

# More cancer research

## Cure, not destruction for cells?

United Press International  
PROVIDENCE, R.I. — Hospital biologists plan extensive tests on a chemical commonly found in research laboratories to determine if it can turn deadly human cancer cells into normal, unharmed ones.

The chemical is dimethyl formamide, or DMF. It's a polar solvent used frequently by organic chemists.

Dr. Daniel Dexter, a researcher at Roger Williams General Hospital in Providence, said Monday DMF apparently has a "somewhat dramatic" effect on human cancer cells.

Cancerous cells treated with

DMF and injected into mice did not grow into tumors, while untreated cancerous cells almost invariably caused tumors, Dexter said.

In addition, he said, "very preliminary" tests with six mice showed that human tumors died when treated with DMF.

Dexter said he plans to test DMF on 50 to 100 cancer-afflicted mice. If the results are encouraging, there will be experiments with rabbits, dogs and monkeys, followed by trials on human within three to five years.

Dexter also confirmed that the hospital was launching a new program designed to improve the effectiveness of existing anti-cancer

drugs. It will involve a limited number of human patients.

Surgeons will remove a piece of a patient's tumor and try to cultivate it in a laboratory dish. The tumor, which can contain up to five kinds of cancer cells, then will be analyzed for its contents.

Drugs will then be custom-blended to attack the different kinds of cancer cells the tumor has, Dexter said.

There is a hitch. Cultivation techniques are only in their infancy, Dexter said, and "require a lot of technical help and a certain amount of money." He said they would not be widely available for at least "a couple of years."

Dr. Paul C. Calabresi, physician-in-chief and a cancer specialist at Roger Williams General Hospital, said Dexter's results with DMF are "very interesting." But he said that further testing was essential.

He said the first part of Dexter's experiments in which DMF-treated and non-treated cancer cells were injected into mice is "significant" and ready for publication.

Dexter, 38, said his research was based on a theory cancer cells can be cured and need not be killed.

He said he believes cancer cells are "stuck" and unable to mature so they multiply rapidly instead. Human cancer cells treated in the test tube with DMF seemed to mature and turn harmless, he said.

Dexter said tests will be run to see if DMF can be used in conjunction with standard cancer treatments. Another chemical, sodium butyrate, will also be examined.

### Castor beans cancer cure?

United Press International  
LAWRENCE, Kan. — A University of Kansas biochemist says although the castor bean is poisonous to eat, it may be valuable as a cancer treatment.

Castor beans, which contain ricin, an enzyme extremely toxic to all animal cells, may be used to attack only tumor cells, Professor L.L. Houston said.

Ricin inhibits the growth of tumor cells "much more efficiently than it inhibits growth of normal cells," Houston said.

Although ricin is very toxic, the oil of the bean is not and has long been used as a laxative, Houston said. He said ricin is a protein and because proteins are not soluble in oil, the toxin is not present in the highly refined oil used as a medication.

Houston is studying methods of altering the ricin molecule so it will act only on rapidly growing cancer cells without damaging normal cells. Ricin is not currently used as a cancer treatment because it kills a large number of normal cells along with cancerous cells.

Ricin acts on the cells by blocking protein synthesis on the ribosome, the cell's protein manufacturing center, Houston said. Without a supply of protein, the cell dies.

Houston said researchers are "at the point where we can design a ricin molecule to make it more selective for tumor cells." Houston's research concerns coupling a ricin molecule with a tumor.

"We plan to make antibodies to these tumor-specific antigens and join ricin molecules to them. Antibodies localize at tumor sites so we hope that the ricin will enter the tumor cells, thereby killing them."



### Halloween early?

Freshman P.E. major Marty Bell isn't early for trick-or-treats. He was just "dressing up" for his dorm picture at Hart Hall.

Battalion photo by Paul Barton

### Ray to wed in prison

United Press International  
KNOXVILLE, Tenn. — James Earl Ray, serving a 99-year prison term for the assassination of Dr. Martin Luther King Jr., will be married to a free-lance artist within two weeks in a prison ceremony, a newspaper reported Tuesday.

Ray and Anna Sandhu, a blonde, 32-year-old Knoxville courtroom artist, first saw each other during a June 1977 preliminary hearing on escape charges against Ray, the Knoxville Journal said in a copyrighted story.

Sandhu said she first spoke to Ray, 50, last fall while he was being inter-

viewed by television reporters.

Stoney Lane, warden at the Brushy Mountain Penitentiary near Petros, said today Ray had told him nothing about the story.

"I don't know a thing about it," Lane said.

If Ray and Sandhu apply for permission to be married, the ceremony will take place in Brushy Mountain's visitor's room.

"He'd be right back in his cell after it's over. There would be no honeymoon," Lane said. He added that Ray and his prospective bride would not be allowed a conjugal visit.

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