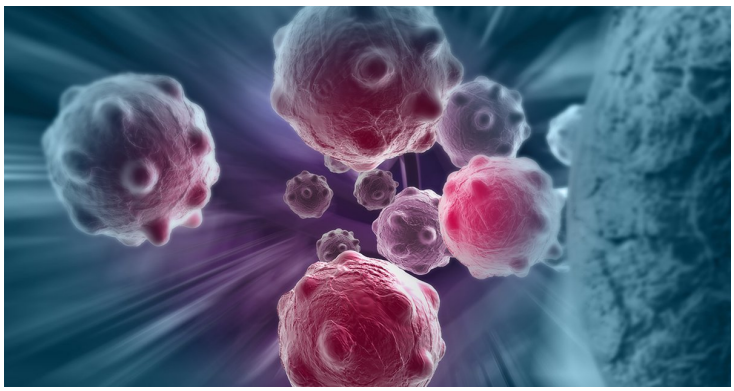
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IIT-G develops strategy to deliver chemotherapeutic drugs to cancer cells

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The new approach would allow the development of drug carriers for chemotherapy with enhanced efficacy and negligible side effects



Indian Institute of Technology Guwahati (IIT-G) researchers have developed a new strategy to deliver chemotherapeutic drugs specifically to the cancerous cells in a patient's body.

The problem with existing chemotherapeutic drugs is that they kill healthy cells of the body in addition to cancerous cells, leading to numerous undesirable side effects.

Explaining his research Prof. Debasis Manna, Department of Chemistry, IIT Guwahati, said, “We have two needs in the development of chemotherapy drugs – the drug must be targeted at the cancer cells, the drug must be released by an external trigger whenever it is required,”

The molecules developed by the IIT-G researchers self-assemble as capsules to hold the drug, which then attaches only to cancer cells. When infrared (IR) light is shone on it, the shell breaks and releases the encapsulated drug into the cancerous cell. The IIT-G scientists rightly believe that their approach would allow the development of drug carriers for chemotherapy with enhanced efficacy and negligible side effects.

Following the development of the targeted IR (light)-trigger drug release system, the IIT Guwahati researchers are preparing to perform in vivo studies to take this understanding closer to drug development.