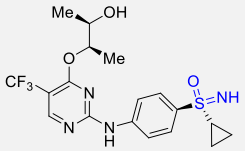
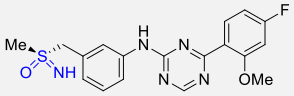
Sulfoximines for Drug Design

Introduction

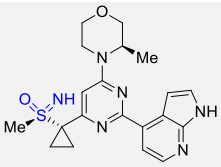
Incorporation of a sulfoximine group into bioactive compounds often improves their ADME/Tox profile, and enhances potency. Moreover, the moiety of sulfoximine is chemically and metabolically stable. NH-sulfoximines can serve as the both hydrogen bond donors and acceptors at the same time.[1-6] Production and commercialization of the building blocks that already contain a sulfoximine group allow significant accelerating discovery of drug candidates. Herein we have designed and synthesized a library of sulfoximines for drug design.



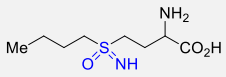
Roniciclib (BAY 1000394)
pan-CDK inhibitor
(Phase II)



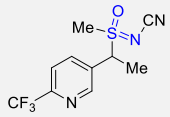
BAY 1143572
PTEFb Inhibitor
(Phase I)



AZD 6738
ATR Inhibitor
(Phase II)

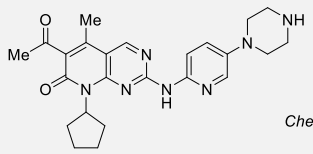


Buthionine sulphoximine
GCL inhibitor



Sulfoxaflor
Insecticide

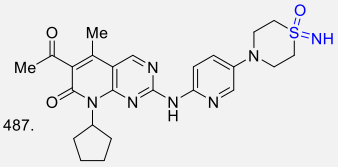
Design



Approved drug **Palbociclib**
Treatment of breast cancer
Pfizer

activity
selectivity

ChemMedChem. **2017**, 487.

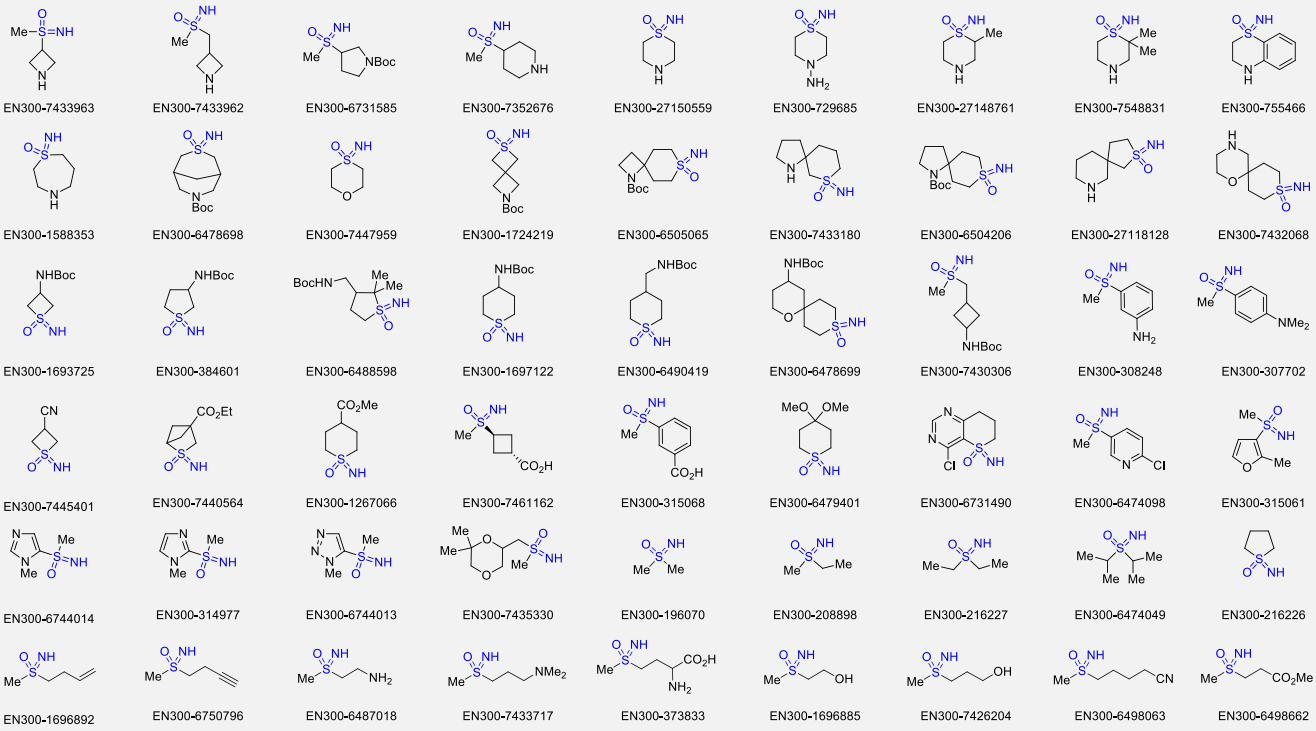


Sulfoximine analogue

Unique properties:

- chemical stability;
- metabolic stability;
- aqueous solubility.

We offer >100 unique sulfoximines on a 5-50 g scale from stock.



References

1. J. A. Sirvent et al. *ChemMedChem.* **2017**, 487.
2. M. Frings et al. *Eur. J. Med. Chem.* **2017**, 225.
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4. S. Park et al. *Bioorg. Med. Chem. Lett.* **2011**, 4888.
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