



Hope Funds for Cancer Research

Press Release

Announces Newly Published Research in the journal *Cell* from Postdoctoral Fellow

For Immediate Release
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Newport, RI - July 3, 2015 - In a paper published online yesterday in the journal *Cell*, Hope Funds Fellow Wilhelm Palm working in the laboratory of Craig B Thompson at the Memorial Sloan-Kettering Cancer Center in New York describes the unexpected discovery that nourishment of cancer cells can be provided by proteins present in the extracellular environment.

Moreover, Dr. Palm and his colleagues show that the ability of cells to access such nutrients from their environment is controlled by a key regulator of growth factor signaling, mTORC1. This regulator has been a therapeutic target for various cancers but clinical trials with different inhibitors have so far not proved very effective. The results presented in this paper offer a new approach to using such mTOR inhibitors in combination with drugs that block the cellular uptake of protein nutrients from the environment.

"These findings not only advance our fundamental knowledge about how mammalian cells obtain essential nutrients but also provide a way forward for development of drug combinations to treat the most difficult of tumors" states Professor Bryan Willams, Co-Chair of Hope Funds Scientific Advisory committee.

The research published in the July 2, 2015 on-line issue of the journal *Cell*, describes this novel work.

To View Abstract of *Cell* Article, [Click Here](#).

About Wilhelm Palm, Ph.D.

Wilhelm Palm, Ph.D. is a postdoctoral fellow at Memorial Sloan-Kettering Cancer Center, in the laboratory of Craig Thompson, M.D. Dr. Palm's work observes that cancer cells require large amounts of nutrients to support their uncontrolled growth. While many oncogenes promote internalization of glucose and glutamine, it is a poorly understood feature of the Ras oncogenes to promote cellular eating of macromolecules. Drs. Palm and Thompson are investigating the ability of cells carrying Ras mutations to fuel their metabolism by consuming proteins present in plasma and lymph constitute omnipotent source of essential amino acids for Ras-transformed cells, which allows them to grow during nutrient-starvation conditions that are lethal to many other types of cancer. In the future, they will elucidate molecular mechanisms trans-scavenging extracellular proteins increases the metabolic resilience of Ras-transformed cells, which will be particularly important in the nutrient-poor microenvironment frequently observed in humans. This could open therapeutic awareness to treat Ras-driven cancers by limiting their access to nutrients or by selectively accumulating toxins in cancer cells.

Dr. Palm is the Hope Funds for Cancer Research Genentech Fellow.



Dr. Palm being presented the Genentech Hope Funds for Cancer Research named fellowship with Dr. Eugene Kennedy, Hope Funds Trustee.

About Hope Funds for Cancer Research

The Hope Funds for Cancer Research was formed in 2006 by a group of concerned individuals who have experience in oncology, intellectual property law, investment banking, philanthropy, sociology, and the arts to establish a funding vehicle that would take a rational scientific, medical, and investment approach to granting money to the most interesting and promising research efforts to address the most difficult-to-treat cancers, including pancreatic, lung, liver, sarcomas, esophageal, brain, gastric, and ovarian cancers. These cancers are insidiously aggressive illnesses that kill most of their victims within months, even with aggressive chemotherapy. The Trustees of the Hope Funds for Cancer Research believe that funding research that could lead to breakthroughs in these areas and increase life expectancy in these types of cancers is at the core of our mission. The Hope Funds for Cancer Research is a 509 (a)(1) charity under 501(c)(3) of the Internal Revenue Service's code. For additional information about the organization, please visit <http://www.hope-funds.org> or call 401-847-3286.

Hope Funds for Cancer Research: Advancing Innovative Research in Understudied Cancers

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