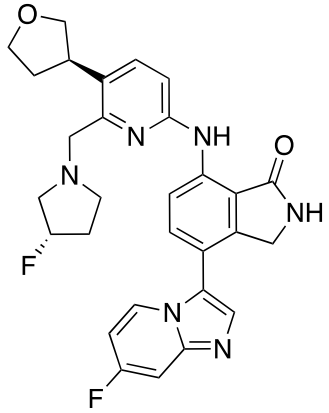
I-733



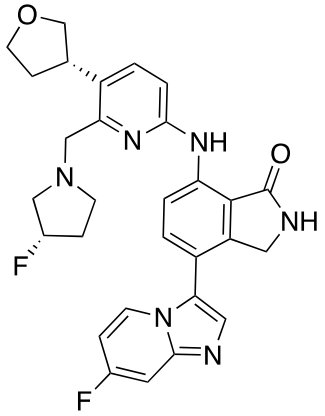
I-734



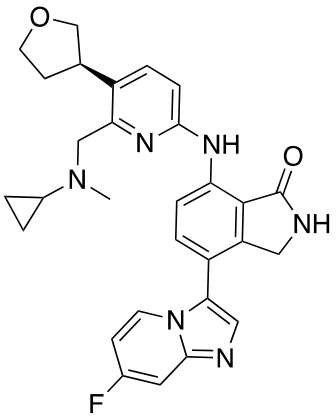
I-735



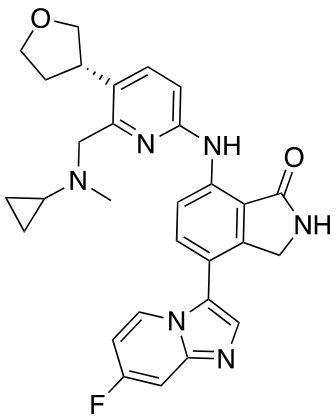
I-736



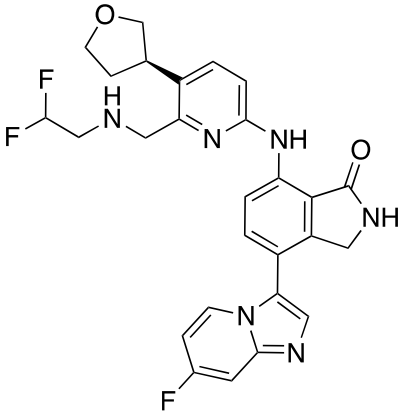
I-737



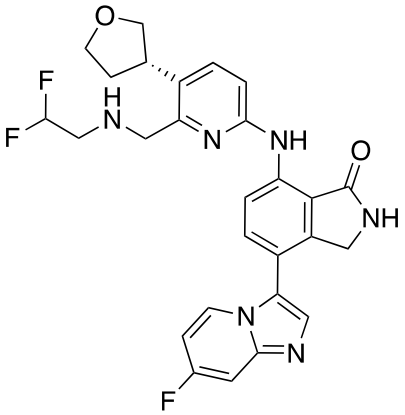
I-738



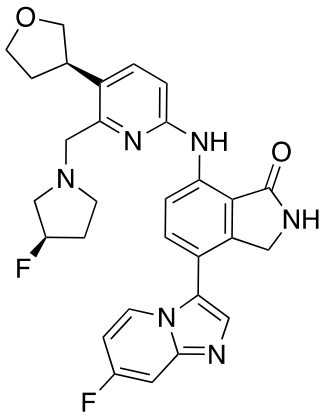
I-739



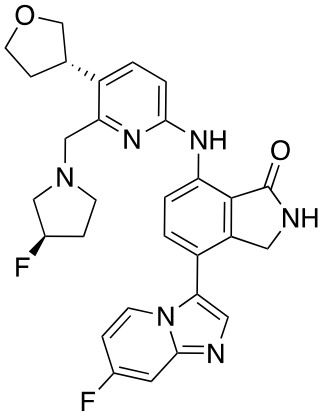
I-740



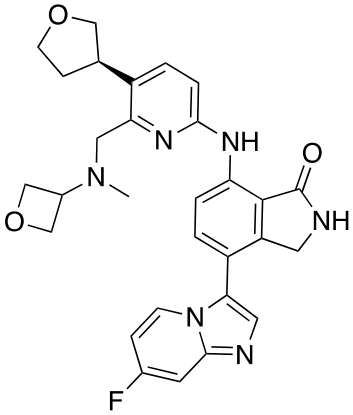
I-741



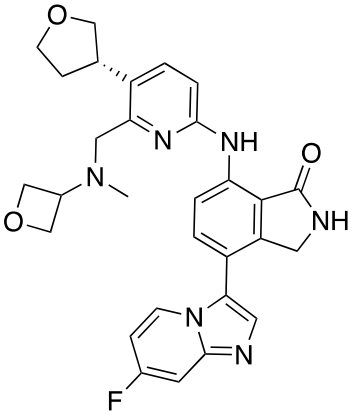
I-742



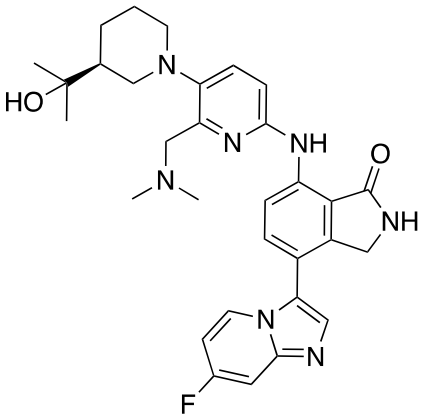
I-743



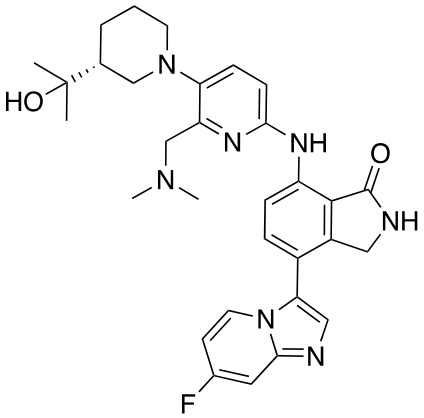
I-744



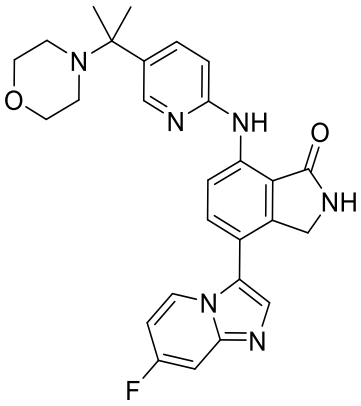
I-745



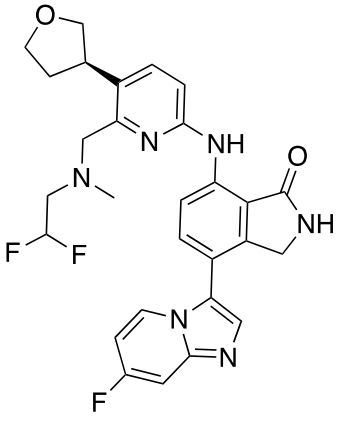
I-746



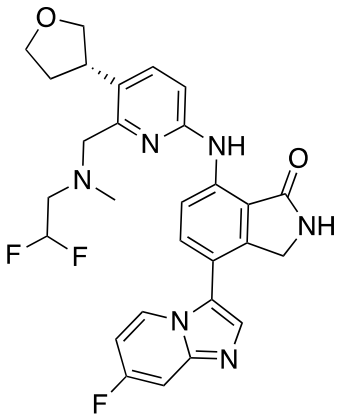
I-747



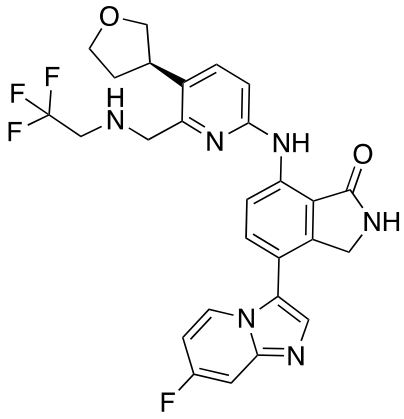
I-748



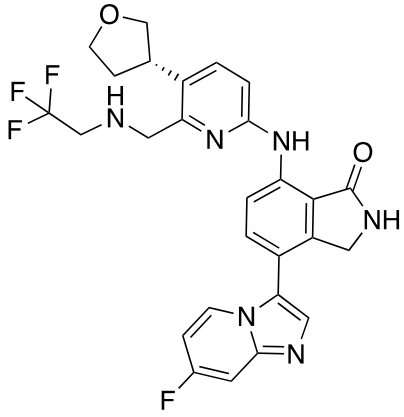
I-749



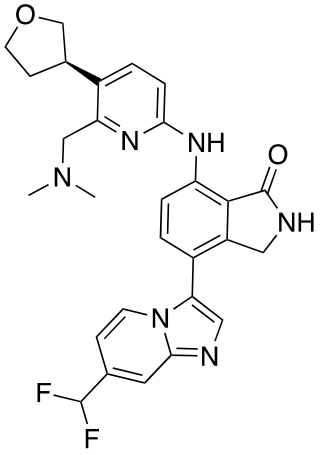
I-750



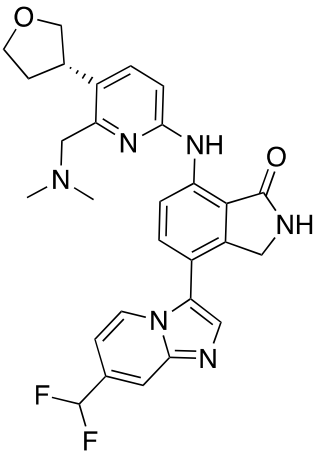
I-751



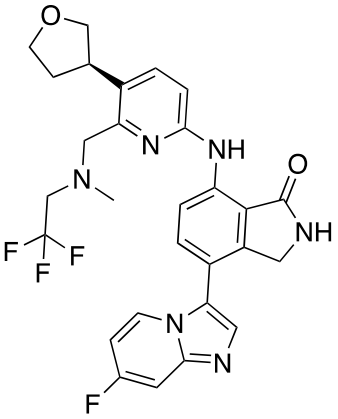
I-752



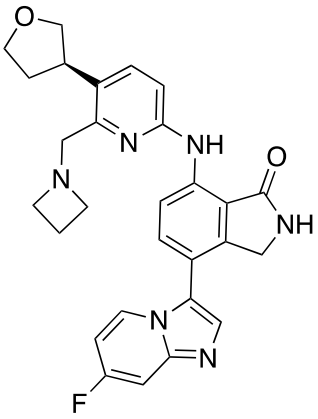
I-753



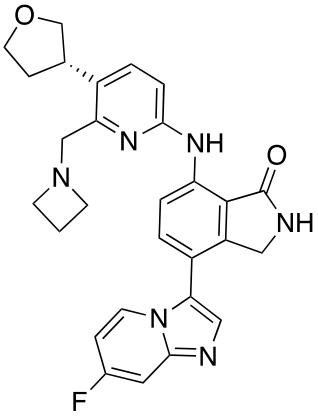
I-754



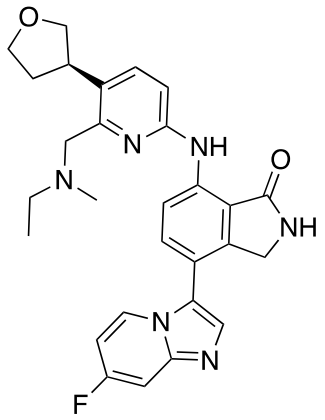
I-755



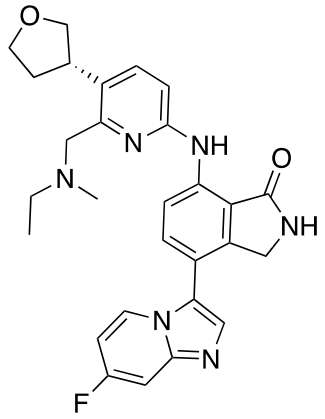
I-756



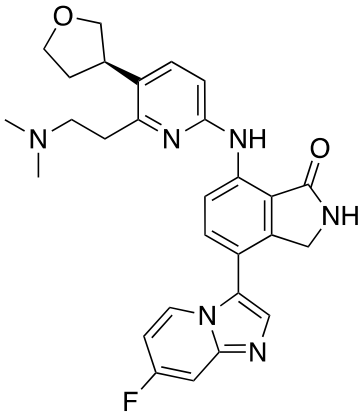
I-757



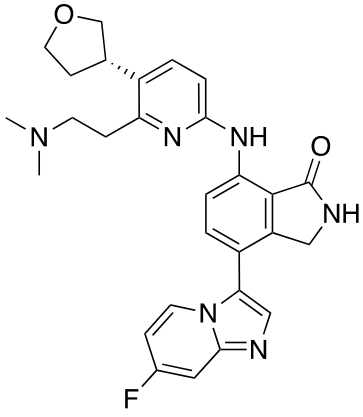
I-758



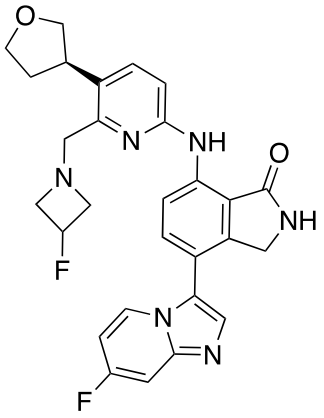
I-759



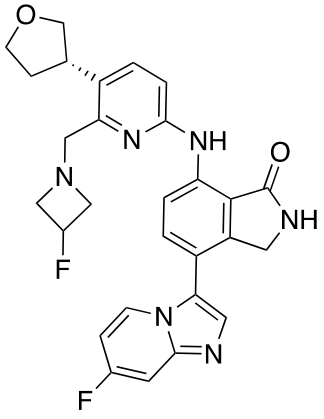
I-760



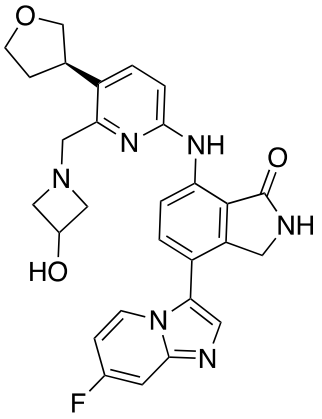
I-761



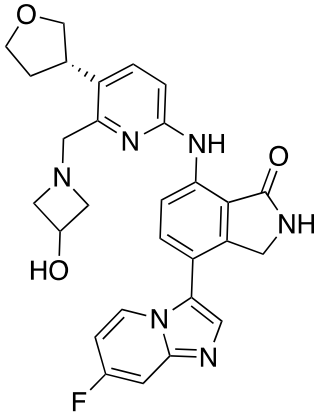
I-762



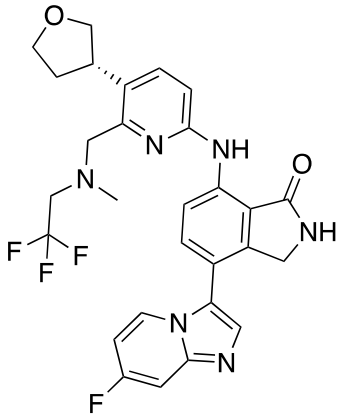
I-763



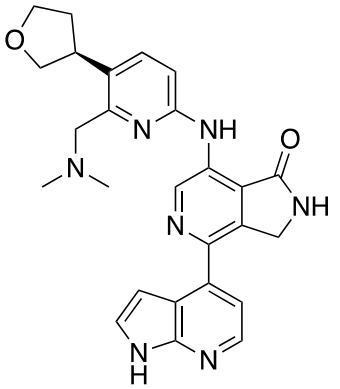
I-764



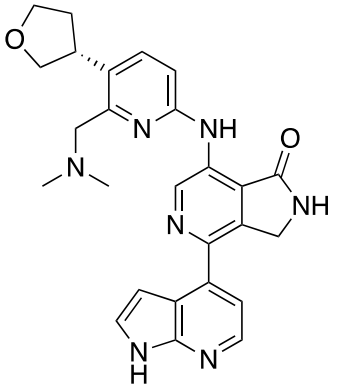
I-765



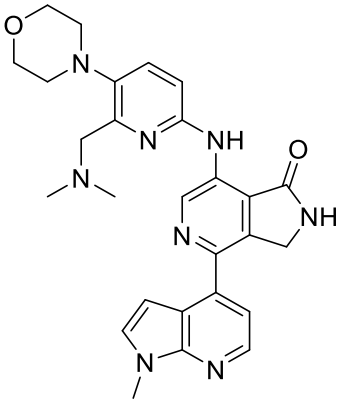
I-766



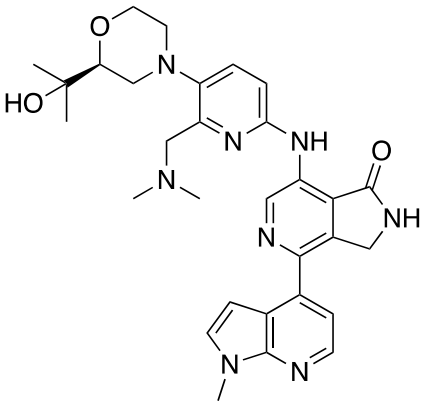
I-767



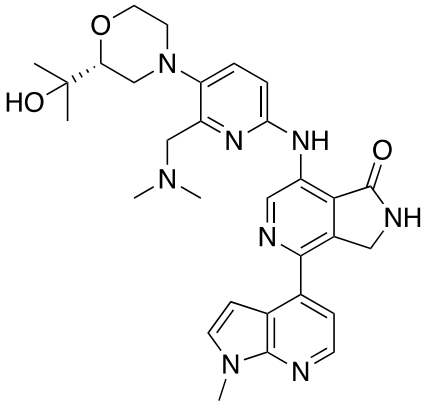
I-768



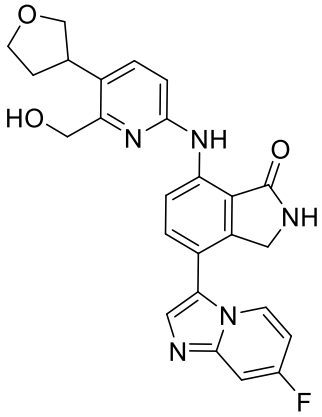
I-769



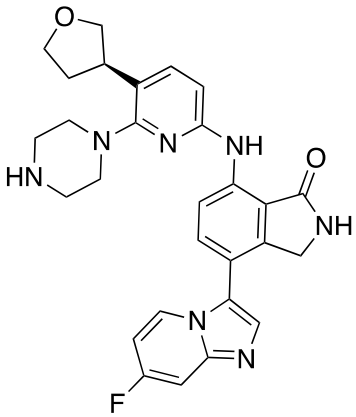
I-770



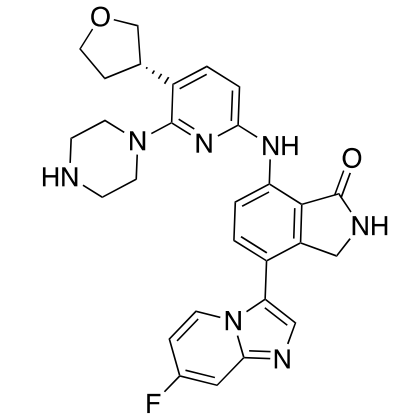
I-771



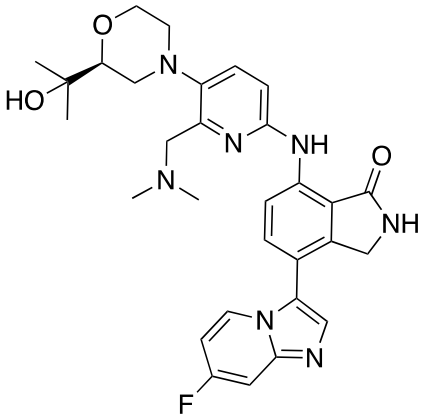
I-772



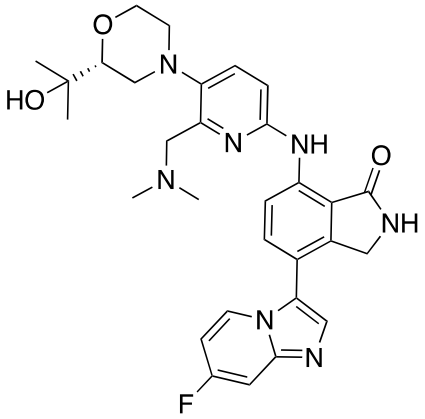
I-773



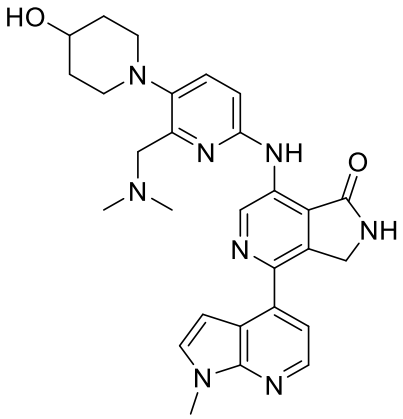
I-774



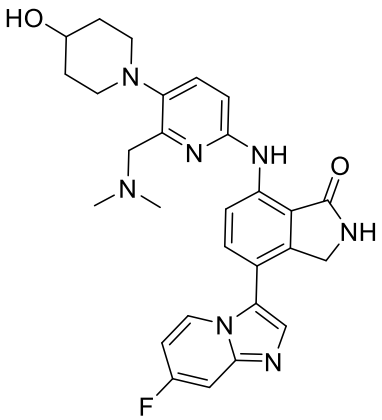
I-775



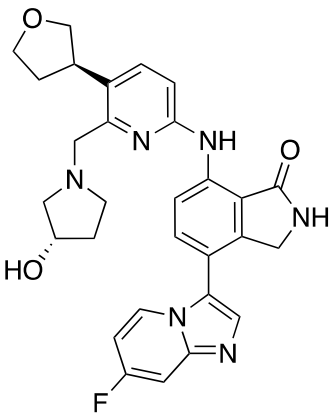
I-776



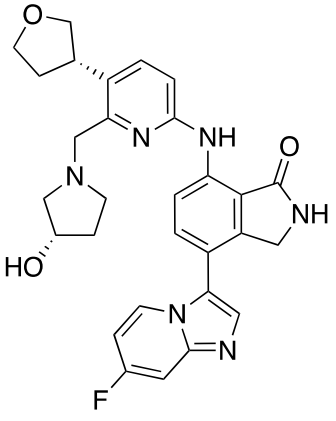
I-777



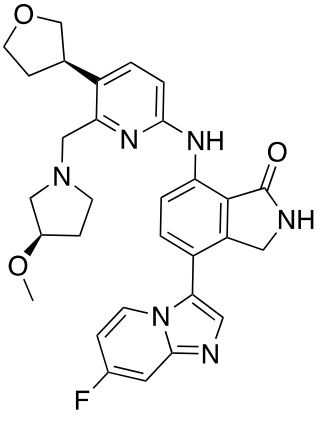
I-778



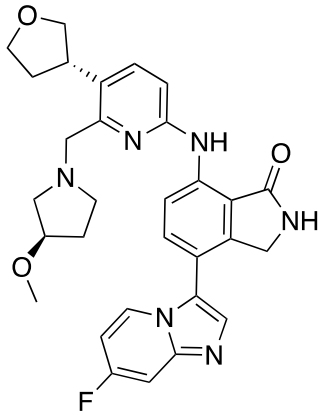
I-779



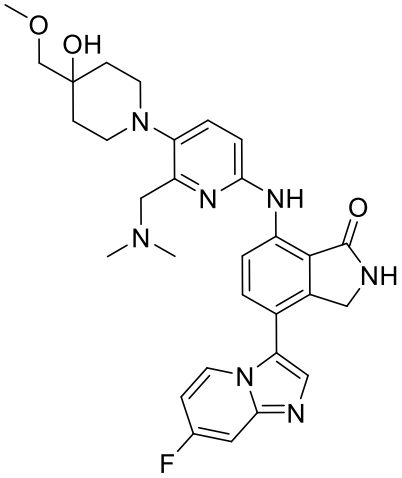
I-780



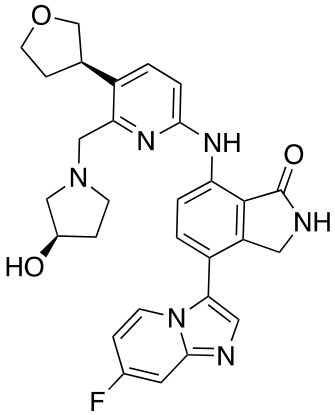
I-781



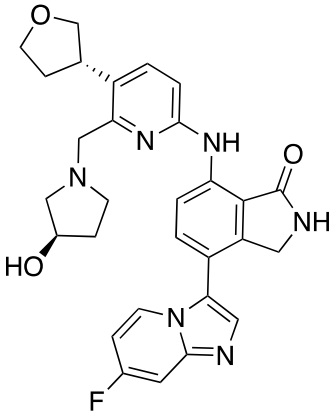
I-782



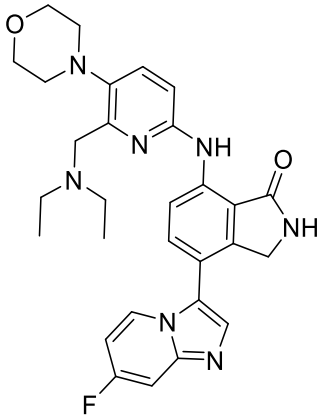
I-783



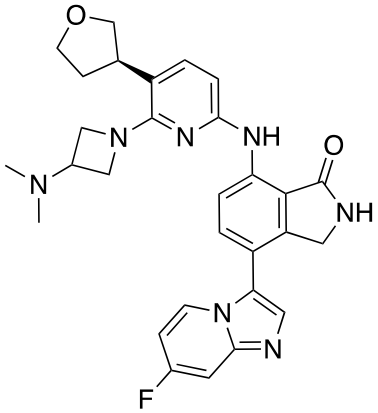
I-784



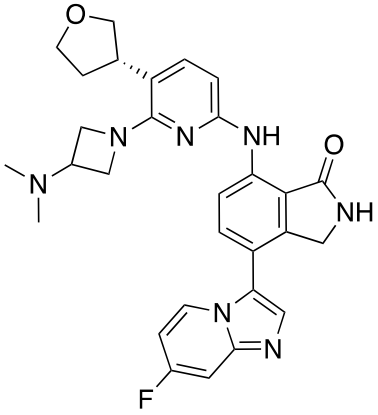
I-785



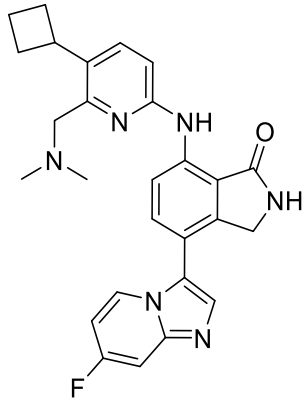
I-786



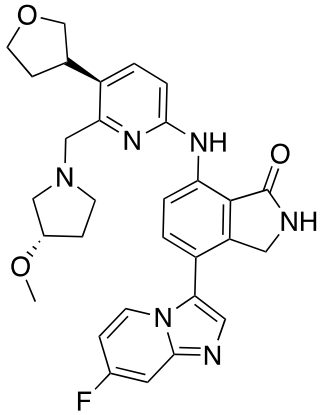
I-787



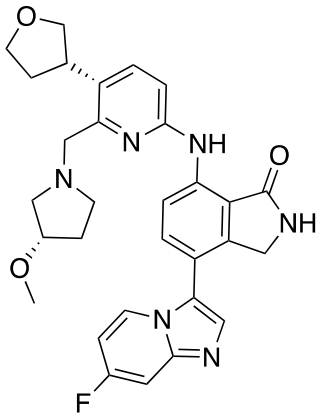
I-788



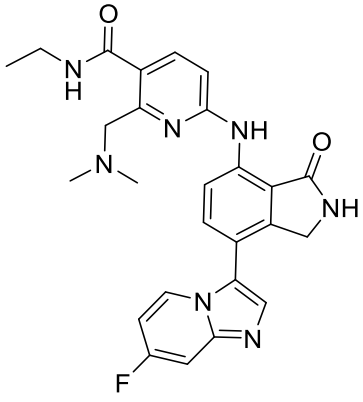
I-789



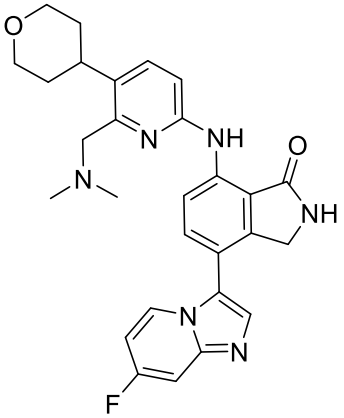
I-790



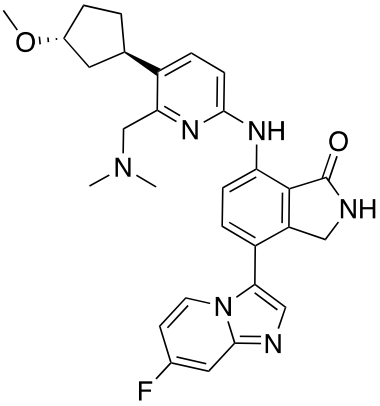
I-791



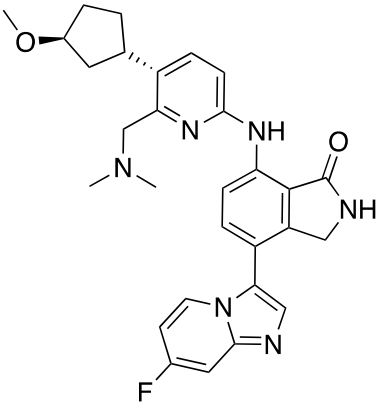
I-792



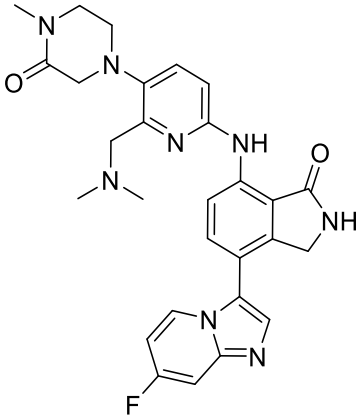
I-793



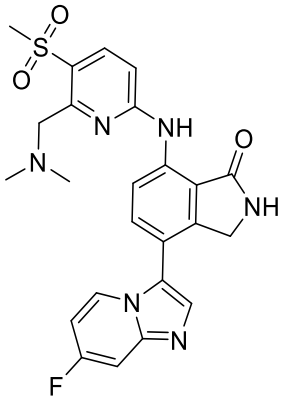
I-794



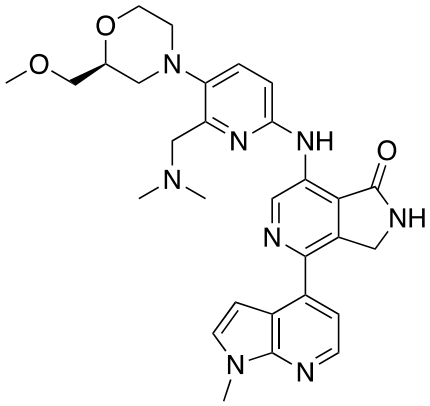
I-795



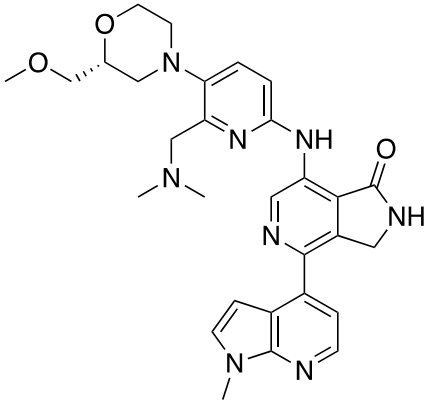
I-796



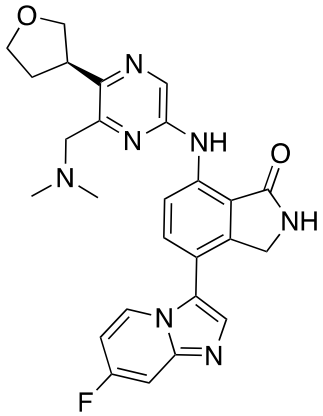
I-797



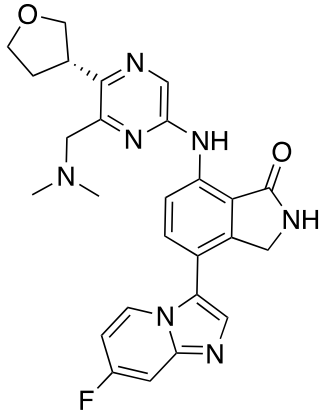
I-798



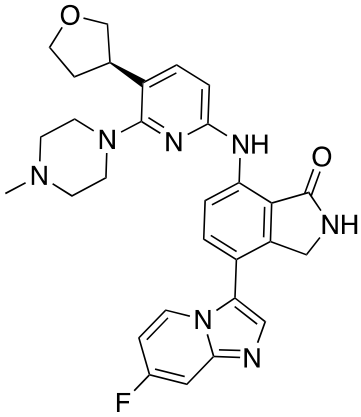
I-799



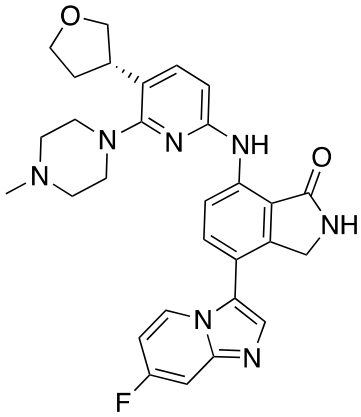
I-800



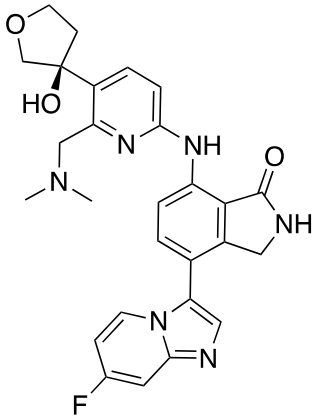
I-801



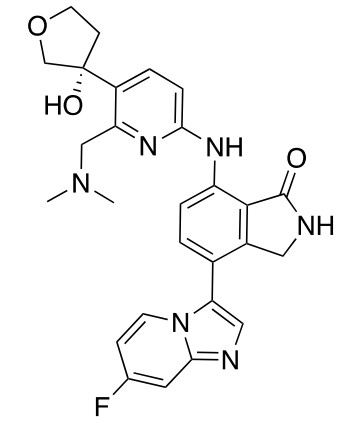
I-802



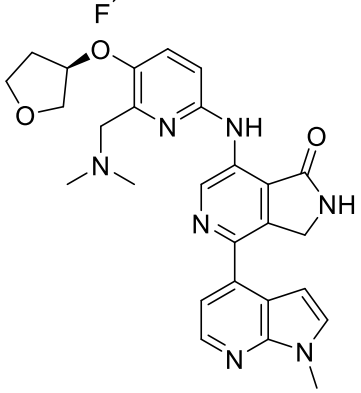
I-803



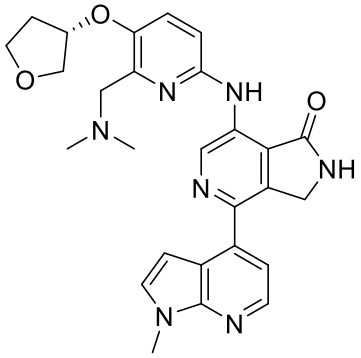
I-804



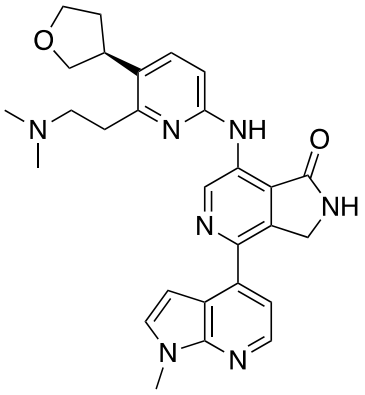
I-805



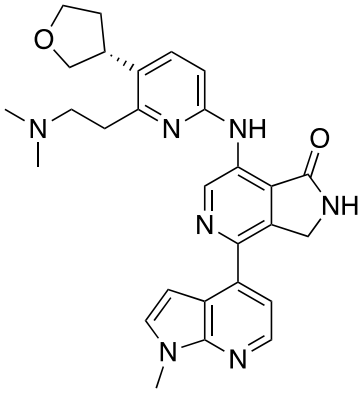
I-806



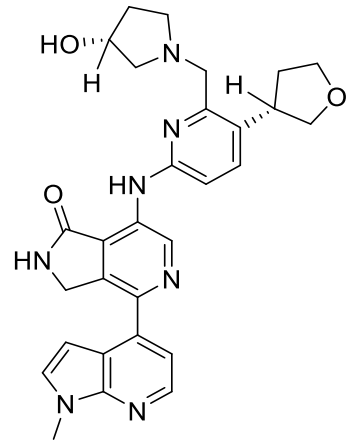
I-807



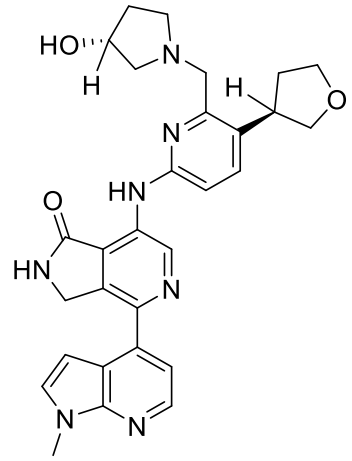
I-808



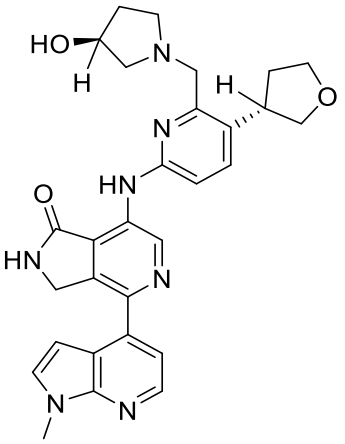
I-809



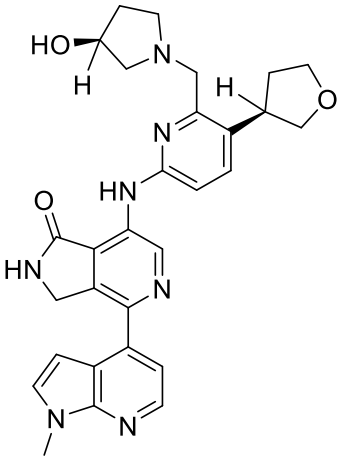
I-810



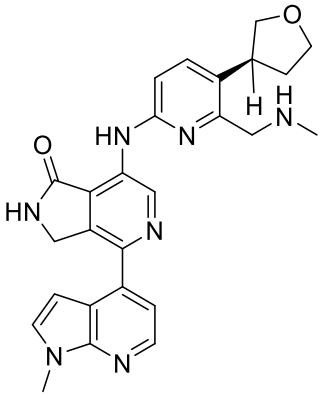
I-811



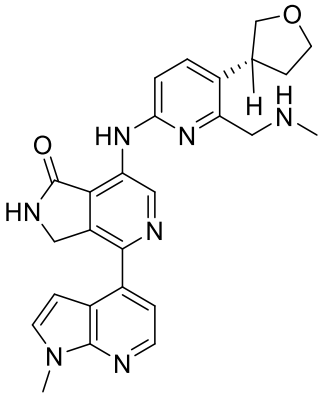
I-812



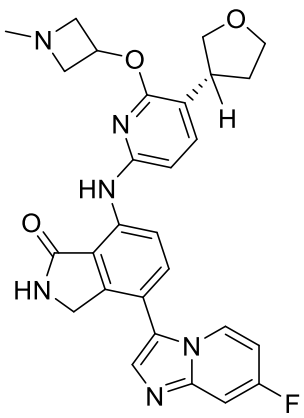
I-813



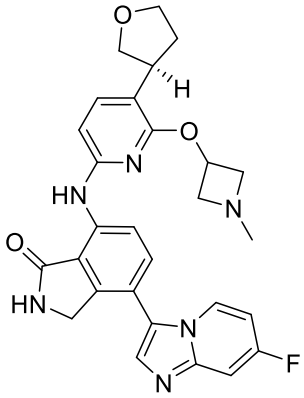
I-814



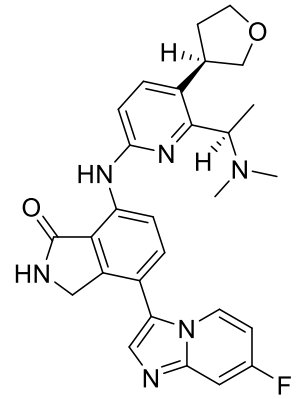
I-815



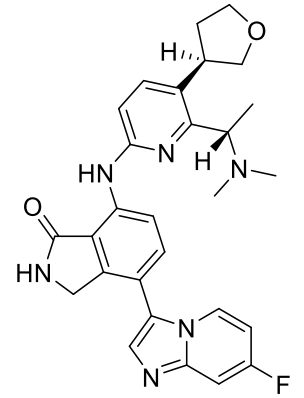
I-816



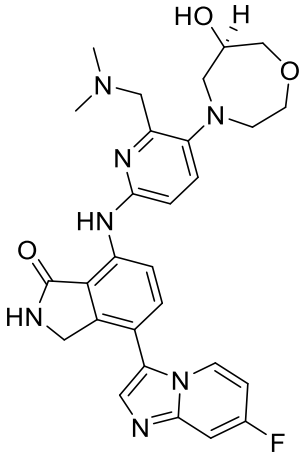
I-817



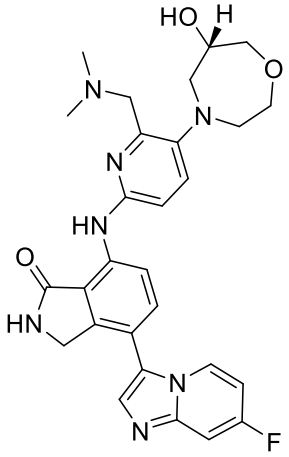
I-818



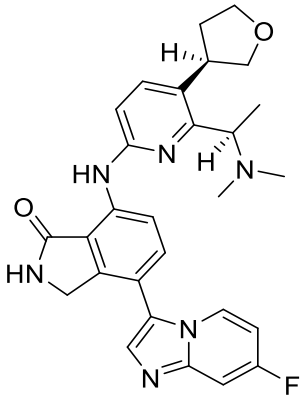
I-819



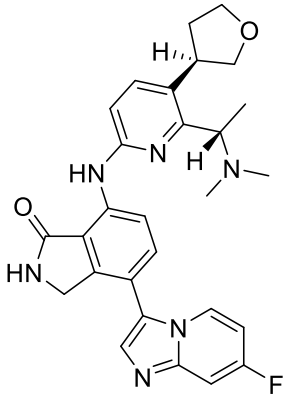
I-820



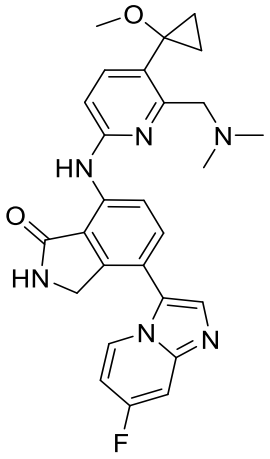
I-821



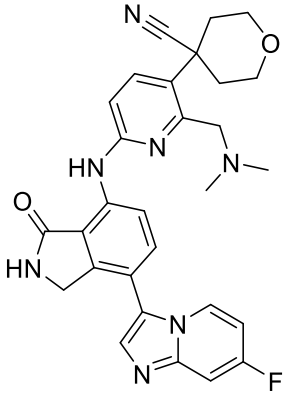
I-822



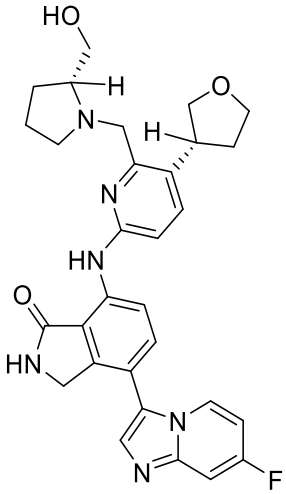
I-823



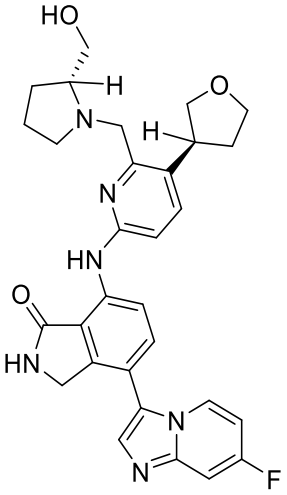
I-824



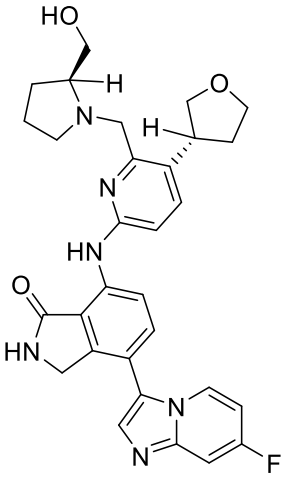
I-825



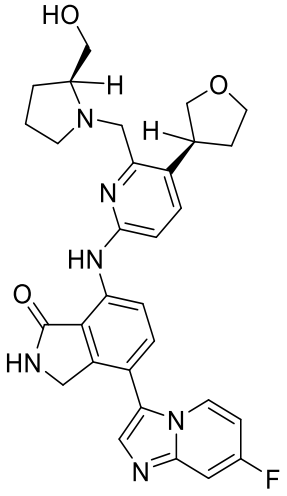
I-826



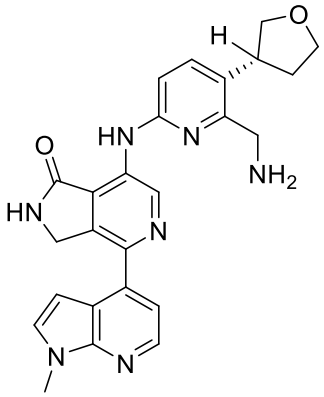
I-827



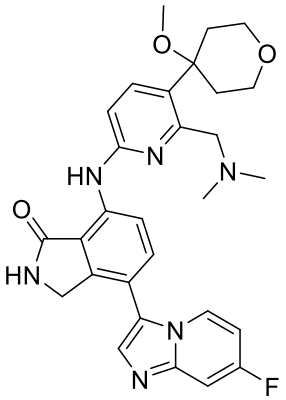
I-828



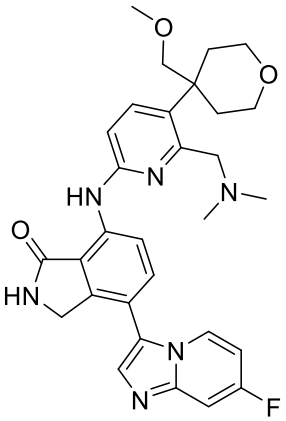
I-829



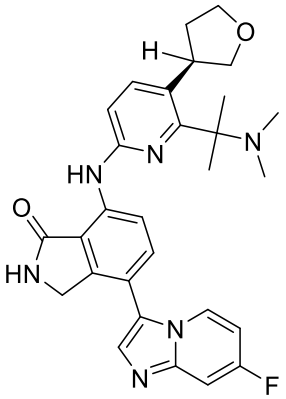
I-830



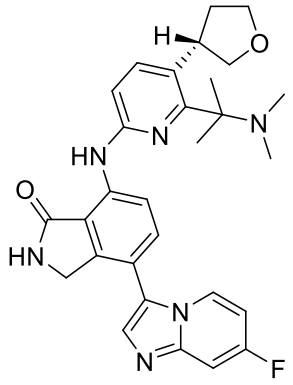
I-831



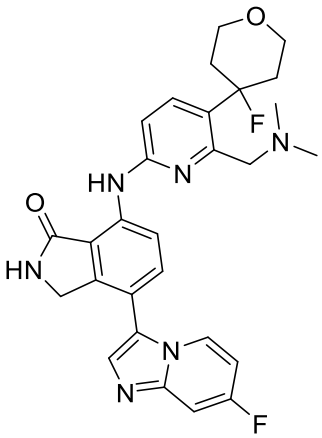
I-832



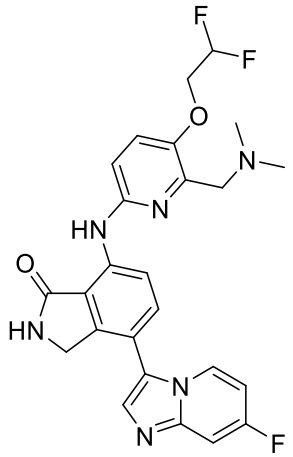
I-833



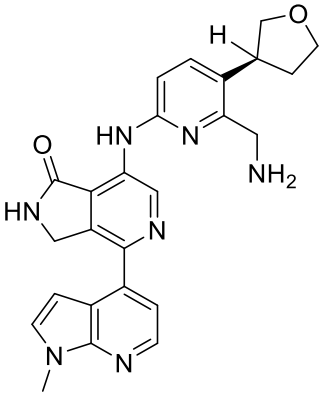
I-834



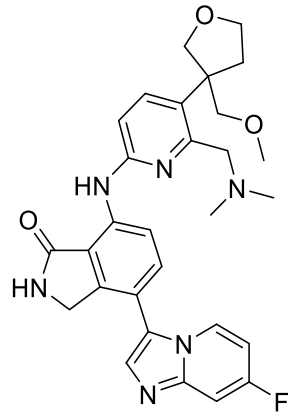
I-835



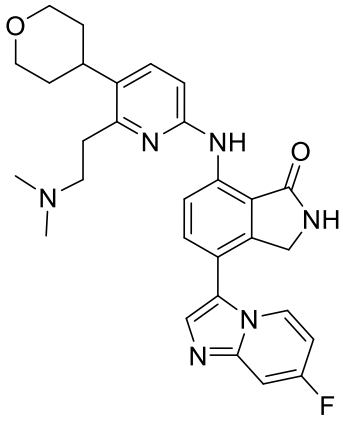
I-836



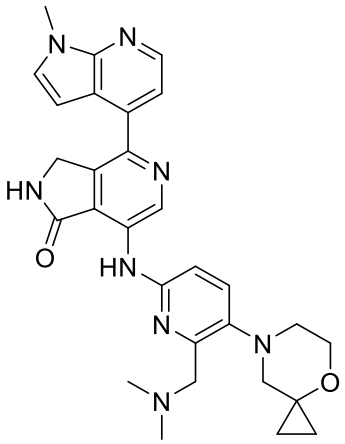
I-837



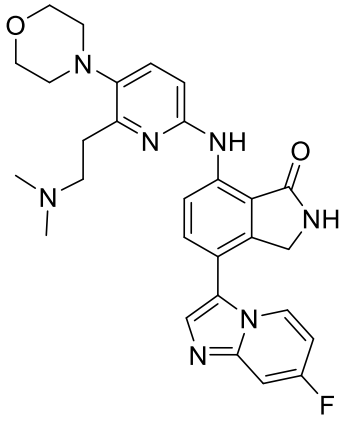
I-838



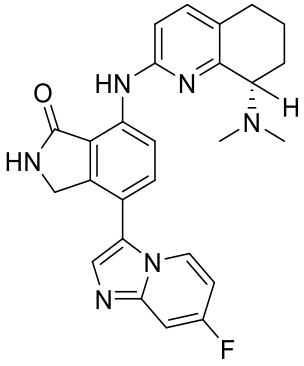
I-839



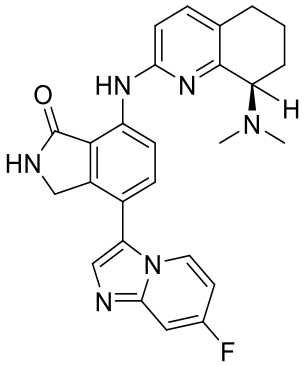
I-840



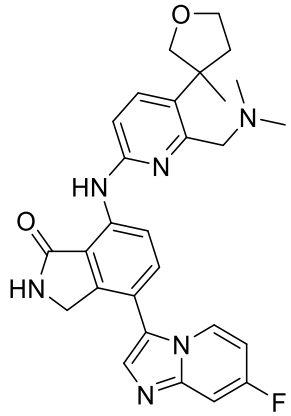
I-841



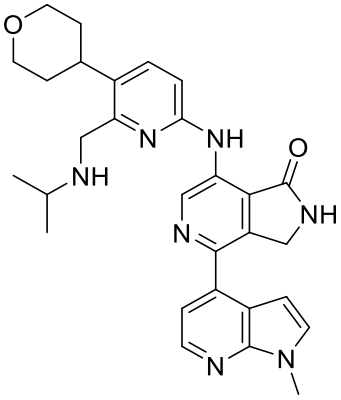
I-842



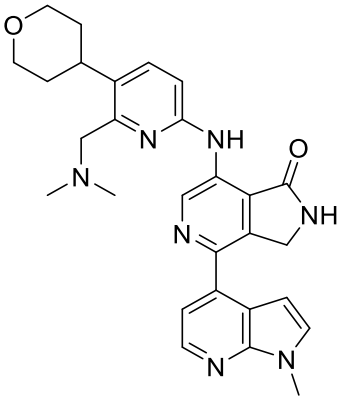
I-843



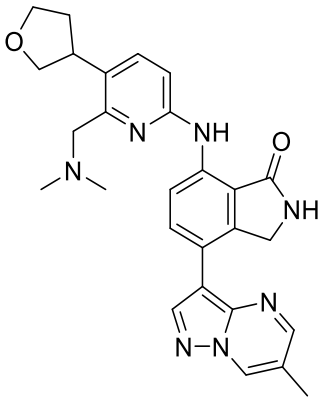
I-844



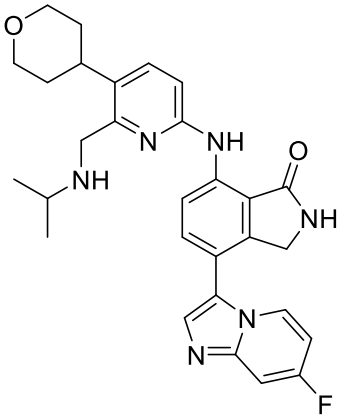
I-845



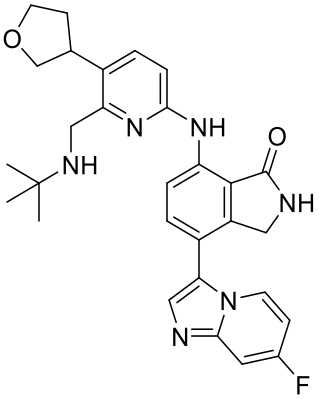
I-846



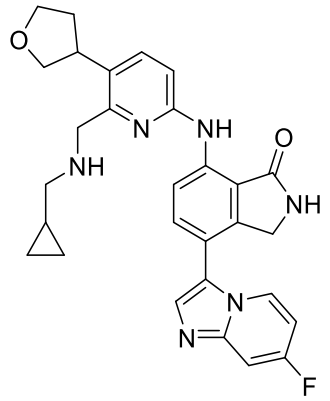
I-847



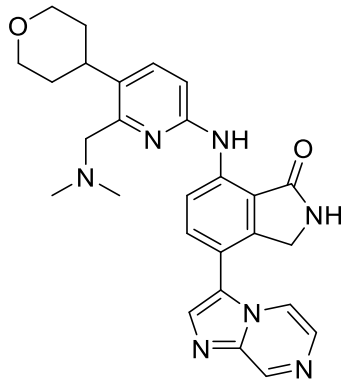
I-848



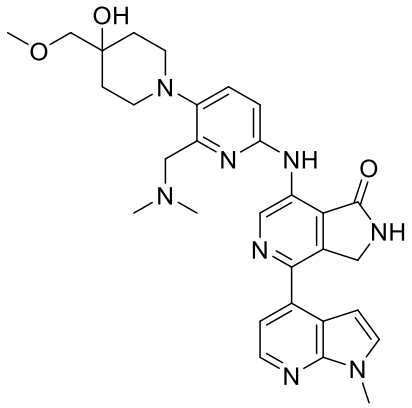
I-849



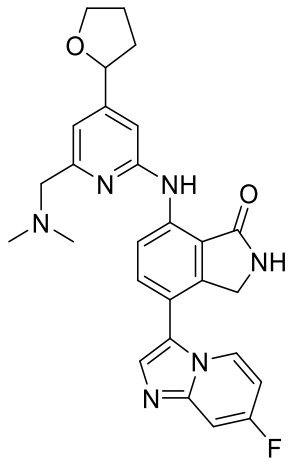
I-850



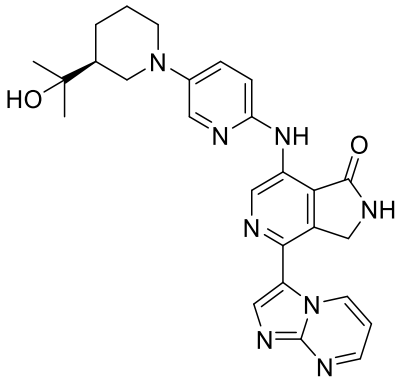
I-851



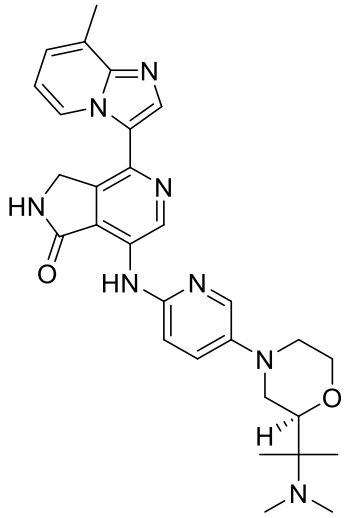
I-852



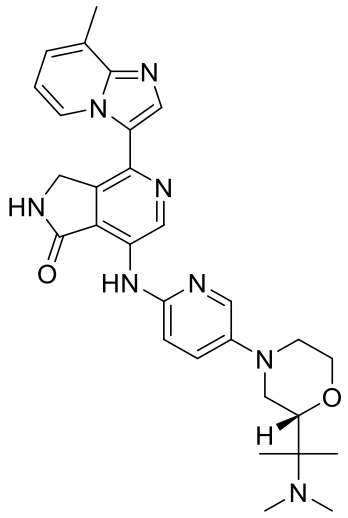
I-853



I-854



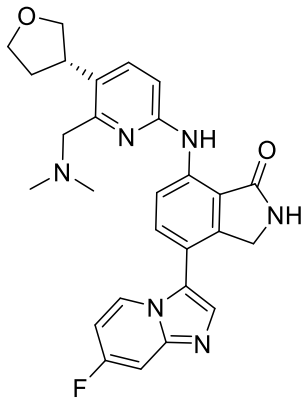
I-855



or a pharmaceutically acceptable salt thereof.

19. The compound of any one of claims 1-18, wherein the compound is:

I-479

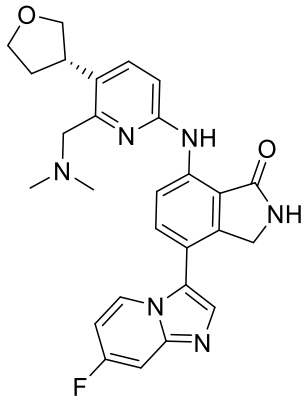


or pharmaceutically acceptable salt thereof.

20. A pharmaceutical composition comprising a compound according to any one of claims 1-19, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

21. The pharmaceutical composition of claim 20, wherein the compound is:

I-479



or pharmaceutically acceptable salt thereof.

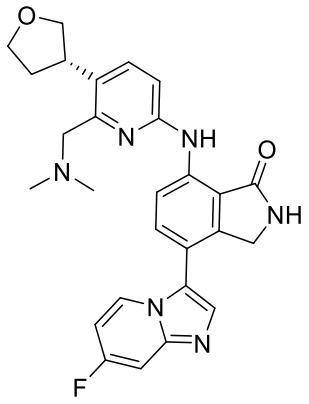
22. The compound of any one of claims 1-19, or the pharmaceutical composition of claim 20 or claim 21, for use as a medicament.

23. An *in vitro* or *ex vivo* method of inhibiting HPK1 in a biological sample comprising contacting the sample with the compound of any one of claims 1-19, or a pharmaceutically acceptable salt thereof, or the pharmaceutical composition of claim 20 or 21.

24. Use of a compound of any one of claims 1-19, or a pharmaceutically acceptable salt thereof, or the pharmaceutical composition of claim 20 or 21, in the manufacture of a medicament for treating a HPK1-mediated disorder, disease, or condition.

25. The method of claim 23 or the use of claim 24, wherein the compound is:

I-479



or pharmaceutically acceptable salt thereof.

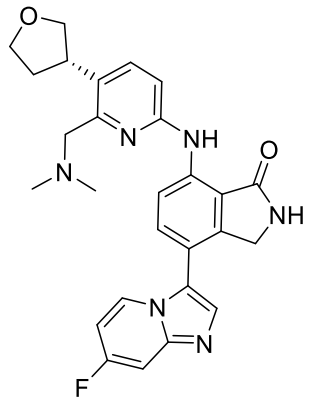
26. The use of claim 24 or claim 25, wherein the disorder is a proliferative disorder.

27. The use of claim 26, wherein the proliferative disorder is cancer.

28. The use of claim 26, wherein the proliferative disorder is associated with one or more activating mutations in HPK1.

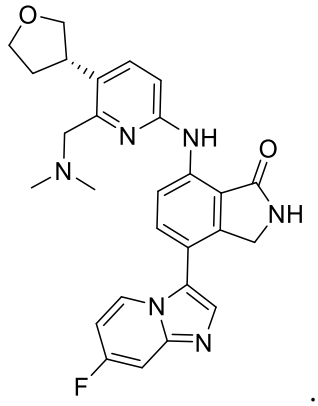
29. The use of claim 24 or claim 25, wherein the disease is a chronic viral infection.

30. A compound, wherein the compound is:

I-479 

or pharmaceutically acceptable salt thereof.

31. The compound of claim 30, wherein the compound is:

I-479 

.

32. A pharmaceutical composition comprising the compound of claim 30 or claim 31 and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

33. Use of the compound of claim 30 or claim 31, or the pharmaceutical composition of claim 32 in the manufacture of a medicament for treating an HPK1-mediated disorder, disease, or condition in a patient.

34. A compound of any one of claims 1-19 or 30-31, or a pharmaceutical composition of any one of claims 20-21 or 32, for use in therapy.