

A mouse model to evaluate potential age-promoting compounds

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While there are well-established mouse models to identify cancer-causing agents, similar models are not available to readily test and identify age-promoting agents. Recently, a mouse strain ($p16^{LUC}$ mice) was developed that can be used to evaluate the transcription of $p16^{INK4}$, which is increasingly expressed during aging and in age-associated diseases.

In this issue of the *Journal of Clinical Investigation*, Norman Sharpless and colleagues at the University of North Carolina evaluated potential age-promoting compounds, including arsenic, a high-fat diet, UV light, and [cigarette smoke](#) in $p16^{LUC}$ mice.

The authors found that a high fat diet did not accelerate $p16^{INK4}$ expression, but both UV light exposure and cigarette smoke exposure dramatically increased $p16^{INK4}$ expression compared to controls that had not been exposed to these age-promoting compounds.

This study demonstrates that $p16^{LUC}$ mice are an appropriate model system for evaluating potential age-promoting compounds.

More information: p16INK4a reporter mice reveal age-promoting effects of environmental toxicants, *J Clin Invest.* [DOI: 10.1172/JCI70960](#)

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