

University of Minnesota lab aims to use simplified cells

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Education

A University of Minnesota lab is working to use simplified versions of cells to study dangerous diseases in detail, test new drugs or even define life on other planets.

Man-made molecules that mimic cells but aren't alive could be used to study illnesses that kill natural life, according to [the Minnesota Daily](http://bit.ly/2etSCdy). (<http://bit.ly/2etSCdy>)

Genetics, cell biology and development assistant professor Kate Adamala said researchers often infect cells with a disease in a controlled environment, such as a petri dish, when they try to study how diseases work. But the cell will kill the disease and not let it reproduce because they're alive and taken from the body.

Adamala said cells created in a lab lack this natural defense and instead absorb and reproduce the DNA they're given. By having the cells host the diseases without fighting back, researchers can study the disease longer and in its later stages.

Aaron Engelhart, who holds the same job title as Adamala, said researchers are able to study the diseases' progression by using fluorescent dyes that attach to molecules and allow machines to track them. Engelhart said the dye sometimes has trouble working in living cells, so using synthetic cells could help the dye prove more effective.

"In a lot of these (diseases) a lot of work's been done, but because some of these tools weren't available until recently, it's been difficult to track (them)," Engelhart said.

Synthetic cells also do not reproduce, Adamala said, making the experiment easier to manage by researchers.

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