Kras Conditional Knockout Allele

WARF: P210181US01

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in a mouse model for studying cancer.

Overview

Differentiation of normal stem cells into the correct cell lineage is a tightly controlled process that involves cell-cell and cell-extracellular matrix interactions as well as signaling through cellular receptors. When this process is disrupted, cell division may occur rather than differentiation leading to tumor formation. Studying gene expression patterns in tumor cells provides potential genetic causes for the uncontrolled cell division. Using these genes, researchers can mimic the genetic triggers in cultured cells creating research tools for studying cancer.

The Invention

A UW-Madison researcher has developed a mouse model for studying cancer in which the gene encoding Kras, a gene associated with cancer, can be knocked out conditionally. The researcher flanked the gene with LoxP sites, so upon expression of Cre recombinase, gene expression is knocked out. The researcher has both the gene construct and Kras knockout mice.

Applications

- Conditionally knock out Kras in mice using the Cre-Lox system
- Research tools companies could sell the mice or gene construct.
- Cancer drug screening programs

Key Benefits

- Allows for tissue/cell specific knockout of Kras, which plays an important role in development and cancer biology
- Could serve as a control for developing Kras-specific or oncogenic Kras-specific reagents

Additional Information

For More Information About the Inventors

- Jing Zhang

Tech Fields

- Drug Delivery : Other drug delivery technologies
- Research Tools : Genomics & proteomics

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854