ACS Medicinal Chemistry Letters

PATENT HIGHLIGHT

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Pyrrolopyrimidine Analogues as MKNK Inhibitors

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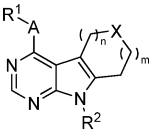
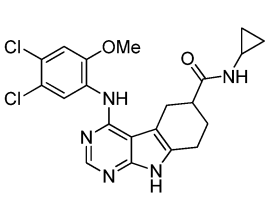
Title:	Pyrrolopyrimidine Analogues as MKNK Inhibitors		
Patent/Patent Application Number:	WO 2013/174743 A1	**Publication Date:**	Nov 28, 2013
Priority Application:	WO 2013-EP60232	**Priority Date:**	May 17, 2013
Inventors:	Klar, U.; Kettschau, G.; Suelzle, D.; Puehler, F.; Kosemund, D.; Lienau, P.; Boemer, U.		
Assignee Company:	Bayer Pharma, Germany		
Disease Area:	Cancer	**Biological Target:**	MKNK1

Summary: The present application claims a series of pyrrolopyrimidine analogues, which inhibit MKNK1 and MKNK2 kinases known to phosphorylate elF4E at Ser209. This phosphorylation step through MKNK protein activity can promote cellular proliferation and survival for malignant transformation. Compounds claimed in this patent could potentially be selective MKNK inhibitor and be useful for the development of new cancer therapies.

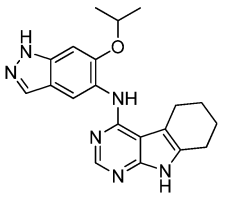
Important Compound Classes:



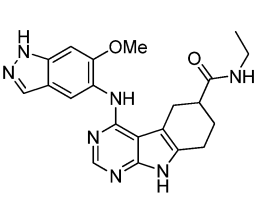
Key Structures:



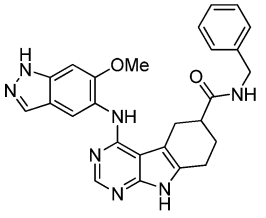
Compound 20



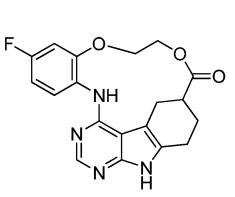
Compound 126



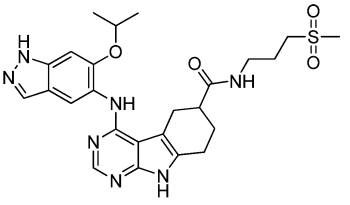
Compound 218



Compound 219



Compound 229



Compound 230

Recent Review Articles: Hou, J.; Lam, F.; Proud, C.; Wang, S. *Oncotarget* **2012**, *2*, 118−131.

Biological Assay: Compound inhibitory activity was evaluated using TR-FRET-based MKNK1 high ATP assay

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Pharmacological Data:

	MKNK1 TR-FRET binding (IC_{50}, nM)
Compound **20**	6
Compound **126**	5
Compound **218**	6
Compound **219**	1
Compound **229**	3540
Compound **230**	1

Synthesis: 238 compounds were synthesized

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Notes
The authors declare no competing financial interest.