

Artificial Cells

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Artificial cells are basic cells that have been constructed artificially, enhanced with packages to be used by the body. They can be used from helping treat disease to powering small medical devices.

Carnegie Mellon University's Philip LeDuc predicts the use of artificially created cells could be a potential new therapeutic approach to treating diseases. This could be done by using naturally available molecules to create a super artificial cell that is capable of targeting and treating desired ailments in the body. He believes that we can modify molecules already in the body to produce biochemicals to help fight disease.

An example of this is Encapsulated Cell Therapy. The use of either human or animal cells can be genetically modified to produce whatever is needed in the body such as proteins or hormones. Insulin is one of the chemicals scientists are working on producing with artificial cells. This would help fight diabetes.

Scientists from NASA and other Universities are working to develop an artificial cell that works like blood but can also carry medications along with oxygen.

They have created a special polymer that forms a sort of cell membrane and they have been able to apply this polymer to their artificial cells making them stronger and more manageable.

By adding different molecules they researchers believe they can manipulate their abilities and make them do things biological cells cannot.

They could make water fearing cells or they could make water loving cells allowing different drugs to be transported around the body. Also they could make the cells strong so they don't collapse when not in an aqueous solution.

Another one being looked into is that of creating artificial eel Cells. Naturally occurring eel cells can create an output up to 600 volts in a single burst.

Scientists from Yale University and the National Institute of Standards and

Technology are looking into creating artificial cells which can produce up to 40 percent more power than those of actual eel cells.

They are hoping in the future to be able to power small medical devices with these cells.

The development and uses of the Artificial cells is ever growing. But the future looks bright for treating many diseases among other applications of the artificial cell.

Work Cited

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