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Shining red mice help Czechs fight bowel cancer, skin disease

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Injected with a fluorescent protein to make them glow bright red, laboratory mice are helping Czech scientists better understand the causes behind intestinal cancers and skin diseases while leaving the rodents unscathed.

A research group at the Institute of Molecular Genetics at the Czech Academy of Sciences is using proteins obtained from sea organisms like coral to light up mice and observe cell development under their skin without having to kill them.

"We can take the mouse every day and place it under a camera monitoring the light," the group's head Radislav Sedlacek told AFP Wednesday.

"We can use it several times without killing it, and the data are very objective," he added.

So-called transgenic mice have their genetic backgrounds switched through simple injections or with the use of stem cells.

Sedlacek also plans to use glowing mice treated with several proteins at the same time, for a better monitoring of cellular processes.

"The red-green-blue combination is very good," he said, adding such mice would be used for example to monitor processes in the intestine to help with research into intestinal cancer, a disease that kills thousands of

Czechs every year.

"The intestinal wall is very dynamic, you have different processes there, and you can monitor them by switching one colour on and another one off," Sedlacek added.

Unlike traditional research techniques, this method does no harm to the mice if "we make sure the gene we insert does not harm another gene", Sedlacek said.