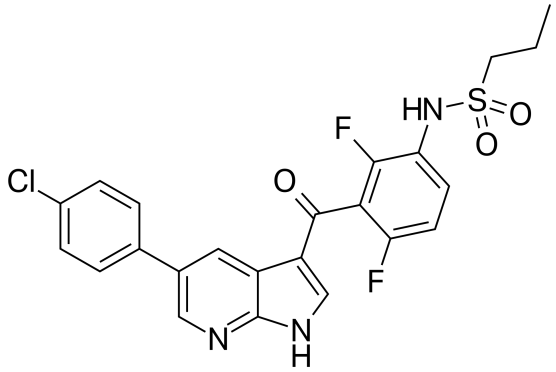
Brand Name: Zelboraf
Generic: vemurafenib
Type: small molecule
Year Accepted/Phase: 2011

Mechanism:

Valganciclovir is a prodrug of ganciclovir, which inhibits viral DNA replication by interfering with viral DNA polymerase.

Chemical Structure:



Indication:

Zelboraf is primarily used for the treatment of patients with BRAF V600E mutation-positive metastatic melanoma. It may also be used in combination with other targeted therapies, such as cobimetinib, to enhance its efficacy.

Clinical trials:

BRIM-3 Trial (Phase III)
Pubmed: https://pubmed.ncbi.nlm.nih.gov/21639808/
Purpose: Evaluate the efficacy and safety of vemurafenib compared to dacarbazine in patients with previously untreated, BRAF V600E mutation-positive metastatic melanoma.
Dates: Results published in 2011.
Results: Vemurafenib significantly improved overall survival (OS) and progression-free survival (PFS) compared to dacarbazine. This trial led to the FDA approval of Zelboraf for the treatment of BRAF V600E mutation-positive metastatic melanoma in August 2011.

BRIM-2 Trial (Phase II)
Pubmed: https://ascopubs.org/doi/10.1200/jco.2011.29.15_suppl.8509
Purpose: Assess the efficacy and safety of vemurafenib in patients with previously treated, BRAF V600E mutation-positive metastatic melanoma.
Dates: Results published in 2010.
Results: Vemurafenib demonstrated a high response rate, with significant tumor shrinkage observed in a substantial proportion of patients. This study provided further support for the use of vemurafenib in BRAF-mutant metastatic melanoma.

BRIM-7 Trial (Phase Ib)
Purpose: Evaluate the safety and preliminary efficacy of vemurafenib in combination with cobimetinib (a MEK inhibitor) in patients with BRAF V600E or V600K mutation-positive metastatic melanoma.
Dates: Results published in 2014.
Results: The combination of vemurafenib and cobimetinib showed promising antitumor activity with manageable safety profiles, leading to further investigation in Phase III trials.

COBRIM Trial (Phase III)
Pubmed: https://pubmed.ncbi.nlm.nih.gov/27480103/
Purpose: Compare the efficacy and safety of vemurafenib combined with cobimetinib versus vemurafenib alone in patients with BRAF V600 mutation-positive metastatic melanoma.
Dates: Results published in 2014.

Results: The combination of vemurafenib and cobimetinib significantly improved progression-free survival and overall survival compared to vemurafenib alone. This led to the FDA approval of the combination therapy in November 2015.