Travel to Mars: Can gene therapy help us clear deadly radiation hurdle?

An international group of researchers has come up with a new plan to help astronauts survive high-level radiation in space – and even get them to Mars without the deadly exposure expected during three years of space travel.

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Researchers with the artificial intelligence company Insilico Medicine Inc who teamed up with international scientists say discoveries in gene therapy and drug creation could be beneficial to future astronauts on deep space missions.

It is estimated that a return trip from Mars would expose astronauts to radiation doses of 600 mSv – a large proportion of the lifetime cap Nasa sets for space travellers of 800-1200 mSv.

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Part of the plan is to make some human cells radioresistant.

Scientists want astronauts to have personalized drugs tailor-made for their own bodies. To do this, they will have to use artificial intelligence to pinpoint which cells are more resistant than others, and fortify them using gene therapy.

Professor David Sinclair of UNSW School of Medical Sciences and Harvard Medical School Boston worked on a study last year that could lead to a drug development that improves the ability of DNA to repair itself and could also reverse aging.

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“No one has ever offered up nutritional or pharmaceutical modalities to protect against radiation for me specifically,” said [astronaut Scott] Kelly.

Read full, original post: Gene therapy may help astronauts going to Mars resist deadly radiation