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Structural-based design, synthesis, and antitumor activity of novel alloxazine analogues with potential selective kinase inhibition

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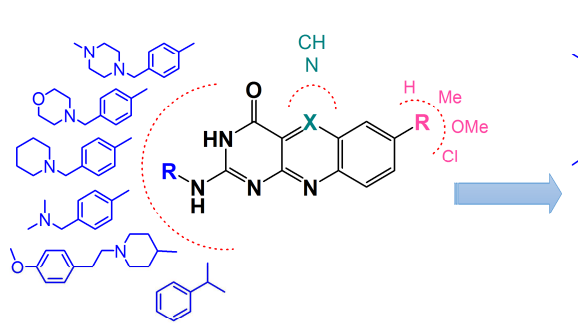
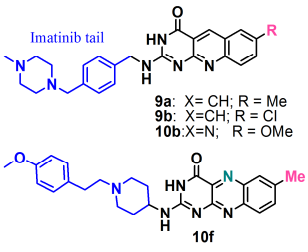


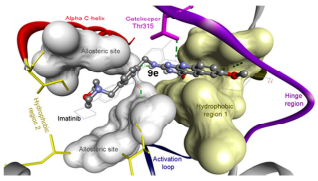
The structural features manipulated to improve PTKI selectivity and antitumor activity of of alloxazines and 5-deazaalloxazines



10f

IC50 value (μM)			
Compound	MCF-7	A2780	HCT116
9a	0.53	0.32	0.82
9b	0.62	0.54	0.72
10b	0.04	0.05	0.05
10f	0.16	0.20	0.17

Apoptosis assay (MCF-7)
10f: early apoptosis (5μM: 100.0%),(10μM: 130.0%),
All compounds: late apoptosis (1-10μM: 28-1180%)



PTK profiling
(% inhibition)
= -33% to -44% (Abl-1)
= -34% (CDK1/CyclinA1)
= -42 to -59% (FAK)