Vorinostat, a novel drug against metastasis
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Introduction
On October 6, 2006, the U.S. Food and Drug Administration granted approval to vorinostat (Zolinza), a histone deacetylase inhibitor, for the treatment of cutaneous manifestations of cutaneous T-cell lymphoma (CTCL) in patients with progressive, persistent, or recurrent disease on or following two systemic therapies.

Interaction with target
Vorinostat binds to the active site of the class I and IIa HDACs, inhibiting its activity.

IC50 < 86 nM

Adverse effects
Vorinostat presents mild adverse effects:

- diarrhea, vomiting, thrombocytopenia and dehydration.

Efficacy
The major trial supporting approval was a single-arm open-label trial that enrolled 74 patients with stage IB and higher CTCL who had failed two systemic therapies. In this study, 30% experienced responses. Vorinostat shows promising effectiveness in combination with other therapies.

Conclusions
- Vorinostat is able to stop the metastasis through the inhibition of HDACs.
- Vorinostat is able to inhibit EMT stopping cancer progression.
- Vorinostat action mechanism is very complex and involves several signalling pathways.
- Vorinostat may be a good candidate as an anticancer drug.

References