

# HiPub (<http://hipub.korea.ac.kr>) installation

- Install Chrome browser:  
<https://www.google.com/chrome/browser/desktop/>
- Install the HiPub plugin:  
<https://chrome.google.com/webstore/detail/hipub/jlbmiklemigmbmcodhjgdpooldjcjam>
- Test installation:  
<https://www.ncbi.nlm.nih.gov/pubmed/24009732>
  - You should see an annotated title and abstract when you go to the PubMed page above as shown on the next slide

Format: Abstract

Send to

PLoS One. 2013 Aug 29;8(8):e73059. doi: 10.1371/journal.pone.0073059. eCollection 2013.

## The conformational control inhibitor of tyrosine kinases DCC-2036 is effective for imatinib-resistant cells expressing T674I FIP1L1-PDGFR $\alpha$ .

Shen Y<sup>1</sup>, Shi X, Pan J.

Author information

### Abstract

The cells expressing the T674I point mutant of FIP1-like-1-platelet-derived growth factor receptor alpha (FIP1L1-PDGFR $\alpha$ ) in hypereosinophilic syndrome (HES) are resistant to imatinib and some second-generation tyrosine kinase inhibitors (TKIs). There is a desperate need to develop therapy to combat this acquired drug resistance. DCC-2036 has been synthesized as a third-generation TKI to combat especially the Bcr-Abl T315I mutant in chronic myeloid leukemia. This study evaluated the effect of DCC-2036 on FIP1L1-PDGFR $\alpha$ -positive cells, including the wild type (WT) and the T674I mutant. The in vitro effects of DCC-2036 on the PDGFR $\alpha$  signal pathways, proliferation, cell cycling and apoptosis of FIP1L1-PDGFR $\alpha$ -positive cells were investigated, and a nude mouse xenograft model was employed to assess the in vivo antitumor activity. We found that DCC-2036 decreased the phosphorylated levels of PDGFR $\alpha$  and its downstream targets without apparent effects on total protein levels. DCC-2036 inhibited proliferation, and induced apoptosis with MEK-dependent up-regulation of the pro-apoptotic protein Bim in FIP1L1-PDGFR $\alpha$ -positive cells. DCC-2036 also exhibited in vivo antineoplastic activity against cells with T674I FIP1L1-PDGFR $\alpha$ . In summary, FIP1L1-PDGFR $\alpha$ -positive cells are sensitive to DCC-2036 regardless of their sensitivity to imatinib. DCC-2036 may be a potential compound to treat imatinib-resistant HES.

PMID: 24009732 PMCID: PMC3756952 DOI: 10.1371/journal.pone.0073059

[Indexed for MEDLINE] [Free PMC Article](#)

### Full text links



### Save items

Add to Favorites

### Similar articles

Antitumor activity of S116836, a novel tyrosine kinase inhibitor, against imatin [Oncotarget. 2014]

Cyclin-dependent kinase 7/9 inhibitor SNS-032 abrogates FIP1-like-1 ple [Clin Cancer Res. 2012]

Ponatinib efficiently kills imatinib-resistant chronic eosinophilic leukemia cells ha [Mol Cancer. 2014]

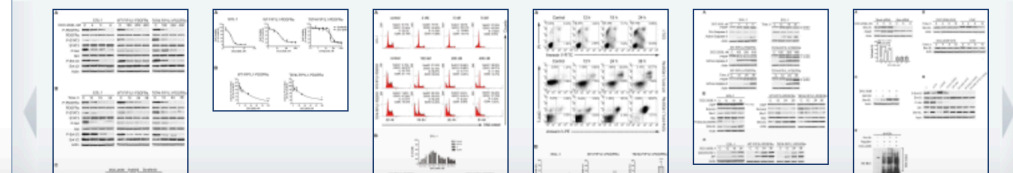
**Review** [FIP1L1-PDGFR $\alpha$  positive chronic eosinophilic [Zhonghua Xue Ye Xue Za Zhi. 2013]

**Review** The FIP1L1-PDGFR $\alpha$  fusion tyrosine kinase in hypereosinophilic [Blood. 2004]

See reviews...

See all...

### Images from this publication. See all images (7) [Free text](#)



### Cited by 5 PubMed Central articles

Verteporfin induces apoptosis and eliminates cancer stem-like cells ir [Am J Cancer Res. 2016]

**Review** The Role of New Tyrosine Kinase Inhibitors in Chronic Myeloid Leu [C

**Review** Platelet-derived growth fact

HiPub

# xMWAS (<https://github.com/kuppal2/xMWAS>) installation

- Install R: <https://cran.cnr.berkeley.edu/>
- Install R package devtools
  - R command for installation:  
**install.packages("devtools")**
- Install R package xMWAS
  - R command for installation:  
**library(devtools); install\_github("kuppal2/xMWAS")**
- Test installation:
  - R command for loading the package:  
**library(xMWAS)**