

News Release

CytRx Corporation Signs Definitive Agreement to Acquire Innovive Pharmaceuticals, Inc.

Combined Company to Drive Stockholder Value with Commitment to Molecular Chaperone Technology Platform and Near-Term Commercialization Opportunities in Oncology

Acquisition Subject to Customary Closing Conditions Including Innovive Stockholder Approval

Company to Host Conference Call at 9:00 AM EDT (6:00 AM PDT) Today to Discuss Transaction

LOS ANGELES--(BUSINESS WIRE)--June 9, 2008--CytRx Corporation (NASDAQ: CYTR), a biopharmaceutical company engaged in the development and commercialization of therapeutics based on molecular chaperone amplification technology, today announced the signing of a definitive agreement to purchase Innovive Pharmaceuticals, Inc., a publicly traded biopharmaceutical company with four clinical stage oncology drug candidates. The combined company will have an attractive and expanded portfolio of clinical development programs in oncology, Amyotrophic Lateral Sclerosis (ALS or Lou Gehrig's disease), stroke recovery and diabetic foot ulcers. In addition, the combined company will own a 49% interest in RXi Pharmaceuticals (NASDAQ: RXII). Included in the acquired pipeline are North American and European licensing rights to tamibarotene, a drug currently being sold in Japan for the treatment of relapsed or refractory acute promyelocytic leukemia (APL). Tamibarotene is presently in a pivotal Phase 2 clinical trial in APL, and CytRx anticipates that the acquisition will accelerate the time to its first potential NDA filing by several years to 2010.

"The Innovive acquisition is a compelling strategic fit for CytRx and is expected to provide several key benefits. Innovive has an attractive oncology portfolio with the opportunity for relatively near-term drug approval with low regulatory risk," said Steven A. Kriegsman, CytRx President and CEO. "This acquisition improves our potential for near-term revenue while maintaining our longer-term emphasis on our molecular chaperone technology platform. The addition of this pipeline leverages our significant expertise in oncology drug development. Moreover, the up-front price we are paying, and the structure of the success-based milestones, affords CytRx stockholders a significant opportunity for upside on our investment. We are confident that CytRx has the financial and operational flexibility to manage the appropriate integration of these assets into our existing portfolio. Following the completion of this transaction, we will undertake a comprehensive strategic review of all Innovive assets to determine where we can maximize stockholder value while managing financial risk."

Steven Kelly, Innovive President and CEO, stated, "Innovive's pipeline was designed to lower clinical and regulatory risk by targeting diseases with well-understood clinical endpoints providing a clear and established pathway to approval. Current market conditions, however, limited our ability to fund ongoing clinical development as intended, and we recognized the need to find a strong partner like CytRx to advance the four drug candidates. We are confident this acquisition by CytRx will serve the best interests of cancer patients."

Leverages CytRx Oncology Expertise

Collectively, CytRx's management and its Board of Directors have brought numerous oncology drugs to market. The senior managers and directors of CytRx who hold significant oncology experience include: Joseph Rubinfeld, Ph.D., a director since July 2002 and world-renowned expert in the field of oncology, who was one of the four initial founders of Amgen, Inc.; Max Link, Ph.D., Chairman of the Company's Board of Directors since 1996, who served for a number of years as Chairman and CEO of Sandoz Pharma and also serves as a director of Alexion Pharmaceuticals, Inc., Celsion Corporation and Discovery Laboratories, Inc.; Jack R. Barber, Ph.D., Chief Scientific Officer, who has significant R&D experience in

oncology at Immusol and Viagene, where Dr. Barber most recently served as Head of Oncology; and Shi Chung Ng, Ph.D., Senior Vice President of Research and Development, who has substantial R&D experience at companies such as Abbott and ArQule, Inc., and most recently served as Vice President of Molecular Oncology at Ligand Pharmaceuticals.

Update on Molecular Chaperone Development

"We look forward to integrating the Innovive portfolio into CytRx as we continue to build upon our molecular chaperone technology and pipeline," said Mr. Kriegsman. "We are proceeding with our Phase 2 clinical trial of irovanadine for diabetic foot ulcers, which is expected to begin in the first quarter of 2009, subject to FDA clearance. Furthermore, scientists at our San Diego laboratory have already identified possible next-generation chaperone-amplifying compounds to expand our pipeline. In the field of oncology, CytRx has been applying molecular chaperone technology to the identification of drug candidates by adapting its proprietary chaperone screening assay to identify inhibitors (rather than amplifiers) of chaperone activity. Because certain chaperones appear to be essential for cancer cells, CytRx's own internal molecular chaperone-inhibiting drug candidates may form the basis of future oncology products."

CytRx also announced today that it plans to conduct additional preclinical toxicology studies of arimoclomol, in development for ALS and stroke recovery, which are expected to take up to one year to complete. Based on recent telephone discussions with the FDA regarding its clinical hold on arimoclomol for ALS, CytRx anticipates that the planned Phase 2b clinical trial of arimoclomol will remain on hold pending completion of this additional preclinical work. However, CytRx has not yet received a formal determination letter from the FDA with respect to the ongoing clinical hold of arimoclomol for ALS. In addition, CytRx anticipates that the time frame for initiating the previously planned Phase 2 clinical trial of arimoclomol in stroke recovery will depend on the results of the new preclinical toxicology studies and other factors.

Innovive Oncology Portfolio Highlights:

- Tamibarotene (formerly known as TM-411, TOS-80T, or Am-80), licensed to Innovive in North America and Europe, is an oral, rationally-designed, synthetic retinoid originally synthesized by the University of Tokyo in 1984. In April 2005, tamibarotene was approved in Japan for use in relapsed/refractory APL.
- The FDA has granted Orphan Drug Designation and Fast Track Designation for the use of tamibarotene in patients with relapsed or refractory APL following treatment with all-trans retinoic acid (ATRA) and arsenic trioxide. CytRx expects to rely on Orphan Drug Designation and proprietary data for market exclusivity since tamibarotene chemical matter is off-patent.
- Innovive has a Special Protocol Assessment (SPA) in place with the FDA for a pivotal Phase 2 clinical trial, known as STAR-1, which is evaluating the efficacy and safety of tamibarotene for the treatment of relapsed or refractory APL. The STAR-1 trial is currently ongoing and includes 31 clinical sites, 22 of which are in Europe. CytRx believes that successful data from the STAR-1 trial and supporting studies, in conjunction with data from the Japanese clinical trials, will form the basis for a New Drug Application (NDA).
- The efficacy of orally administered tamibarotene was demonstrated in two Phase 2 studies conducted in Japan in a total of 63 Japanese subjects with APL. The overall complete response rate in these subjects was 60%. In subjects experiencing their first relapse, the overall complete response rate was 81%.
- Innovive also retains an option to expand its licenses for the use of tamibarotene in other fields in oncology, including multiple myeloma, myelodysplastic syndrome and solid tumors in the

U.S., and multiple myeloma, myelodysplastic syndromes and solid tumors other than hepatocellular carcinoma in Europe.

- APL is apparently caused by a suppressive mutation of the Retinoic Acid Receptor-alpha (RAR alpha) gene. Both tamibarotene and ATRA are thought to act by restoring the normal activity of RAR alpha. However, of the three known RAR's (RAR alpha, -beta, and -gamma) tamibarotene has the highest affinity for the desired RAR alpha, with considerably less affinity for RAR beta, and essentially no affinity for RAR gamma. This selectivity may result in fewer side effects than ATRA, which conversely has its highest affinity for RARs -gamma and -beta and its lowest affinity for the desired RAR-alpha. These differences from ATRA provide a rationale for the hypothesis that tamibarotene may be associated with less toxicities, which may allow a future opportunity for tamibarotene to replace ATRA as a first-line therapy for APL.
- INNO-406 (formerly known as NS-187) is a potent, oral, rationally designed, dual Bcr-Abl and Lyn-kinase inhibitor that is currently being planned as a third line treatment for patients with Chronic Myeloid Leukemia (CML) or certain forms of Acute Myeloid Leukemia (AML) that are refractory or intolerant of other approved treatments. In an international Phase 1 clinical trial that is near completion, INNO-406 has resulted in complete clinical responses with apparently fewer of the dose-limiting side effects observed with other marketed drugs. INNO-406 has been granted Orphan Drug Status for the treatment of CML by the FDA. Upon completion of the Phase 1 clinical trial, the Company anticipates evaluating options for a Phase 2 protocol with the FDA in CML.
- INNO-206 (formerly DOXO-EMCH) is a prodrug of the commonly prescribed chemotherapeutic doxorubicin and was designed to reduce adverse events by preferentially targeting the tumor. In a Phase 1 study, doses were administered at up to six times the standard dosing of doxorubicin without an increase in observed side effects over those historically seen levels with doxorubicin. Objective clinical responses were seen in patients with sarcoma, breast and lung cancers. The Company anticipates evaluating options for a Phase 2 protocol with the FDA.
- INNO-305, a cancer vaccine immunotherapeutic, also known as WT1 (Wilm's Tumor Antigen 1) heteroclitic peptide immunotherapy, is in a Phase 1 clinical trial for the treatment of subjects with AML and myelodysplastic syndrome (MDS) as well as subjects with non-small cell lung cancer (NSCLC) and mesothelioma. INNO-305 was designed to have a unique ability among WT1 peptide cancer immunotherapeutics to stimulate both CD8 and CD4 T-cells which may result in a more robust immune response.

Acquisition Improves CytRx's Strategic Position

CytRx management and its Board of Directors believe Innovive represents an excellent strategic opportunity for the Company that may lead to significant stockholder value creation for the following reasons:

- **Relatively Low-Risk Market Opportunity:** The near-term market opportunity for Innovive's tamibarotene in refractory APL in the U.S. alone is estimated to approach \$20 million per year - with the market opportunity for an expanded label including refractory, maintenance and front-line therapy expanding to up to \$150 million in potential recurring revenue in the U.S. and Europe. There are currently no approved third-line treatment options for refractory APL patients. As mentioned, tamibarotene is currently approved as a drug in Japan and is in a pivotal Phase 2 clinical trial in the U.S. that is subject to an SPA agreement with the FDA. CytRx expects to use the data from the ongoing pivotal Phase 2 trial of tamibarotene in APL and supporting studies in conjunction with previously generated safety data from Japanese

- trials as the basis for a New Drug Application (NDA) which could be filed as early as 2010.
- **Attractive Oncology Portfolio with Improvements Over Existing Therapies:** In addition to tamibarotene, Innovive has two clinical drug candidates poised for Phase 2 development and one drug candidate that is in Phase 1 development. The portfolio has relatively low regulatory risk in that the diseases are well-understood, clinical endpoints are well-documented and established, and the regulatory pathway to drug approval is generally fairly straightforward. Moreover, there is early evidence of clinical activity and safety in both INNO-406 and INNO-206, in addition to tamibarotene, and each candidate has differentiating characteristics that may represent improvements over existing therapies. In addition, INNO-305 is an attractive cancer vaccine therapeutic that is in Phase 1 development. The addressable market opportunity for INNO-206 could be up to \$5 billion, and the Company believes the combined U.S. and European addressable market opportunity for INNO-406 could be up to \$400 million, and up to \$150 million for INNO-305.
 - **Creates Near-term Potential for NDA Filing:** Through the Innovive acquisition, tamibarotene's ongoing development may provide a relatively rapid path to commercialization. Already approved in Japan, tamibarotene represents an attractive late-stage oncology product candidate with significant differentiation from competitor agents.
 - **Attractive Price:** Since inception in 2004, Innovive has invested more than \$41 million to move its oncology product candidates forward through clinical development in the U.S. CytRx may receive substantial benefits from this acquisition for an up-front cost of \$3.0 million payable in CytRx common stock plus the payment of Innovive's current liabilities - with any future consideration only payable upon the achievement of sales milestones.
 - **Chaperone Technology Platform Provides Longer-Term Opportunity:** CytRx owns three clinical-stage compounds based on its small molecule "molecular chaperone" co-induction technology and is currently identifying additional pipeline candidates. Molecular chaperones play a critical role in maintaining the health of every cell, and because of this, CytRx's technology may be applicable to a wide range of diseases. The Company has announced plans to commence a Phase 2 clinical trial of iroxadine for diabetic foot ulcers in the first quarter of 2009 subject to FDA clearance.
 - **RXi 49% Equity Ownership Provides Independent Market Value:** CytRx maintains a 49% equity interest in RXi Pharmaceuticals, Inc. (NASDAQ: RXII), an RNAi company. CytRx's approximately 6.3 million shares have a current market value of approximately \$54 million.

Transaction Summary

CytRx has agreed to acquire Innovive for total consideration of approximately \$21.3 million plus the assumption of Innovive's liabilities. The consideration has three components: 1) at the completion of the transaction, the holders of Innovive's fully diluted shares of common stock will be entitled to receive in the aggregate \$3.0 million in CytRx common stock valued at a price of \$0.94 per share, determined as the volume weighted average price of CytRx common stock for the ten trading days immediately prior to the signing of the definitive agreement on Friday, June 6; 2) CytRx will assume Innovive liabilities and accrued expenses through the closing (as of today, current liabilities are approximately \$3.7 million); and 3) CytRx will pay future performance-based milestone earn-outs to Innovive stockholders of up to approximately \$18.3 million payable in cash or stock at CytRx's discretion upon the satisfactory completion of specific sales milestones for Innovive product candidates.

The transaction is expected to close in the third quarter of 2008 subject to customary closing conditions including regulatory clearance, approval by stockholders representing a majority of Innovive shares outstanding, and effectiveness of the registration statement that CytRx will file with the U.S. Securities

and Exchange Commission (SEC) relating to the CytRx common stock to be paid as consideration to Innovive's stockholders.

Conference Call and Webcast

CytRx Corporation will host a conference call and webcast today, Monday, June 9, 2008, at 9:00 A.M. EDT (6:00 AM PDT) to discuss the Innovive transaction and review recent developments. Interested participants and investors may access the teleconference call by dialing 877-591-4949 and/or (U.S./Canada) or 719-325-4862 (international).

The webcast of the call can be accessed on the Investor section of CytRx's Web site at <http://www.cytrx.com/>.

Web participants are encouraged to go to the Web site 15 minutes prior to the start of the call to register, download and install any necessary software. After the live webcast, a replay will remain available in the Investors section of CytRx's Web site for 180 days.

A telephonic replay will also be available beginning at 12:00 Noon EDT for thirty days through Wednesday, July 9, Midnight EDT. Access numbers for this replay are 888-203-1112 (U.S./Canada) and 719-457-0820 (international); participant code 9480407.

CytRx's press releases are also available at <http://www.cytrx.com/>.

About CytRx Corporation

CytRx Corporation is a biopharmaceutical research and development company engaged in the development of high-value human therapeutics. The Company owns three clinical-stage compounds based on its small-molecule "molecular chaperone" co-induction technology. CytRx has a research and development facility in San Diego. CytRx also has a 49% equity interest in RXi Pharmaceuticals Corporation (NASDAQ: RXII). For more information on the Company, visit www.cytrx.com.

About Innovive Pharmaceuticals

Innovive Pharmaceuticals, Inc. acquires, develops and commercializes novel therapeutics addressing significant unmet medical needs in the fields of oncology and hematology. The company has four drug programs in clinical development: INNO-406, tamibarotene, INNO-206 and INNO-305, for the treatment of chronic myelogenous leukemia, acute promyelocytic leukemia, small cell lung cancer, and acute myelogenous leukemia, respectively. For additional information, please visit www.Innovivepharma.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. Such statements involve risks and uncertainties that could cause actual events or results to differ materially from the events or results described in the forward-looking statements, including risks relating to the timing and the satisfaction of conditions to completion of our proposed acquisition of Innovive Pharmaceuticals, Inc., and our ability to achieve one or more of our objectives in undertaking the acquisition, the risk that secured loan amounts advanced by us to Innovive cannot be repaid by Innovive if the acquisition is not completed, the risk that the costs of our planned molecular chaperone amplification clinical and preclinical programs and funding of Innovive's operating expenses before and after the acquisition will be greater than we anticipate and adversely affect our liquidity and require us to obtain additional financing sooner than expected, risks relating to clinical development of the product candidates of CytRx and Innovive, and the risks and uncertainties described in the most recent annual and quarterly reports filed by CytRx with the Securities and Exchange Commission and current reports filed since the date of CytRx's most recent annual report. The business and operations of RXi, as well as ownership of RXi shares, also are subject to risks and uncertainties, including those set forth in the most recent annual and quarterly reports filed

by RXi with the Securities and Exchange Commission and current reports filed since the date of RXi's most recent annual report. All forward-looking statements are based upon information available to CytRx on the date the statements are first published. CytRx undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

In connection with the proposed transaction, CytRx will file with the SEC a registration statement on Form S-4, which will include a preliminary prospectus/proxy statement of CytRx and Innovive relating to the merger. INVESTORS AND STOCKHOLDERS ARE STRONGLY ADVISED TO READ THE PRELIMINARY PROSPECTUS/PROXY STATEMENT WHEN IT BECOMES AVAILABLE, BECAUSE IT WILL CONTAIN IMPORTANT INFORMATION. Investors and stockholders may obtain a free copy of the prospectus/proxy statement (when available) and other documents filed by us and Innovive at the SEC's website at <http://www.sec.gov>.

This communication does not constitute an offer to sell or the solicitation of an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such jurisdiction. No offering of securities will be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

This communication is not a solicitation of a proxy from any stockholder of Innovive. However, CytRx, Innovive and their respective officers and directors may be deemed to be participants in the solicitation of proxies from Innovive stockholders in connection with the proposed acquisition. Information about the officers and directors of CytRx and their ownership of CytRx common stock is set forth in the proxy statement for CytRx's 2008 Annual Meeting of Stockholders, which was filed with the SEC on May 23, 2008. Information about the officers and directors of Innovive and their ownership of Innovive common stock is set forth in Innovive's most recent Annual Report on Form 10-K, which was filed with the SEC on March 31, 2008 and amended on April 29, 2008. Investors and stockholders may obtain additional information regarding the direct and indirect interests of CytRx, Innovive and their respective officers and directors in the proposed acquisition by reading the prospectus/proxy statement referred to above.

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