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Dowpharma and Cytogen Agree to Develop PSMA Antibody for Treatment of

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[Dowpharma and Cytogen Agree to Develop PSMA Antibody for Treatment of Cancer](http://www.bioportfolio.com/news/Dowpharma_and_Cytogen_Agree_to_Develop_PSMA.html)

Agreement applies ChelaMed(sm) radiopharmaceutical services from Dowpharma(sm) to Cytogen's Proprietary 7E11.C5.3 Monoclonal Antibody

MIDLAND, MI and PRINCETON, N.J.-(May 10, 2005)-Cytogen Corporation (Nasdaq: CYTO), a product-driven biopharmaceutical company, and Dowpharma(sm) contract manufacturing services, a business unit of The Dow Chemical Company (NYSE: DOW), today announced a collaboration to create a targeted oncology product designed to treat prostate and other cancers. Under the agreement, Dowpharma's proprietary MeO-DOTA bifunctional chelant technology will be used to radiolabel Cytogen's prostate-specific membrane antigen (PSMA) antibody with a therapeutic radionuclide. PSMA is a protein highly expressed on the surface of prostate cancer cells and the neovasculature of many solid tumors.

"We are extremely pleased to expand our long-standing relationship with this well respected and established company," said Michael D. Becker, Cytogen's president and chief executive officer. "We believe that Dowpharma's MeO-DOTA technology is a perfect complement to Cytogen's expertise in developing and commercializing innovative molecules and this agreement marks a significant step in the development of our therapeutic franchise in oncology."

Under the agreement, proprietary chelation technology and other capabilities, provided through ChelaMed(sm) radiopharmaceutical services from Dowpharma, will be used to attach a therapeutic radioisotope to the same murine monoclonal antibody utilized in Cytogen's PROSTASCINT(r) (capromab pendetide) molecular imaging agent. This antibody, called 7E11-C5.3 (or 7E11), is directed against an intracellular epitope of PSMA. The 7E11 antibody was excluded from the PSMA technology licensed to the PSMA Development Company LLC, the Company's joint venture for PSMA product development. Consequently, the joint venture is not involved in this development initiative.

"We are delighted that we are applying our capabilities in chelation, conjugation, process and radiochemistry to enable Cytogen to develop this novel cancer therapy," said Nick Hyde, business director, Dowpharma. "Monoclonal antibodies labeled with radionuclides have proven successful for both the diagnosis and treatment of several tumors."

Dowpharma's MeO-DOTA bifunctional chelant will be utilized to attach the beta emitting radionuclide

lutetium-177 as a payload to the 7E11 antibody, enabling targeted delivery of this cytotoxic agent. The Company intends to develop the resulting innovative molecule for the treatment of various cancers, initially in prostate, that express the PSMA marker.

"DOTA-based bifunctional chelating agents have been shown to provide exceptional stability to insure that therapeutic radionuclides do not separate from the monoclonal antibodies that target them to tumors," said William Goeckeler, Ph.D., senior vice president of operations at Cytogen. "Dow is a world leader in the development of this technology and having the opportunity to collaborate with them should hasten the development process for our therapeutic radiolabeled 7E11 product candidate."

Cytogen's PROSTASCINT molecular imaging agent is the first and only commercial product targeting PSMA. PROSTASCINT consists of the 7E11 monoclonal antibody directed against PSMA that is linked to the radioisotope Indium-111. Due to the selective expression of PSMA, the PROSTASCINT molecular imaging procedure can detect the extent and spread of prostate cancer using a standard gamma camera. Clinical studies have demonstrated that overexpression of PSMA determined by immunohistochemical staining using 7E11 in primary prostate cancer not only correlates with other adverse traditional prognostic factors, but can independently predict disease recurrence.

About Dowpharma

Dowpharma(sm) contract manufacturing services, serves the pharmaceutical and biopharmaceutical industries with innovative technologies, products, and services in drug discovery, development, delivery and manufacturing. Dowpharma has one of the broadest and deepest capabilities in the global outsourcing industry with service that include process development, route selection, methods development, custom solubilization, chiral capabilities, and associated analytical services, as well as manufacturing and scale-up from feasibility, through clinical trials, to commercial manufacturing.

Dowpharma manufactures small molecule Active Pharmaceutical Ingredients (APIs) and intermediates, nucleic acid medicines, cGMP polymers, peptides and therapeutic proteins from microbial fermentation and plant-based systems. Dowpharma draws upon over 30 years of excellent cGMP regulatory compliance in the organic synthesis of APIs and pharmaceutical intermediates with the ability to provide client support in filing and validation strategies. Dowpharma operates research, process development, and manufacturing facilities in North America and Europe. More information is available at www.dowpharma.com .

In June 2003, Dowpharma announced the addition of ChelaMed(sm) radiopharmaceutical services to its portfolio. This service offering includes technology and capabilities to enable biopharmaceutical companies to transform their breakthrough targeting molecules into biotargeted radiopharmaceuticals, with integrated development capabilities from benchtop through manufacturing. The business model for the service is based on funding for feasibility studies, with successful progression toward regulatory approval entailing milestone and royalty payments to Dow. While the launch of ChelaMed services represents Dow's first broad introduction of radiopharmaceutical services, the company has been working in this field for several years. In addition, over the course of more than 100 years as a manufacturing leader, Dow has built strength and expertise in radiochemistry, chelation chemistry, synthetic organic chemistry, analytical sciences and process chemistry -- all of which support success in development of biotargeted radiopharmaceuticals.

About Dow

Dow is a leader in science and technology, providing innovative chemical, plastic and agricultural products and services to many essential consumer markets. With annual sales of \$40 billion, Dow serves customers in 175 countries and a wide range of markets that are vital to human progress: food, transportation, health and medicine, personal and home care, and building and construction, among others. Committed to the principles of sustainable development, Dow and its 43,000 employees seek to balance economic, environmental and social responsibilities.

About Cytogen Corporation

Founded in 1980, Cytogen Corporation of Princeton, NJ is a product-driven biopharmaceutical company that develops and commercializes innovative molecules that can be used to build leading franchises. Cytogen's marketed products include QUADRAMET(r) (samarium Sm-153 lexidronam injection) and PROSTASCINT(r) (capromab pendetide) kit for the preparation of Indium In-111 capromab pendetide in the United States. Cytogen also has exclusive United States marketing rights to COMBIDEX(r) (ferumoxtran-10) for all applications, and the exclusive right to market and sell ferumoxytol (previously Code 7228) for oncology applications in the United States.

Cytogen's development pipeline consists of therapeutics targeting prostate-specific membrane antigen (PSMA), a protein highly expressed on the surface of prostate cancer cells and the neovasculature of many solid tumors. Full prescribing information for the Company's products is available at <http://www.cytogen.com> or by calling 1-800-833-3533. For more information, please visit the Company's website at <http://www.cytogen.com>, which is not part of this press release.

This press release contains certain "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995 and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical facts, included in this press release regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. Such forward-looking statements involve a number of risks and uncertainties and investors are cautioned not to put any undue reliance on any forward-looking statement. There are a number of important factors that could cause Cytogen's results to differ materially from those indicated by such forward-looking statements. In particular, Cytogen's business is subject to a number of significant risks, which include, but are not limited to: the risk of obtaining the necessary regulatory approvals; the risk of whether products result from development activities; the risk of shifts in the regulatory environment affecting sales of Cytogen's products such as third-party payor reimbursement issues; the risk associated with Cytogen's dependence on its partners for development of certain projects, as well as other factors expressed from time to time in Cytogen's periodic filings with the Securities and Exchange Commission (the "SEC"). As a result, this press release should be read in conjunction with Cytogen's periodic filings with the SEC. The forward-looking statements contained herein are made only as of the date of this press release, and Cytogen undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

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