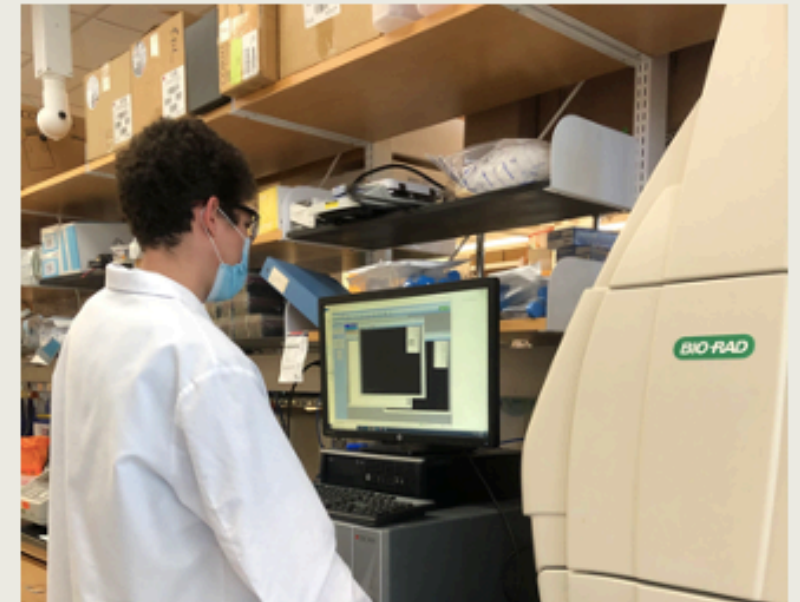


KYNURENINE METABOLISM INDUCES HIV LATENCY DISRUPTION AND ACSS2- ASSOCIATED HISTONE CROTONYLATION

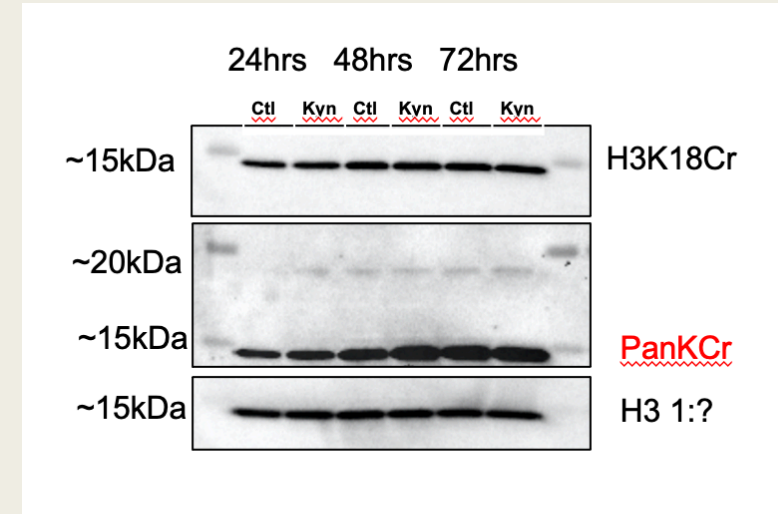
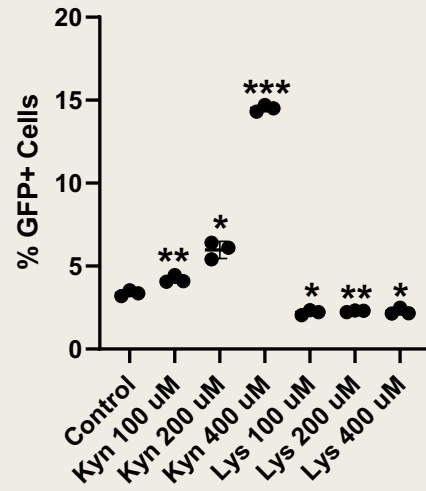
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Does kynurenine metabolism play a role in HIV latency disruption?

- HIV-1 is the virus that causes AIDS which, left untreated, can cause death. However, the disease remains incurable due to the virus' ability to incorporate its genetic code into immune cells and remain in a latent state. For this reason, current treatments fail to completely purge the virus from the host.
- Kynurenine, a tryptophan metabolite, has been shown to interact with transcription factors to enable transcription. It can also generate Crotonyl-CoA, an enzyme involved in epigenetic regulation. It can provide a possible route of HIV latency disruption.

Results



- Kynurenine induces latency reversal, as indicated by increased GFP expression in the infected cell lines. It also induces increased levels of crotonylation and proteins involved in crotonylation. The mechanism through which this happens remains unknown.
- These results can encourage future studies into the specific mechanisms at play. Where is crotonylation occurring? What molecules is kynurenine interacting with?
- Finding effective latency reversal agents will be key in developing a treatment to cure HIV positive patients.