

Molecular pathway may help reduce damage after heart attack

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(Medical Xpress) -- UH Manoa's John A. Burns School of Medicine (JABSOM) Assistant Professor Michelle Matter and her colleagues in the Department of Cell and Molecular Biology and the Center for Cardiovascular Research have discovered a molecular pathway that may help reduce the damaging effects of an enlarged heart, caused by hypertension or a heart attack.

Enlargement of the [heart](#), called cardiac hypertrophy, stretches cardiac cells, causing the cells to release Vascular Endothelial Growth Factor (VEGF). VEGF helps protect cardiac function and keep cardiac cells alive.

“We have found that stretch of adult [cardiac cells](#) promotes release of VEGF through activation of the NFkB signaling pathway,” said Dr. Matter, an Assistant Professor of Molecular Biology. “Targeting this molecular pathway may alleviate the pathological effects of hypertrophy and increase survival of patients who have had a [heart attack](#) or suffer hypertension.”

Matter's research, conducted in conjunction with Dr. Eugene Konorev at the University of Hawai'i at Hilo, is published today in *PLoS ONE*, a peer-reviewed medical journal. The research was funded by the National Center for Research Resources, part of the National Institutes of Health.

More than 3,100 people in Hawai'i die of cardiovascular disease every year, according to The Burden of Heart Disease in Hawai'i, a report to

the Hawai'i State Department of Health (DOH).

Further, the report suggests as many as 70% of the adults in Hawai'i have at least one risk factor for cardiovascular disease, including diabetes, hypertension and obesity.

Residents of Hawai'i Island, Native Hawaiians, Filipinos, and the poor have higher risks for [cardiovascular disease](#), according the DOH report.

Ways to lessen your risk for heart disease include lowering high blood pressure, reducing high cholesterol, not smoking, engaging in more physical activity, managing diabetes, and controlling weight.

More information: Dr. Matter's paper is published on line at:
www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0029055

Provided by University of Hawai'i at Manoa

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