

Business & Regulatory Report

Regulatory Approvals & Applications:

Alimta Approved In Europe For Advanced Or Metastatic Non-Small Cell Lung Cancer

Eli Lilly and Co. (NYSE: LLY) of Indianapolis said the European Commission has granted approval for the use of Alimta (pemetrexed for injection) as monotherapy for maintenance treatment of patients with other than predominantly squamous cell histology in locally-advanced or metastatic non-small cell lung cancer whose disease has not progressed immediately following platinum-based chemotherapy.

The approval is based on data that showed pemetrexed improved overall
(Continued to page 2)

Clinical Trials:

Boehringer Ingelheim Begins Phase III Trial Of Oral EGFR Inhibitor For NSCLC

Boehringer Ingelheim of Ridgefield, Conn., announced the initiation of a phase III trial of BIBW 2992 as first-line treatment in non-small cell lung cancer patients with epidermal growth factor receptor mutations. BIBW 2992 is the first orally-administered irreversible dual inhibitor of EGFR and HER2, to reach phase III development in NSCLC.

The LUX-Lung 3 trial will compare the efficacy and safety of the single-agent BIBW 2992 to that of standard chemotherapy (cisplatin/pemetrexed) as a potential first-line treatment for NSCLC patients with EGFR mutations. **Boehringer Ingelheim's** LUX-Lung trial program currently includes two phase III trials assessing the efficacy and safety of BIBW 2992 in various NSCLC patient populations across the globe.

"The **Boehringer Ingelheim** LUX-Lung 3 trial studying BIBW 2992 in patients with EGFR mutations will be important as we continue to work towards providing personalized medicine for patients with lung cancer," said **James Yang**, professor at the Graduate Institute of Clinical Medicine and the Graduate Institute of Clinical Pharmacy at the College of Medicine at the National Taiwan University. "BIBW 2992 is an irreversible tyrosine kinase inhibitor whose clinical benefit we are hoping to confirm in the first-line setting for patients with EGFR mutations."

On May 29, **Boehringer Ingelheim** announced that it entered into an agreement with the Manchester, UK, based company **DxS** to provide a companion diagnostic test kit for BIBW 2992 to identify mutations of the EGFR in patients with NSCLC. Under the agreement, **DxS** and **Boehringer Ingelheim** will work jointly to make a suitable companion diagnostic test

(Continued to page 5)

© Copyright 2009
The Cancer Letter Inc.
All rights reserved.

Regulatory Applications:

AstraZeneca Submits Applications To FDA, EMA, For **Vandetanib** For NSCLC

... Page 2

Deals & Collaborations:

Merck Licenses **BioWa** Platform For Antibody Development

... Page 7

PO Box 9905
Washington DC 20016
Telephone 202-362-1809

Alimta Approved In Europe As Maintenance Therapy

(Continued from page 1)

survival in other than predominantly squamous NSCLC patients in the maintenance setting.

Pemetrexed is a chemotherapy agent currently approved for first-line treatment of advanced, other than predominantly squamous NSCLC in combination with a platinum-based chemotherapy, and as a single agent in the second-line setting for advanced, other than predominantly squamous NSCLC patients with recurrent disease.

The concept of maintenance therapy represents a paradigm shift in the treatment of advanced, other than predominantly squamous NSCLC, the company said. Traditionally, patients who respond to first-line chemotherapy are monitored until the disease recurs and are then treated with a second-line regimen. In maintenance therapy, rather than halting further treatment until disease progression, patients who respond to a first-line therapy are treated immediately with a maintenance regimen.

“The idea behind Alimta as maintenance therapy for nonsquamous, non-small cell lung cancer is to treat patients immediately following their initial course of therapy, in an effort to prolong survival,” Richard Gaynor, vice president, cancer research and global oncology platform leader at Lilly, said in a statement. “The study that led to this approval was the first that

showed improved overall survival in the maintenance setting for NSCLC. This was also the third trial to show the benefit of tailoring Alimta treatment to the nonsquamous NSCLC patient population.”

Overall survival data for pemetrexed as a maintenance therapy for NSCLC was presented at this year’s annual meeting of the American Society of Clinical Oncology.

The trial compared efficacy with respect to overall survival of pemetrexed plus best supportive care versus placebo plus best supportive care in 663 patients with stage IIIB/IV NSCLC whose disease had not progressed after four cycles of platinum-based induction chemotherapy.

Pemetrexed was not included among the induction regimens studied in the maintenance trial. The trial supported two previous studies looking at the use of histology to tailor treatment for patients with advanced, other than predominantly squamous NSCLC.

Patients in the trial were treated with pemetrexed (500 mg/m² on day one of each 21-day cycle) plus best supportive care or placebo plus best supportive care. All patients were supplemented with vitamin B12, folic acid and dexamethasone.

The approval—the fourth in Europe—follows an initial positive opinion issued by the European Medicines Agency’s Committee for Medicinal Products for Human Use on May 29 and the recent approval by FDA of pemetrexed for maintenance therapy in advanced, nonsquamous NSCLC patients whose disease has not progressed after four cycles of platinum-based first-line chemotherapy.

Apart from the existing approvals in the E.U. and U.S. for the use of pemetrexed in the treatment of patients with locally-advanced or metastatic other than predominantly squamous NSCLC, pemetrexed is also approved, in combination with cisplatin, in both the E.U. and U.S. for the treatment of chemotherapy naive patients with unresectable malignant pleural mesothelioma.

AstraZeneca (NYSE: AZN) said it has submitted a New Drug Application to FDA and a Marketing Authorisation Application to the European Medicines Agency for an investigational drug, vandetanib 100 mg for use in combination with chemotherapy for the treatment of advanced non-small cell lung cancer in patients previously treated with one prior anti-cancer therapy.

The U.S. and European submissions are supported by data from phase III clinical studies evaluating the

THE **CANCER** LETTER

Business & Regulatory Report

Publisher: Kirsten Boyd Goldberg

Editor: Paul Goldberg

Editorial: 202-362-1809 Fax: 202-379-1787

PO Box 9905, Washington DC 20016

Customer Service: 800-513-7042

PO Box 40724, Nashville TN 37204-0724

Business & Regulatory Report is a supplement to The Cancer Letter. ISSN 1053-9611. Other than "fair use" as specified by U.S. copyright law, none of the content of this publication may be reproduced, stored in a retrieval system, or transmitted in any form (electronic, mechanical, photocopying, facsimile, or otherwise) without prior written permission of the publisher. Violators risk criminal penalties and damages.

safety and efficacy of vandetanib 100 mg in combination with chemotherapy. Pending approval, the treatment will be marketed as Zactima.

Evaluation of vandetanib is ongoing, as monotherapy or in combination with other anti-cancer therapies in a range of tumour types, including thyroid cancer. Results from the ZEPHYR (300mg monotherapy study in EGFR failures in advanced NSCLC, phase III) and ZETA (300 mg monotherapy in advanced medullary thyroid cancer, phase III) studies will be presented in the first half of 2010.

Vandetanib has a unique profile that fights cancer through two clinically proven mechanisms -- by blocking the development of tumour blood supply (anti-angiogenesis or anti-VEGFR), and by blocking the growth and survival of the tumour itself (anti-EGFR). Vandetanib also inhibits RET-tyrosine kinase activity, an important growth driver in certain types of thyroid cancer, the company said.

ZODIAC (ZACTIMA in combination with Docetaxel in non-small cell lung cancer) is a phase III randomised, double-blind, placebo-controlled study evaluating the combination of vandetanib 100mg once daily plus docetaxel versus docetaxel alone in patients with locally advanced or metastatic NSCLC, treated with one prior anti-cancer therapy. It enrolled 1391 patients at 250 centres throughout Europe, North America, South America and Asia Pacific.

ZEAL (ZACTIMA Efficacy with Alimta in Lung cancer) is a randomised, double-blind, placebo-controlled phase III study evaluating the combination of vandetanib 100mg with pemetrexed versus pemetrexed alone in patients with locally advanced or metastatic NSCLC, treated with one prior anti-cancer therapy. It enrolled 534 patients at 160 centres across 23 countries.

ZEST (ZACTIMA Efficacy Study versus Tarceva) is a phase III randomised, double-blind, multi-centre study to assess the efficacy of vandetanib 300mg versus erlotinib in patients with locally advanced or metastatic NSCLC after failure of at least one prior anti-cancer therapy. It enrolled 1240 patients at 171 centers across 22 countries.

ZEPHYR (ZACTIMA Efficacy trial for NSCLC Patients with History of EGFR-TKI and chemo-Resistance) is a phase III, randomised, double-blind, parallel-group, multi-centre study evaluating the efficacy of ZACTIMA 300mg plus best supportive care versus best supportive care in patients with locally advanced or metastatic (stage IIIB-IV) NSCLC after prior therapy with an EGFR inhibitor. The study is running in

approximately 170 centres across 23 countries.

ZETA (Zactima Efficacy in Thyroid Cancer Assessment) is a phase III, randomized, double-blind, placebo-controlled, multi-centre study, evaluating once-daily ZACTIMA 300mg as a monotherapy in advanced medullary thyroid cancer.

Cell Therapeutics Inc. (NASDAQ and MTA: CTIC) of Seattle announced today that it had requested and the EMEA has agreed to an oral explanation in support of the OPAXIO Marketing Authorization Application in September, 2009, extending the review for the Committee for Medicinal Products for Human Use opinion on approval until Q4-2009.

In April, 2008 the EMEA accepted for review the MAA for OPAXIO for first-line treatment of patients with advanced non-small cell lung cancer who are performance status 2, based on a non-inferior survival and improved side effect profile. The previously scheduled June, 2009, meeting with the EMEA on OPAXIO did not occur due to conflicts in regulatory schedule as CTI focused on completing the pixantrone New Drug Application submission in June, 2009.

Opaxio (paclitaxel poliglumex, CT-2103), which was formerly known as Xyotax, is an investigational, biologically enhanced, chemotherapeutic that links paclitaxel, the active ingredient in Taxol, to a biodegradable polyglutamate polymer, which results in a new chemical entity. When bound to the polymer, the chemotherapy is rendered inactive, potentially sparing normal tissue's exposure to high levels of unbound, active chemotherapy and its associated toxicities.

Blood vessels in tumor tissue, unlike blood vessels in normal tissue, are porous to molecules like polyglutamate. Based on preclinical studies, it appears that OPAXIO is preferentially distributed to tumors due to their leaky blood vessels and trapped in the tumor bed allowing significantly more of the dose of chemotherapy to localize in the tumor than with standard paclitaxel.

Once inside the tumor cell, enzymes metabolize the protein polymer, releasing the paclitaxel chemotherapy. Preclinical and clinical studies support that Opaxio metabolism by lung cancer cells may be influenced by estrogen, which could lead to enhanced release of paclitaxel and efficacy in women with lung cancer compared to standard therapies.

Cell Therapeutics Inc. (NASDAQ and MTA: CTIC) of Seattle said it was notified by EMEA that pixantrone is eligible to be submitted for a Marketing Authorization Application through the EMEA's

centralized procedure.

The centralized review process provides for a single coordinated review for approval of pharmaceutical products that is conducted by the EMEA on behalf of all European Union.

The EMEA also designated pixantrone as a New Active Substance; if approved, compounds designated as an NAS receive a 10-year market exclusivity period in E.U. member states. CTI will request a meeting with the EMEA to discuss the submission of the MAA for pixantrone to treat aggressive non-Hodgkin's lymphoma in the E.U. member states.

CTI completed the submission of the New Drug Application to FDA for pixantrone to treat relapsed or refractory, aggressive NHL in June 2009 and requested priority review, which if granted could lead to an approval decision from the FDA in the fourth quarter of 2009. Pixantrone is currently available in Europe on a named-patient basis.

The SME program is an initiative by the EMEA that is dedicated to addressing the needs of small and medium size companies developing medicinal products in Europe. Companies granted SME status are able to seek assistance, information and training from dedicated EMEA personnel, particularly in support of MAA.

In addition, SME status may result in reduced or deferred fees associated with marketing authorization applications, scientific advice and inspections. The EMEA also provides for translation of certain required documents. Restricted to companies based in the European Union, SME status has been granted to CTI Life Sciences Limited, a wholly-owned subsidiary of CTI, based in London.

Keryx Biopharmaceuticals Inc. (NASDAQ: KERY) of New York announced that it has reached agreement with the FDA regarding a Special Protocol Assessment on the design of a phase III trial for its PI3K/Akt pathway inhibitor, KRX-0401 (perifosine), in relapsed or relapsed / refractory multiple myeloma patients previously treated with bortezomib (Velcade). The SPA provides agreement that the Phase 3 study design adequately addresses objectives in support of a regulatory submission.

The trial, "A Phase III Randomized Study to Assess the Efficacy and Safety of Perifosine Added to the Combination of Bortezomib and Dexamethasone in Multiple Myeloma Patients Previously Treated with Bortezomib" will be a double-blind, placebo-controlled trial comparing the efficacy and safety of KRX-0401 vs. placebo when combined with bortezomib and

dexamethasone.

The trial, powered at 90%, will enroll approximately 400 patients with relapsed or relapsed / refractory multiple myeloma. The primary endpoint is progression-free survival and secondary endpoints include overall response rate, overall survival and safety.

The phase III trial is a randomized (1:1), double-blind trial comparing the efficacy and safety of KRX-0401 to placebo when combined with bortezomib and dexamethasone in approximately 400 patients with relapsed or relapsed / refractory multiple myeloma. Patients must have been previously treated with both bortezomib (VELCADE) and an immunomodulatory agent (REVLIMID or THALIDOMID), and been previously treated with one to four prior lines of therapy. The primary endpoint is progression-free survival and secondary endpoints include overall response rate, overall survival and safety.

Micromet Inc. (NASDAQ: MITI), of Bethesda, Md., received Orphan Drug Designation from EMEA for BiTE antibody blinatumomab (MT103) for acute lymphoblastic leukemia.

Blinatumomab is a novel therapeutic antibody that activates a patient's T cells to seek out and destroy cancer cells.

In June, Micromet announced that the company had achieved its primary endpoint in an ongoing phase II study of ALL patients. The company presented data at the the 14th Congress of the European Hematology Association in Berlin, showing an 81% response rate in acute lymphoblastic leukemia patients with minimal residual disease.

The patients included in this phase II clinical trial were in complete hematological remission following intense chemotherapy regimens, but retained a detectable level of ALL cancer cells in their bone marrow--so called minimal residual disease.

Various studies have confirmed that ALL patients with MRD following chemotherapy have a significantly worse prognosis than patients without MRD.

Mylan Inc. (NASDAQ: MYL) of Pittsburgh, Pa., said its subsidiary Mylan Pharmaceuticals Inc. has received approval from FDA for its Abbreviated New Drug Application for Bicalutamide Tablets, 50 mg.

Bicalutamide Tablets are the generic version of AstraZeneca's prostate cancer treatment Casodex, which had total U.S. sales of about \$322 million for the 12 months ending March 31 for the same strength, according to IMS Health. Mylan has begun to ship

this product. Mylan has 118 ANDAs pending FDA approval representing \$82.8 billion in annual brand sales, according to IMS Health. Thirty-five of these pending ANDAs are potential first-to-file opportunities, representing \$16.7 billion in annual brand sales, according to IMS Health.

Peregrine Pharmaceuticals Inc. (NASDAQ: PPHM) of Tustin, Calif., and **Affitech A/S** (NASDAQ OMX: AFFI) of Horsholm, Denmark, announced that they have entered into a licensing agreement for antibody therapeutic rights under Peregrine's preclinical anti-VEGF antibody program.

Under the agreement, Affitech will license exclusive worldwide rights to develop and commercialize products under Peregrine's selective anti-VEGF intellectual property portfolio, including the fully human antibody r84, which was discovered by Affitech and jointly developed by the companies under an ongoing collaboration.

Affitech will be responsible for future preclinical and clinical development and potential product commercialization. Peregrine will receive an upfront payment, research fees and future milestone payments. Peregrine will also receive royalties on any future sales and a share of sublicensing revenues. Additional financial terms were not disclosed.

The fully human and selective anti-VEGF monoclonal antibody, r84, which is the most advanced candidate in Peregrine's anti-VEGF antibody program, targets the cancer-promoting growth factor VEGF. Data presented at IBC's 5th Annual International Anti-Angiogenesis Conference in 2007 showed that r84 was as effective as Avastin (bevacizumab) in inhibiting tumor growth in a number of models of human cancers, including a mouse model of human breast cancer.

r84 is distinctive because it selectively blocks VEGF from binding to VEGF receptor 2, while non-selective agents such as Avastin block binding to both VEGFR2 and VEGF receptor 1, the company said.

Watson Pharmaceuticals Inc. (NYSE: WPI) of Morristown, N.J., announced that it received a Complete Response Letter from FDA on its New Drug Application for Trelstar 22.5 mg (triptorelin pamoate for injectable suspension), a 24-week formulation of Trelstar for the palliative treatment of advanced prostate cancer. The Trelstar NDA was prepared in cooperation with Debiopharm Group.

According to the letter, the FDA has requested clarifications related to the clinical testing of the

product, additional information regarding the chemistry, manufacturing and controls of the product and other components, and information related to third party manufacturing. Watson is working to ensure the requested information is provided to the FDA expeditiously.

Trelstar 22.5 mg builds on Watson's long-standing track record in prostate cancer and expanding urology franchise. The new, longer-acting formulation of Trelstar is designed to be conveniently administered and to continuously suppress the production of testosterone in men with advanced prostate cancer for 24 weeks.

Trelstar is a therapy with established efficacy and safety in two formulations—a four-week formulation (TRELSTAR DEPOT) and a 12-week formulation, the company said.

Trelstar, developed by Debiopharm Group and marketed by Watson, administers a synthetic luteinizing hormone releasing hormone agonist, triptorelin, which suppresses the production of testosterone in the testicles.

In clinical trials, the most common adverse events occurring in patients were hot flushes, skeletal pain, impotence and headache. As with all LHRH agonists, triptorelin causes an initial transient increase in testosterone levels and may initiate or worsen symptoms during this transient period. Rare post-marketing reports of anaphylactic shock and angioedema have been reported.

Clinical Trials:

Keryx Begins Phase I Trial Of Agent For Solid Tumors

(Continued from page 1)

kit globally available.

The global LUME-Lung Phase III clinical trial program is investigating BIBF 1120 in combination with standard second-line chemotherapy in patients with advanced NSCLC. The studies are ongoing with a recruitment target of 2,600 patients worldwide. This is one of the largest phase III study programs in an advanced NSCLC patient population to date.

Keryx Biopharmaceuticals Inc. (NASDAQ: KERX) of New York announced the initiation of a phase I clinical study to evaluate KRX-0401 (perifosine) as a single agent treatment for recurrent solid tumors in pediatric patients.

This phase I study is now open for enrollment at Memorial Sloan-Kettering Cancer Center in New York

City. Oren Becher, instructor, Department of Pediatrics, in coordination with Eric Holland, director of the Brain Tumor group at Memorial Sloan-Kettering Cancer Center, will act as the study's Principal Investigator. The study is being fully funded by an external grant provided by a private organization.

KRX-0401 is a novel, oral, anticancer agent that modulates Akt and several other important signal transduction pathways. Keryx is in the process of finalizing late-stage protocols for Perifosine in the treatment of Multiple Myeloma and Metastatic Colon Cancer.

Activation of the PI3K/AKT pathway has been associated with poor prognosis, or proliferation, in several pediatric tumors such as neuroblastoma, glioblastoma, rhabdomyosarcoma, and medulloblastoma. Perifosine's inhibition of this and other pathways, as well as its ability to cross the blood-brain barrier has generated much interest in exploring its potential activity in the treatment of patients with advanced brain tumors.

In vitro and in vivo data presented at AACR 2009 by investigators from the National Cancer Institute demonstrated that single agent perifosine not only induced tumor regression and delayed tumor growth, but that perifosine also improved the survival of mice bearing neuroblastoma tumors. Moreover, in a Phase II study conducted at Memorial Sloan-Kettering Cancer Center, perifosine induced responses and delayed disease progression in adult patients with advanced brain tumors.

Additionally, combination studies of perifosine with novel agents in patients with advanced brain tumors are expected to commence later this year. Such studies also to be funded by external grants.

Ron Bentsur, CEO of Keryx Biopharmaceuticals, commented, "We're very excited that Memorial-Sloan Kettering has taken on a leadership role in the first pediatric study of perifosine." Mr. Bentsur continued, "We are extremely grateful for the external financial support which we have received, and we look forward to working with Drs. Becher and Holland, and their team of renowned oncologists on this study."

The single-center, open-label, Phase I study is entitled "Study of Single Agent Perifosine for Recurrent Pediatric Solid Tumors." In this study, perifosine is being evaluated as a single-agent in pediatric patients with any solid tumor that has failed standard therapy. Patients up to 18 years of age with a performance status of greater than 40% are eligible for this study.

The study has been designed as a dose escalation study to determine the maximum tolerated dose of

perifosine alone in recurrent/progressive pediatric tumors. A standard 3+3 dose escalation design will be employed with 3 to 6 patients at each dose level. All patients will receive perifosine at a loading dose on the first day, followed by a maintenance dose to start on day two until progression of disease. A minimum of 4 and a maximum of 24 patients will be required to complete the study.

KRX-0401 (perifosine) is in-licensed by Keryx from Aeterna Zentaris, Inc. in the United States, Canada and Mexico.

Lexicon Pharmaceuticals Inc. (NASDAQ: LXX) of The Woodlands, Tex., announced today that it has initiated a phase II clinical trial of LX1032, the company's oral drug candidate for managing gastrointestinal symptoms associated with carcinoid syndrome.

LX1032 is designed to reduce serotonin production in patients with metastatic carcinoid tumors. Elevated levels of serotonin contribute to the gastrointestinal and possibly other symptoms experienced by these patients.

In addition to LX1032, Lexicon has three other drug candidates progressing through various stages of clinical development, including LX1031 for irritable bowel syndrome, LX2931 for rheumatoid arthritis, and LX4211 for diabetes.

The phase II clinical trial is designed as a four-week, randomized, double-blind, placebo-controlled study to evaluate the safety and tolerability of LX1032 and its effects on symptoms associated with carcinoid syndrome. The study will include up to 28 patients with carcinoid syndrome who are symptomatic despite treatment with currently available therapy. Up to four dose levels may be evaluated in a serial ascending fashion. Once an optimal or maximal dose is identified, additional patients will be added to confirm clinical observations.

The clinical trial sites will include The University of Texas M.D. Anderson Cancer Center in Houston, Texas; the H. Lee Moffitt Cancer Center & Research Institute in Tampa, Florida; and Hematology Oncology Services of Little Rock, Arkansas, the company said.

LX1032 is being developed in a product development collaboration with Symphony Capital Partners, L.P. and its co-investors.

LX1032 was discovered and developed at Lexicon to reduce serotonin production by inhibiting tryptophan hydroxylase (TPH), a key enzyme in the synthesis of serotonin. Excessive levels of serotonin have been

implicated in symptoms associated with carcinoid syndrome. Serotonin's breakdown product, 5-HIAA, is a biomarker used in the diagnosis of the condition.

Quantum Immunologics Inc. of Tampa, Fla., announced that the first patient in its breast cancer trial has begun to receive its dendritic cell therapy.

QI is currently sponsoring and conducting an FDA-authorized phase I/II clinical trial testing the safety and efficacy of its immunotherapy on 27 Stage IV breast cancer patients who have failed conventional therapy. The clinical trials involve the use of dendritic cell therapy using the oncofetal antigen, or iLRP -- immature Laminin Receptor Protein, as a cancer antigen (a protein found on cancer cells that can be targeted by the body's own immune system) found in many tumor cell lines or fetal tissue, but absent on normal, healthy tissue. QI believes that the OFA antigen can serve as a unique, valuable and promising antigen for individualized breast cancer immunotherapy.

Centered in Mobile, Ala., QI's clinical trial is designed around the use of QI's proprietary dendritic cell therapy, which employs OFA to recruit the patient's own immune system to target and attack the cancer cells with the intent to improve patient survivability and quality of life.

Each patient will receive three monthly injections of the patient's own dendritic cells that have been sensitized to OFA. It is anticipated that once the sensitized cells are injected back into the patient, the patient's T-cells will locate the OFA found on the patient's cancer cells, thereby generating an immune response with the goal of killing the cancer cells and preventing further spread of the disease.

US Oncology, Inc. of The Woodlands, Tex., said US Oncology Research will participate in the **BiPar Sciences** phase III, Multi-center, Open-Label, Randomized Trial of Gemcitabine/Carboplatin (G/C), with or without BSI-201, in patients with Estrogen Receptor, Progesterone Receptor, and HER2-negative metastatic breast cancer.

Joyce O'Shaughnessy, co-chair of the US Oncology Breast Cancer Research Committee, associate director for clinical research for US Oncology and co-director of the Breast Cancer Research Program at Baylor-Charles Sammons Cancer Center and Texas Oncology, a US Oncology affiliate in Dallas, Texas, will lead the study as a follow-up to the phase II study presented in a plenary session at the 45th Annual Meeting of the American Society of Clinical Oncology.

BSI-201 targets PARP, or poly (ADP-ribose) polymerase, a key enzyme involved in DNA repair and cell proliferation. By inhibiting the enzymatic activity of PARP, BSI-201 significantly enhances the anti-tumor effects of chemotherapy and has shown promising safety and efficacy results in patients with solid tumors.

Physicians within the US Oncology network are expected to enroll more than 100 participants in this 420-patient study. Enrollment in the study opened July 17 in centers nationwide.

Patients targeted for the study include adults with histologically documented metastatic breast cancer with measurable disease that is ER-negative, PR-negative, and HER2- non-overexpressing. They will receive the chemotherapy combination of gemcitabine/carboplatin with or without BSI-201.

Patients must have measurable metastatic breast cancer with zero to two prior chemotherapy regimens for metastatic disease; adjuvant chemotherapy is allowed. Primary objectives of the study are to evaluate: overall survival, progression-free survival, the objective response rate, and to further evaluate the safety and tolerability of BSI-201 in combination with gemcitabine and carboplatin.

Phase II of the study in triple negative breast cancer patients found that BSI-201 + G/C resulted in a statistically and clinically significant improvement in clinical benefit rate (CBR), median progression-free survival and OS, compared with G/C alone. BSI-201 + G/C was well tolerated with adverse events (AEs) consistent with known safety profiles of G/C regimens.

Deals & Collaborations:

Merck Licenses BioWa Platform For Antibodies

BioWa, Inc. of Princeton, N.J., said it has entered into a license agreement with **Merck KGaA**, Darmstadt, Germany, providing the global healthcare and chemicals company with access to BioWa's Potelligent Technology platform for the research, development and commercialization of their antibody therapies with enhanced antibody-dependent cellular cytotoxicity.

Under the terms of the license agreement, BioWa grants Merck KGaA non-exclusive rights to research, develop and commercialize therapeutic antibodies generated through Potelligent Technology for an undisclosed number of targets. In return, BioWa will receive upfront payments, and may receive development milestone payments and royalties on products. Other

details of the agreement are not disclosed.

Potelligent Technology improves potency and efficacy of antibody therapeutics, by enhancing ADCC, one of the major mechanisms of action for antibody therapeutics.

BioWa is a wholly owned subsidiary of Kyowa Hakko Kirin Co., Ltd., and is the exclusive worldwide licensor of AccretaMab platform. AccretaMab platform consists of Potelligent and Complegent Technologies, creating a superior antibody molecule with enhanced ADCC and CDC activities.

Debiopharm Group, a Swiss-based global biopharmaceutical group of, and **MSM Protein Technologies**, a human antibody drug discovery company based in Medford, Mass., announce the signing of an exclusive agreement for the development and commercialisation of Debio 0929, an antibody targeting a G protein-coupled receptor, to be developed into a new oncology therapeutic drug.

Under the agreement, Debiopharm and MSM have formed a partnership to select antibodies against the GPCR. Upon completion of the discovery phase, MSM will grant Debiopharm a worldwide exclusive licence for the development and commercialisation of the antibody. MSM will retain marketing rights for Russia, Ukraine and several other countries in Eastern Europe and Asia. MSM will receive milestone payments from Debiopharm during the development of the product, as well as a share of royalties on net sales.

MSM is a closely held drug discovery company based in Boston, MA. The company applies its proprietary SIMPL platform and magnetic proteoliposome particles to display multispacers such as GPCRs in highly concentrated and purified form while retaining their native conformation and orientation thereby maximizing the probability of raising functional antibodies.

FORMA Therapeutics of Cambridge, Mass., entered into a collaboration agreement with **Novartis**.

Under the agreement, FORMA will utilize its cell-based screening platform to discover inhibitors for undisclosed protein-protein interaction targets in the field of oncology.

FORMA is integrating transformative chemistry and biology to unlock the best targets and pathways that genomic medicine has revealed. Capitalizing on the targets and pathways validated by the Cancer Genome Atlas Project and other related efforts, FORMA is developing a new generation of cancer therapies aimed at previously elusive drug targets. The

company is achieving this by applying its proprietary cell-based screening, structure-guided drug discovery and Diversity Oriented Synthesis technologies, which FORMA also uses to discover novel compounds for its partners in indications beyond oncology.

Morphotek Inc. of Eston, Pa., and **Cancer Innovations Inc.**, a privately held biotechnology company specializing in the development of oncology products, have entered into an evaluation and option agreement in which Morphotek will evaluate monoclonal antibodies targeting certain tumor-associated proteins.

Morphotek is a subsidiary of **Eisai Corp. of North America**.

The agreement with CII provides Morphotek access to several of CII's monoclonal antibodies. Morphotek will evaluate one or more of the antibodies and have the right to exercise an option for a license during the evaluation period. Should Morphotek choose to exercise its option, the parties will enter negotiations for a license under which Morphotek would receive an exclusive worldwide license to develop the antibodies for potential therapeutic, diagnostic and prophylactic use, and would retain the responsibility for the commercialization of the antibodies.

Nuevolution of Copenhagen announced the execution of a worldwide technology cross-licensing agreement with **GlaxoSmithKline**.

The agreement relates to a number of patented technologies for rapid synthesis and DNA-tagging of hundreds of millions of chemically diverse drug-like small molecule compounds and the efficient screening of these, facilitating the identification of potent drug leads. These technologies were developed by Nuevolution and Praecis Pharmaceuticals, a wholly owned subsidiary of GlaxoSmithKline.

Under the cross-licensing agreement, GlaxoSmithKline will obtain a non-exclusive license under technology patents of Nuevolution, and Nuevolution will obtain a one time license fee and a non-exclusive license under technology patents of GlaxoSmithKline.

Nuevolution has developed Chemetics, a hybrid of proven wet chemistry and molecular biology which represents the ultimate fragment based lead discovery technology. Chemetics enables rapid synthesis and DNA-tagging of hundreds of millions of chemically diverse drug-like small molecule compounds and the efficient screening of these, facilitating the identification of potent drug leads.