Docket #: S20-360

Targeted Cancer Therapy for the Treatment of Cancers That Have Mutations in the HAT1 Holoenzyme Complex

Stanford researchers have developed a platform for identifying highly specific modulators of cancer-associated mutant Histone Acetyltransferase 1 (HAT1) holoenzyme complexes. Cancer, a disease of unregulated cell division, is one of the leading causes of death world-wide and new targeted treatment options would be invaluable tools in combating the disease. The HAT1 holoenzyme complex is involved in the replication-dependent assembly of chromatin through the stimulation of histone protein synthesis and the acetylation of those newly synthesized histone proteins. Recent research by the inventors has demonstrated that these functions of the HAT1 holoenzyme complex are intertwined with the nutrient-sensing that regulates cell division. Additionally, they discovered that HAT1 expression is associated with poor prognosis in several cancers, and that many cancers exhibit frequent mutations in the HAT1 holoenzyme complex. This novel platform enables high-throughput screening, with flexible readouts, for the discovery of therapeutic modulators of cancer-specific mutant HAT1 holoenzyme complexes.

Applications

- Cancer therapeutic discovery
- Therapeutics targeting cancer-specific mutant HAT1 holoenzyme complex

Advantages

- Novel modality

- High specificity
- Flexible assay readout

Publications

- HAT1 Coordinates Histone Production and Acetylation via H4 Promoter Binding

Innovators

- Joshua Gruber
- Harry Gruber

Licensing Contact

Hyunjin Kim

Licensing Manager, Life Sciences

Email