

MEDICAL

Cancer Research Focuses on Growing Tumor Cells Outside the Human Body

NewsUSA

(NU) - One of the great barriers to improving the fight against cancer has been the problem of growing human cancer cells for drug testing so they behave as if they were inside the patient.

To answer this, pharmaceutical companies are beginning to grow human tumors in mice. But mice are not human, so the tests often lead to dead ends. And while it's possible to grow tumor cells in petri dishes, they rarely behave like actual cancers.

But now this problem is being solved by a company called Precision Therapeutics Inc (NASDAQ:AIPT), formerly Skyline Medical Inc (NASDAQ:SKLN), and its partner, Helomics.

Precision Therapeutics and Helomics, through a subsidiary named TumorGenesis, are pioneering an approach that takes cancer cells from a patient, then analyzes the tumors' genes and proteins. That information is crucial because it guides the selection of nutrients and other substances that the cells need. The final step is putting the cancer cells not in a petri dish, but rather on a special scaffold that's bathed in the nutrient-rich media.

The result: "For the first time, it will be possible to grow tumors outside the body that closely mimic those in the body," explains Dr. Carl Schwartz, CEO of Precision Therapeutics.



Cancer researchers seek to grow tumor cells outside the human body that mimic those in the body.

That, in turn, will bring major benefits for cancer treatment and drug discovery. Cancer is actually many thousands of different diseases, each with different underlying DNA mutations.

That's why drugs that are effective against one person's ovarian cancer may fail utterly against another's. But with the ability to grow the cancer cells from patients outside the body, doctors will be able to test drug combinations to discover what works before treating the patient, thus saving people from debilitating side effects from ineffective drugs.

Equally important, pharmaceutical companies will have a far better and lower-cost way to test drug candidates than testing on mice. It's yet another key step towards personalized cancer treatment that will give every patient a much better chance of long-term survival.