

Table 2 Comparison of key biochemical properties of the guanosine analogues aciclovir and penciclovir which are produced *in vivo* by their respective prodrugs, valaciclovir and famciclovir

| | Famciclovir | Valaciclovir |
|---|---|--|
| Oral absorption and blood pharmacokinetics parental compounds and production of PCV and ACV are similar | | |
| | Penciclovir | Aciclovir |
| HSV1 thymidine kinase | High affinity ($K_i = 1.5 \mu\text{m}$) | Low affinity ($K_i = 173 \mu\text{m}$) |
| HSV1 DNApol | Low affinity ($K_i = 8.5 \mu\text{m}$) | High affinity ($K_i = 0.07 \mu\text{m}$) |
| Stability of triphosphate | Long ($t_{1/2} = 10 \text{ h}$) | Short ($t_{1/2} = 0.7 \text{ h}$) |
| DNA chain terminating | Rapid | Obligate |