

Conquering Cancer



Cancer is a relentless killer. But that's changing. These five companies are on the front lines of the new fight.

BY WILLIAM KAY

Nearly everyone knows someone who has been hit by cancer. It is, unarguably, one of the great scourges of our time. A mysterious malady, for years the cancer-fighting industry amounted to little more than a blind search for answers. But that's changing fast.

As each discovery lays the foundation for the next, the cumulative effect has downgraded many cancers from outright killers to chronic but controllable ailments that can sometimes be cured. Major rewards are now in sight for winning companies and their shareholders.

A New Approach to an Old Problem

Many conventional cancer treatments destroy not only the root of the problem but healthy cells too, poisoning and weakening the patient — the equivalent of carpet-bombing a city to kill the enemy: collateral damage is high.

But now research is increasingly finding ways to target only the malignancies, leaving the rest of the body unharmed. The scatter gun is being replaced by the sniper's bullet.

Some developments focus on boosting the immune system with vaccines. Doctors once believed that the immune system only fought bacteria and viruses. Now they know it may play a central role in protecting against and fighting cancer, slowing down its growth. It may be someone's immune system which determines whether surgery, radiation, or drugs will work.

Other treatments introduce viruses into the body to destroy bad cells, leaving the good untouched. More precise treatments like these can work better, more quickly, and cost less. They are also a world away from the debilitating, occasionally dangerous, and often frightening conventional treatments.

In the future, more treatments will be personalized to the immune system of the individual patient, as we enter an era of tailor-made anti-cancer therapies. Companies are also developing new ways to alleviate unpleasant side effects.

Accentia Biopharmaceuticals (NASDAQ: ABPI)

Florida-based Accentia offers investors two options: you can either buy shares in the company itself, which has two cancer drugs in the pipeline as well as others aimed at respiratory diseases, or you can laser in on its majority-owned but listed sub-

subsidiary, Biovest International, Inc., which concentrates on cancer drugs.

Accentia's senior executives, who have a strong medical background based on links with Johns Hopkins University, have created a vertically-integrated company that buys, develops, and markets drugs and vaccines.

"We intend to focus on the development and commercialization of already approved products in new formulations to create more clinically and economically valuable products," says Dr. Frank O'Donnell, the group's chairman and CEO.

Accentia has two main operations: its Biopharmaceutical Products and Services segment, which develops drugs which are close to completion, including Biovest's BiovaxID, an anti-cancer vaccine, and its Specialty Pharmaceuticals segment, which markets and sells pharmaceutical products that are developed primarily by other companies. Its products include Emezine, which controls nausea and vomiting, two frequent side effects of chemotherapy.

In February, Accentia signed a sublicense agreement with Revimmune LLC, under which it was granted the exclusive worldwide rights to Revimmune, a patent-pending pharmaceutical treatment in late-stage development for a variety of autoimmune diseases.

The drug uses an ultra-high intensity, intravenous form of an already-approved oral drug, cyclophosphamide, to reboot the immune system of a patient weakened by cancer treatment. This beats current therapies, which merely try to suppress the autoimmunity.

For the year ending September 30, 2006, Accentia's losses increased by 16% to \$36.6 million. The company has long-term debt of \$27 million.

Biovest International (OTC BB: BVTI)

Biovest's vaccine, BiovaxID, fights the blood cancer non-Hodgkin's lymphoma. This cancer starts in the body's disease-fighting network, the lymphatic system, and spreads throughout the body. It's one of the most rapidly increasing can-

cers in the U.S., with twice as many cases reported as 30 years ago, and can strike at any age.

BiovaxID is being used in Phase III clinical trials in 24 major U.S. medical institutions. It attempts to trigger a lasting immune response from the body to counter this invariably fatal cancer's tendency to return after years of remission following treatment. The vaccine has almost none of the side-effects associated with the chemotherapy and radiation traditionally used to treat non-Hodgkin's lymphoma.

In the year ending September, 2006, Biovest's total revenues rose from \$5 million to \$7.3 million and its operating losses rose from \$11 million to \$12 million. At that date, it had net tangible liabilities of \$19 million.

Bionovo (OTC BB: BNVI)

Bionovo specializes in drugs aimed at women's health, such as alleviating the effects of menopause. It's also working on drugs to encourage cancer cells to commit suicide — a process known as apoptosis — while leaving normal cells intact and functioning. Existing treatments often stop working because patients develop resistance to them.

The company has potential winners in AA102 and BZL101, oral drugs to fight advanced breast, pancreatic, and ovarian cancer as well as other solid tumors. AA102 is purely aimed at fighting advanced breast cancer, which Bionovo estimates as a \$7 billion industry. Pancreatic cancer is the fourth biggest cause of cancer death in the U.S. Every year over 30,000 people are diagnosed with this disease, but there are few treatments available.

In January 2007, California-based Bionovo announced that JP Morgan Investment Management's Global Life Science Fund had bought 500,000 shares in the company at \$1.60 per share.

"We are excited to have JP Morgan's Global Science Fund invest in Bionovo and show their support of our development initiatives," said Isaac Cohen, CEO. On January 21, 2007, Bionovo

also raised a gross \$15.7 million in a private placement financing.

Oncolytics Biotech (TSX: ONC, NASDAQ: ONCY)

This Canadian company focuses on developing viruses that kill cancer cells, but leave normal cells unharmed.

Its Reolysin, a potentially revolutionary therapy for up to two-thirds of all human cancers, is in Phase I and II trials. The drug is a cancer-fighting virus that is injected into the tumor and then multiplies in the body, killing bad cells until none are left. The treatment can be used on its own or alongside radiation and chemotherapy.

In February 2007, the company raised \$12 million gross through a public offering, boosting its year-end 2006 assets of \$35.5 million. "The past year has been an exciting and productive one for Oncolytics," says Dr. Brad Thompson, president and CEO.

Provectus Pharmaceuticals (OTC BB: PVCT)

Tennessee-based Provectus is developing treatments for liver and breast cancer as well as melanoma, the most dangerous form of skin cancer. The company has 15 pharmaceutical, medical device, and biotech patents, with another 19 being processed.

"We are a group of dedicated and entrepreneurial scientists working together for the past 10 years to develop alternative treatments that are safer, more effective, less invasive, and more economical than conventional therapies," says Craig Dees, CEO.

Founded five years ago, the company is conducting clinical trials of Provecta for melanoma and breast cancers that have already spread. The drug works by destroying malignant tumors and shrinks untreated ones — what is known as the "bystander" effect. Phase I of liver trials will begin soon. The company is also undertaking clinical studies for Xantryl, a gel to fight skin cancer, and it's working on cosmetic and therapeutic treatments, in particular laser-based products to treat melanoma.