Cancer Cells in Blind Mole Rats ‘commit suicide’

Curious Cat Science and Engineering Blog

Cancer cells in blind mole rats ‘commit suicide’
Blind mole rats don’t get cancer, and geneticists have worked out why — their cells kill themselves with a poisonous protein when they multiply too much.
Blind mole rats, which live in underground burrows throughout Southern and Eastern Africa, and the Middle East, are fascinating creatures. The naked mole rat, in particular, is the only cold-blooded mammal known to man, doesn’t experience pain, and is also arguably the only mammal (along with the Damaraland mole rat) to demonstrate eusociality — that is, they live in large hierarchical communities with a queen and workers, like ants or bees.

They’re also cancer-proof [1], which was found in 2011 to be down to a gene that stops cancerous cells from forming. The same team thought that two other cancer-proof mole rat species might have similar genes, but instead it turns out that they do develop cancerous cells — it’s just that those cells are programmed to destroy themselves if they become dangerous.

Very interesting research. The results of evolution are amazing. And while turning the medical research discoveries into workable treatments for people is very difficult the continued increase in our knowledge helps us find treatments that work.

Related: Webcast of a T-cell Killing a Cancerous Cell [2] – Synthetic Biologists Design a Gene that Forces Cancer Cells to Commit Suicide [3]

Source URL (retrieved on *07/28/2014 - 10:43am*):
http://www.ecnmag.com/blogs/2012/11/cancer-cells-blind-mole-rats-%E2%80%98commit-suicide%E2%80%99?qt-most_popular=0

Links:
[1] http://engineering.curiouscatblog.net/2009/10/28/the-only-known-cancerless-animal/
[2] http://engineering.curiouscatblog.net/2012/02/09/webcast-of-a-t-cell-killing-a-cancerous-cell/
[3] http://engineering.curiouscatblog.net/2011/09/04/synthetic-biologists-design-a-gene-that-forces-cancer-cells-to-commit-suicide/