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# Chimeric Kinase Inhibitors with Increased Activity

Tech ID: 30509 / UC Case 2019-123-2

## INVENTION NOVELTY

This invention describes newly generated kinase inhibitors that demonstrate enhanced and attenuated action over their parent kinase inhibitors. These molecules can be used alone but, when combined with novel blocking molecules, the action of these chimeric kinases can be targeted for action in the central nervous system (CNS).

## VALUE PROPOSITION

Kinase inhibitors are used to treat many diseases including: leukemia, breast cancer, Parkinson’s disease and epilepsy. This technology modifies existing kinase inhibitors such as dasatinib, (which crosses the blood-brain barrier), lapatinib (for brain tumor indications), and GNE-7915 (which is used to treat Parkinson’s) by linking them to certain binding ligands that provide them with properties such as greater efficacy and longer dwell time. This novel invention provides the following advantages: 1) They increase the efficacy of known mTOR, EGFR, LRRK2 and KRAS inhibitors. 2)Chimeras have prolonged residency time in cells over parent kinase inhibitors. 3) They can be directed to the CNS when combined with novel blocking compounds (disclosed in SF2019-124). 4) These compounds are expected to have decreased systemic toxicity and improved target specificity when combined with novel blockers.

## TECHNOLOGY DESCRIPTION

Medicinal chemists at the University of California, San Francisco have generated chimeric kinase inhibitors that have greater efficacy than the known compounds they are based on. By combining existing kinases with novel blocking compounds, these kinases can be directed to the CNS, preventing their action in the periphery.

## APPLICATION

Treatment of a broad range of cancers Treatment of Parkinson’s disease and other CNS diseases

## LOOKING FOR PARTNERS

To develop and commercialize this technology for therapeutic uses.

## STAGE OF DEVELOPMENT

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### OTHER INFORMATION

#### KEYWORDS

small molecule, oncology,  
  
Parkinson's, kinase inhibitors

#### CATEGORIZED AS

- ▶ Medical
  - ▶ Disease: Cancer
  - ▶ Disease: Central Nervous System
  - ▶ Therapeutics

#### RELATED CASES

2019-123-2, 2019-124-1

Pre-clinical

DATA AVAILABILITY

Under NDA/CDA

PATENT STATUS

Patent Pending

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