

Kinase Inhibitors Optimized for Lung, Pancreatic, and Colon Cancer Therapy

Track Code: 2020-SINT-69073

Categories:

- Pharmaceuticals

Keywords:

- Lung Cancer
- Pharmaceuticals

Purdue University researchers have synthesized kinase inhibitors that display potent anti-proliferative effects when dosed into lung, pancreatic, and colon cancer cells. Overactive kinases are a primary driver of cancer cell proliferation. Accordingly, many chemotherapeutic regimens contain kinase inhibitors; however, current kinase targeting compounds are not effective in treating aggressive forms of lung, pancreatic, and colon cancers. Purdue University researchers have optimized previously identified kinase inhibitors to achieve a higher potency against many lung, pancreatic, and colon cancer cell lines. These compounds were tested against the NCI-60 cancer cell panel and have low sub micromolar GI50 values. For example, the GI50 against some colon cancers are as low as 5 nM. These compounds also have IC50 values of 25 nM against proliferation of the MiaPaCa-2 pancreatic cancer cell line. The potency of the compounds toward multiple aggressive cancer cell lines makes them promising cancer therapeutic candidates for future development.

Technology Validation: The compounds were tested against the NCI-60 cancer cell line panel and exhibit nanomolar GI50 values in some cell lines.

Advantages

- Inhibits Growth of Multiple Cancer Cell Lines
- Increased Potency versus Previously Identified Molecules

Applications

- Cancer Therapies
- Cancer Relapse
- Kinase Inhibitors

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Intellectual Property:

Application Date: June 24, 2020

Type: Provisional-Patent

Country of Filing: United States

Patent Number: (None)

Issue Date: (None)

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