Health Bulletin

New Versions Of Age-Old Poisons Offer Hope To Cancer Patients

(NAPSA)—Over time, a number of plants once thought to be dangerous, such as the tomato and potato, have been shown to actually be nutritious and are now part of everyday life for many. In a similar way, new drugs derived from two substances once considered poisons are now in clinical trials and are offering hope to some people with cancer.

Specifically, more patient-friendly versions of arsenic and nitrogen mustard are getting a second chance as effective chemotherapy options for patients with multiple myeloma and sarcoma.

During the Middle Ages, arsenic was used primarily as a poison, but by the 19th century, its healing properties became widely known and doctors prescribed it for ailments ranging from psoriasis to sleeping sickness.

In 2000, arsenic trioxide (inorganic arsenic) was approved for the treatment of a rare form of leukemia called acute promyelocytic leukemia, or APL. It has been shown to achieve complete remission in 50-80 percent of patients with relapsed APL. However, due to its side effects at higher doses, this form of arsenic is ineffective against most other forms of cancer.

Now, through new technology, researchers at a company called ZIOPHARM Oncology are clinically testing ZIO 101—a type of organic arsenic. Clinical studies suggest that ZIO-101 has been shown to be well tolerated at daily doses greater than 50 times higher than those approved by the FDA for inorganic arsenic.

Phase II trials for patients with multiple myeloma, leukemias and liver cancer are now under way at cancer centers across the U.S.

In another development, researchers have also found that isophosphoramide mustard (IPM), a much-less-toxic cousin of nitrogen mustard, which is itself a variation of mustard gas, has similar potential. After World War II, chemists at Yale University discovered that nitrogen mustard, in small doses, wiped out certain cells in the blood-forming and infection-fighting compartments of the body. This became the first effective chemotherapy for cancer.

Researchers say more patient-friendly versions of drugs once thought toxic are showing promise in the battle against cancer.

This led to the development of anti-cancer agents, such as ifosfamide, which is widely used in the treatment of sarcoma, testicular cancer and certain other cancers. In order for ifosfamide to produce anti-tumor effects, it has to be metabolized to its active form. This process creates metabolites that can cause harmful side effects.

Researchers are now building on previous technology and studying the anti-cancer effects of the active component of ifosfamide, ZIO-201. Currently in a phase II trial targeting sarcoma, the ingredient has shown a toxicity profile that is less debilitating than ifosfamide and more easily managed for both patients and their caregivers.

To learn more, you can visit ziopharm.com. Click on the "Patients" section to volunteer for clinical trials, which are taking place in different locations.