

In case of disaster: Blood test could 'fast screen' for radiation exposure

After a nuclear disaster like the one in Fukushima, Japan, in 2011, first responders need to quickly measure radiation exposure en masse and decide who requires urgent treatment. Existing tests are fast and accurate—but they rely on sophisticated laboratories, expensive machinery and meticulous work, says Dipanjan Chowdhury, a radiation oncologist at the Dana-Farber Cancer Institute. “We don’t have copious amounts of radiation drugs available” in such a situation, he adds. “So how do we decide who gets them?”

To address this question, Chowdhury and his colleagues are developing a simple assay that...detects levels of molecules called microRNAs (miRNAs) in blood and other bodily fluids.

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Chowdhury’s team members found that [a specific] radiation signature exists in monkeys (which are the best lab proxies for humans). Their study identifies seven miRNAs that fluctuate in both mice and macaques exposed to radiation. The monkeys were given lethal doses of...whole-body radiation, similar to levels inhaled by Fukushima workers. Together three of these miRNAs...can indicate with 100 percent accuracy whether a macaque has encountered radiation, and two...can predict whether the exposure will be fatal.

[Read the fully study [here](#) (behind paywall)]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Detecting Radiation Exposure with a Blood Test](#)