

UC San Diego's Karin Receives Prestigious Harvey Prize

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Scott LaFee

Michael Karin, PhD, Distinguished Professor of Pharmacology and Pathology at the University of California, San Diego School of Medicine has been awarded the 2010 Harvey Prize in human health by the Technion, Israel's premier institute of technology.

The prize honors Karin's seminal research linking obesity, inflammation and cancer. Specifically, judges noted Karin's "pioneering contributions" to the deciphering of the molecular mechanism used by mammalian cells to react to cytokines (proteins that cause inflammation), to adverse environmental conditions and to various pathogens. "These discoveries," the judges said, have "led to the identification of new target proteins that have recently been used to develop new medications for preventing and treating various malignant tumors."

Karin will accept the Harvey Prize at a ceremony at the Technion in Haifa, Israel on March 15, 2011, along with Alexander Polyakov, a theoretical physicist at Princeton University who is receiving the 2010 Harvey Prize for science and technology, based upon his work in quantum field theory. Each recipient will receive a \$75,000 cash award.

At UC San Diego, Karin and colleagues have long been interested in how cells and biological systems function at the molecular level in both healthy and stressed or diseased states. The research has broad, practical implications and applications, notably in issues like obesity and cancer.

"In addition to its well-known contribution to cardiovascular disease and metabolic disorders, such as type II diabetes, obesity has been found to increase cancer risk," said Karin. "Of all cancers, the one most affected by obesity is liver cancer, the third leading cause of cancer-related deaths worldwide. Our work has shown that obesity promotes the development of liver cancer through inflammatory mechanisms similar to those we elucidated earlier in colorectal cancer, another very common inflammation-promoted cancer."

Karin's lab has identified cytokines and responding transcription factors involved in these cancers. Drugs that inhibit activation of a key transcription factor called STAT3 are in development and slated for clinical trials soon.

The Harvey Prize has been awarded annually since 1972 to recipients in human health, science and technology, and for contributions to peace in the Middle East. It is named after Leo M. Harvey, an American industrialist who established the prize fund. To date, 13 Harvey Prize recipients have gone on to win a Nobel Prize.

Media Contact: Scott LaFee, 619-543-6163, slafee@ucsd.edu

