Adenosine kinase deficiency makes liver more susceptible to carcinogen

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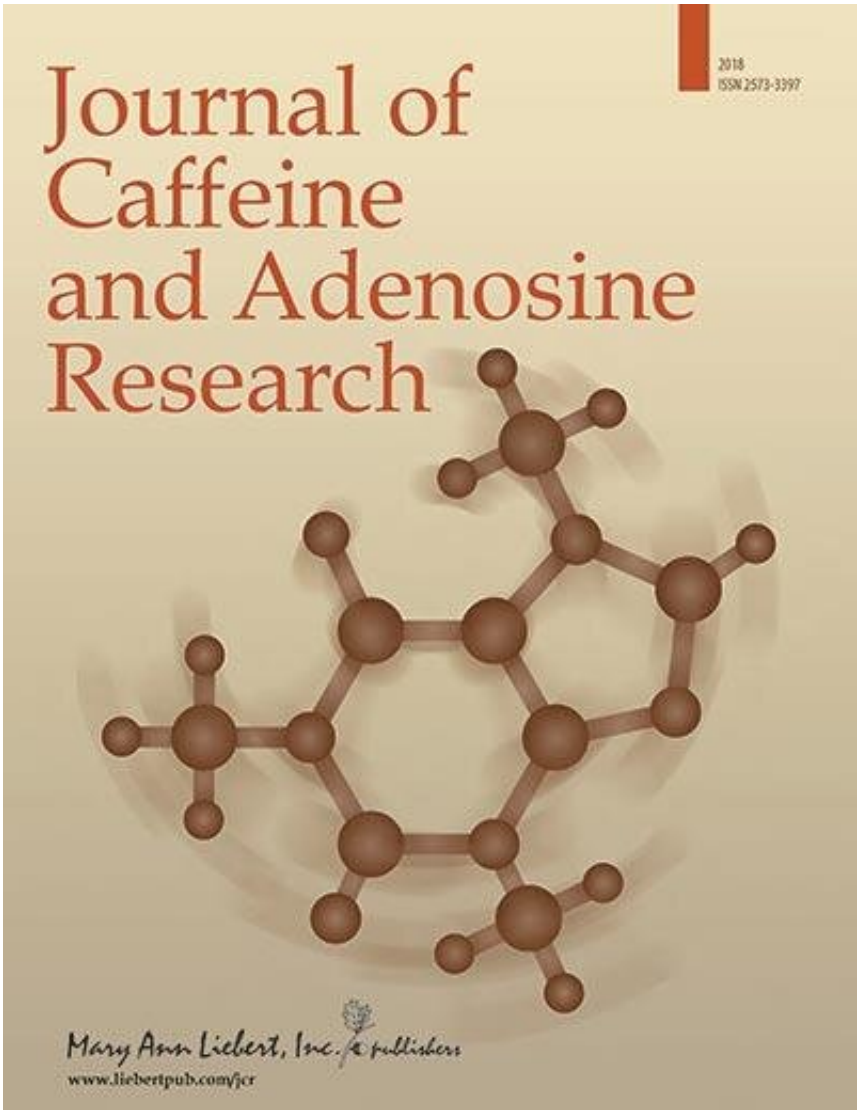

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A new study has shown that reduced adenosine kinase expression (ADK) in the liver can make it more susceptible to carcinogenic damage and the development of liver cancer. Combined results from the study of human liver cancer samples and mice with reduced levels of ADK expression support these findings, reported in *Journal of Caffeine and Adenosine Research*.

In the article entitled "Adenosine Kinase Deficiency Increases Susceptibility to a Carcinogen," Rkia El-Kharrag, Ph.D., Randy Owen, BSc, and Detlev Boison, Ph.D., Legacy Research Institute, Portland, OR, showed that 64% of patients with liver cancer had lower ADK expression. ADK is highly expressed in the liver, where it regulates adenosine levels and is important in controlling hepatic metabolism. The researchers used transgenic technology to generate mice with reduced ADK expression and then exposed them to a carcinogen to study the effects on the animals' body weight and survival.

"These results might represent a very significant advance in the field. Further studies should confirm if adenosine kinase represents a new biomarker or a pharmacological target in liver cancer," says Editor-in-Chief of *Journal of Caffeine and Adenosine Research* Sergi Ferré, MD, Ph.D., and his research colleagues in the Integrative Neurobiology Section, National Institute on Drug Abuse, National Institutes of Health, Baltimore, MD.

More information: Rkia El-Kharrag et al, Adenosine Kinase Deficiency Increases Susceptibility to a Carcinogen, *Journal of Caffeine and Adenosine Research* (2019). DOI: 10.1089/caff.2018.0019

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