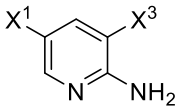
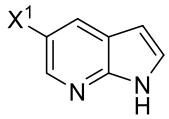
CLAIM

1. A method of preparing Compound (N), comprising:



(K)

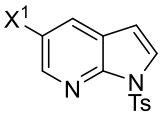
(q) reacting Compound (K) or a pharmaceutically acceptable salt thereof with acetaldehyde in the presence of a palladium catalyst to form Compound (M)



(M)

or a pharmaceutically acceptable salt thereof, wherein X^1 is independently -F or -Cl, and X^3 is -Br or -I; and

(p) tosylating Compound (M) or a pharmaceutically acceptable salt thereof to form



(N)

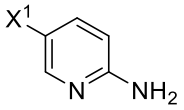
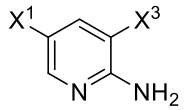
Compound (N).

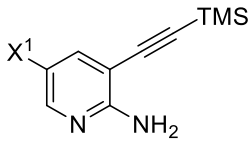
2. The method of claim 1, wherein the palladium catalyst of step (q) comprises a mixture of bis(dibenzylideneacetone) palladium and a tertiary phosphine ligand, PR_3, wherein R is $C_{1\text{-}6}$ alkyl or $C_{5\text{-}6}$ cycloalkyl.

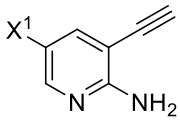
3. The method of claim 2, wherein the tertiary phosphine ligand, PR_3 is $P(^tBu)_3$, PCy_3, $P(i\text{-}Pr)_3$, $P(Bu_3)$, PEt_3, PMe_3, or any combination thereof.

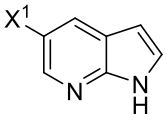
4. The method of either of claims 2 or 3, wherein the tertiary phosphine ligand comprises $P(^tBu)_3$.

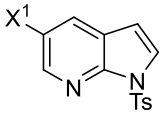
5. A method of preparing compound (N) comprising:

(1) reacting Compound (J)  **(J)** or a pharmaceutically acceptable salt thereof with an iodinating agent or a brominating agent to form Compound (K)  **(K)** or a pharmaceutically acceptable salt thereof, wherein X^1 is -F or -Cl, and X^3 is Br or I;

(m) reacting Compound (K) or a pharmaceutically acceptable salt thereof with trimethylsilyl acetylene to form Compound (L)  **(L)** or a pharmaceutically acceptable salt thereof, wherein TMS is trimethylsilyl;

(n) reacting Compound (L) or a pharmaceutically acceptable salt thereof with a C_{1-6} alkoxide base to form Compound (P)  **(P)** or a pharmaceutically acceptable salt thereof;

(o) reacting Compound (P) with potassium *tert*-butoxide, potassium *tert*-amylate, or any combination thereof to form Compound (M)  **(M)** or a pharmaceutically acceptable salt thereof; and

(p) tosylating Compound (M) or a pharmaceutically acceptable salt thereof to form Compound (N)  **(N)** .

6. The method of claim 5, wherein the C_{1-6} alkoxide base of step (n) comprises potassium *tert*-amylate, potassium *tert*-butoxide, potassium methoxide, sodium *tert*-amylate, sodium *tert*-butoxide, sodium methoxide, or any combinations thereof.

7. The method of either of claims 5 or 6, wherein the reaction of Compound (K) or a pharmaceutically acceptable salt thereof with trimethylsilyl acetylene in step (m) is performed in the presence of a palladium catalyst comprising $Pd(Ph_3P)_4$, $Pd(PPh_3)_2Cl_2$, $Pd(dppf)_2Cl_2$, or any combination thereof, a copper (I) halide catalyst, or any combination thereof.

8. The method of any one of claims 5-7, wherein the reaction of Compound (K) or a pharmaceutically acceptable salt thereof with trimethylsilyl acetylene in step (m) is performed in the presence of CuI, $Pd(Ph_3P)_4$, $Pd(PPh_3)_2Cl_2$, $Pd(dppf)_2Cl_2$, or any combination thereof.

9. The method of any one of claims 5-8, wherein the tosylation of step (p) is performed by reacting Compound (M) or a pharmaceutically acceptable salt thereof with TsCl.

10. The method of any one of claims 5-9, wherein Compound (J) or a pharmaceutically acceptable salt thereof is reacted with an iodinating agent comprising I_2, ICl, *N*-iodosuccinimide, and wherein X^3 is I.

11. The method of claim 10, wherein the iodinating agent is I_2.

12. The method of any one claims 5-9, wherein Compound (J) or a pharmaceutically acceptable salt thereof is reacted with a brominating agent comprising Br_2, *N*-bromosuccinimide, 1,3-dibromo-5,5-dimethylhydantoin, or any combination thereof, and wherein X^3 is Br.

13. The method of claim 12, wherein the brominating agent is Br_2.

14. The method of claim 1, further comprising treating the reaction mixture of step (q) with a carbonate base prior to the step (p) reaction.

15. The method of claim 14, wherein the carbonate base is Na_2CO_3.