

Corporate Video Focuses on Transforming Cancer Therapies

Innovative drug developer Tosk creates video on promising battle against cancer

MOUNTAIN VIEW, CALIFORNIA, USA, June 6, 2019 /EINPresswire.com/ -- Tosk, Inc. announced today the release of a new video describing the company's work and proprietary technology intended to transform the treatment of cancer and other diseases,

The video focuses on four drugs that the company is developing, including one that successfully completed a recent human trial on 25 head and neck cancer patients. This drug, known as TK-90, prevented mucositis, a painful, debilitating and potentially life-threatening side effect of several front-line cancer drugs and radiation therapy. The

video can be viewed at: <https://www.youtube.com/channel/UCGp6O1YPAslkiwAGX7LhO-Q>

The 2 minute, 28 second video illustrates how Tosk's scientists developed proprietary technologies that harness the common fruit fly (*Drosophila melanogaster*) in their discovery efforts. "The fruit fly has played a long and important role in scientific research," according to



Drug developer Tosk, Inc.,

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Brian Frenzel, CEO, Tosk, Inc.

Tosk's CEO Brian Frenzel, a well-known biopharmaceutical entrepreneur. Frenzel points out that six Nobel prizes in medicine or physiology have been awarded to 10 scientists based on their research using the fruit fly, half of them since 2004, the latest in 2017. Tosk, like the Nobel prize winners, uses the fruit fly because it has surprising similarities to humans at the genetic and molecular levels. Nearly 70 percent of human disease-related genes have analogs in *Drosophila*. And because the life cycle of the fruit fly is short, only 50 days from birth to death and only two weeks from birth to adulthood, drug discovery in flies can be done quickly and cost effectively.

“TK-90 is the first drug discovered in a fly to successfully complete a human clinical study,” Frenzel says. “It is, in the parlance of the US Food and Drug Administration, a ‘new chemical entity’, something that has never been tried as a drug treatment.” Tosk's scientists selected the drug using tests involving tens of thousands of candidate compounds. Each compound given to the flies was paired with a chemotherapeutic that would otherwise prevent eggs from hatching and developing. Compounds that increased survival of the flies' eggs and resulted in larva or mature fruit flies were considered "hits." The hits were then tested in cell culture models using human cancer cells to select "leads" that did not block the cancer killing efficacy of the chemotherapy. Tosk's researchers then used traditional rodent models to confirm safety, adverse effect prevention, and non-interference with the therapeutic effects of the cancer drug. With adverse effects eliminated, drugs fighting the cancer can be administered at higher doses and over a longer timeframe, offering patients an improved chance of a cure.

TK-90 is furthest along, but other breakthrough small molecule, relatively inexpensive drugs are not far behind, Frenzel emphasizes. Tosk's second drug, TK-39, which prevents the dose-limiting, permanent, and potentially fatal damage to the heart caused by doxorubicin and other widely used, frontline cancer therapies, is being prepped to enter human trials. Another side effect

preventing drug is TK-88, which prevents permanent kidney damage and hearing loss caused by widely used platinum-based drugs, such as carboplatin and cisplatin.

Tosk has a second revolutionary drug discovery platform that may be even more significant, Frenzel says. This drug screening method uses fruit flies with human cancer genes imbedded into their genome. The company is using this fly model to discover drugs to block the activity of human cancer genes. This program is sponsored by a \$2 million National Cancer Institute grant and addresses genes which drive over 30 percent of all cancers.

Each of the Tosk initiatives is covered in the new video.

Tosk, Inc. is a privately held biopharmaceutical company that discovers and develops new drugs to improve outcomes for cancer patients by preventing the adverse side effects of existing, widely-used cancer therapies and by blocking the activity of cancer genes. For further information on the company, see www.tosk.com.

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