

# **Strength and Innovation of Novartis Oncology Products and Pipeline With Potential to Improve Patient Treatment Demonstrated by More Than 170 Abstracts at ASCO Annual Meeting**

May 15, 2008

- - Unprecedented amount of research reflects depth and breadth of collaboration with investigators worldwide to develop new treatments for diverse forms of cancer
- - Plenary session to highlight impact of Zometa(R), the leading IV bisphosphonate, on relapse rate of patients with early-stage breast cancer
- - Four oral sessions to feature RAD001, first oral once-daily continuous inhibitor of mTOR, including first results of RECORD-1 study in renal cell carcinoma
- - Updated Phase II results with Tasigna(R) in Philadelphia chromosome-positive chronic myeloid leukemia to be presented

EAST HANOVER, N.J., May 15 /PRNewswire/ -- Novartis Oncology announced today that the 44th annual meeting of the American Society of Clinical Oncology (ASCO) will include an unprecedented amount of research drawing from Novartis Oncology's robust pipeline of investigational compounds and existing cancer therapies. Novartis Oncology's cancer therapies will be the subject of more than 170 abstracts at the meeting, and will be highlighted in a plenary session, as well as seven oral presentations.

A plenary session will feature the first efficacy results from the ABCSG-12 study, looking at the impact of Zometa® (zoledronic acid) on disease-free survival in patients with early-stage breast cancer (Abstract #LBA4: Sunday, June 1, 2008; 1:45 PM to 2:00 PM CDT). In addition, late-breaking data on the role of RAD001 (everolimus) as a potential new treatment option for patients with advanced kidney cancer who have failed standard therapies will be presented in an oral session (Abstract #LBA5026: Saturday, May 31, 2008; 4:30 PM-4:45 PM CDT).

"This is a particularly exciting year for Novartis Oncology in advancing research and touching the lives of thousands of cancer patients," said David Epstein, CEO & President of Novartis Oncology. "Our scientific presence at ASCO shows that Novartis is a leader in delivering potential new cancer treatments and in demonstrating productive collaboration with key investigators across the intricate spectrum of cancer research."

Six Novartis oncology compounds are currently in late-stage development with the potential for registration over the next five years. These compounds include RAD001 (renal cell carcinoma and other cancers), ASA404 (non-small cell lung cancer), SOM230 (Cushing's disease, refractory carcinoid tumors and acromegaly), LBH589 (cutaneous T-cell lymphoma and other cancers), EPO906 (ovarian cancer), and PKC412 (acute myelogenous leukemia and aggressive systemic mastocytosis).

Other highlights of data to be presented include:

-- The first results from the CALGB trial 79809, of the effects of Zometa

on bone mineral density in premenopausal women who develop ovarian failure due to adjuvant chemotherapy (Abstract #512: Saturday, May 31, 2008; 5:00 PM-5:15 PM CDT).

- Results from a Phase II study of bevacizumab and RAD001 in the treatment of advanced renal cell carcinoma (RCC) (Abstract #5010: Saturday, May 31, 2008; 2:00-PM-2:15 PM CDT).
- Data from a multicenter Phase I clinical trial of daily and weekly RAD001 in combination with weekly paclitaxel and trastuzumab in patients with Her2-overexpressing metastatic breast cancer with prior resistance to trastuzumab (Abstract #1003: Monday, June 2, 2008; 4:30 PM-4:45 PM CDT).
- Analysis of results from a Phase II study of RAD001 in patients with recurrent endometrial carcinoma (Abstract #5502: Sunday, June 1, 2008; 5:30 PM-5:45 PM CDT).
- Updated Phase II results on Tasigna in patients with imatinib-resistant chronic myeloid leukemia in chronic phase (Abstract #7010: Monday, June 2; 10:30 AM - 10:45 AM CDT).
- Phase II data comparing safety and efficacy between squamous and non-squamous non-small cell lung cancer patients receiving ASA404 (Abstract #8072: Sunday, June 1, 2008; 2:00 PM-6:00 PM CDT).

#### Novartis Oncology Products and Compounds

Zometa is currently used for the prevention of skeletal-related events (pathological fractures, spinal compression, radiation or surgery to bone, or tumor-induced hypercalcemia) in patients with advanced malignancies involving bone.

RAD001 (everolimus) is an investigational oral once-daily inhibitor of mTOR, a protein that controls tumor cell division and blood vessel growth. Everolimus is approved under the trade-name Certican® for the prevention of organ rejection in heart and kidney transplant recipients. Certican was first approved in the EU in 2003 and is available in more than 60 countries.

Tasigna® (nilotinib) is a next-generation tyrosine kinase inhibitor recently approved in the US and EU as second-line therapy for patients with Philadelphia chromosome-positive chronic myeloid leukemia (Ph+ CML).

ASA404 is an investigational small-molecule Tumor-VDA that selectively disrupts existing tumor blood vessels.

#### Zometa Safety Information

ZOMETA is generally well tolerated. The most common side effects you may experience with ZOMETA therapy are fatigue, nausea, vomiting, bone pain, headache, fever, shortness of breath, anemia, constipation, or lack of appetite. These side effects with ZOMETA were usually mild and transient. Your doctor may recommend a mild pain reliever to make you more comfortable.

In some cases, ZOMETA and other bisphosphonates have been known to cause kidney damage. Prior to each infusion, your doctor will routinely do blood tests to monitor your kidney function. If you have kidney problems, your doctor may decide that you need a lower dose of ZOMETA or that ZOMETA should not be given. Patients with severe kidney problems should not receive ZOMETA.

If you are pregnant, you should not receive ZOMETA because of the potential harm to the unborn child. While on ZOMETA therapy, you should avoid becoming pregnant.

Osteonecrosis of the jaw (ONJ) has been reported mostly in cancer patients receiving treatments, including intravenous bisphosphonates, chemotherapy, and/or corticosteroids. The majority of reported cases have

been associated with dental procedures such as tooth extraction. You should maintain good oral hygiene and should have a dental examination with appropriate preventive dentistry prior to treatment with bisphosphonates. While on treatment, you should avoid invasive dental procedures if possible. No data are available as to whether discontinuation of bisphosphonate therapy reduces the risk of ONJ in patients requiring dental procedures. A connection between the use of bisphosphonates and ONJ has not been established. Based on your condition, your doctor will determine the treatment plan you will receive.

In postmarketing experience, severe and occasionally incapacitating bone, joint, and/or muscle pain has been reported infrequently in patients taking bisphosphonates.

ZOMETA contains the same active ingredient as found in Reclast® (zoledronic acid). If you are treated with ZOMETA, you should not be treated with Reclast.

You should take an oral calcium supplement of 500 mg and a multiple vitamin containing 400 IU of vitamin D daily.

It is important to keep up with your fluid intake while on ZOMETA therapy. Signs and symptoms of low fluid intake include thirst, sagging skin, low urine output, and dry mouth. Be sure to drink plenty of water or other fluids.

Please see enclosed full Prescribing Information in the ZOMETA resource book.

#### Tasigna Safety Information

##### WARNING: QT PROLONGATION AND SUDDEN DEATHS

Tasigna prolongs the QT interval. Sudden deaths have been reported in patients receiving nilotinib. Tasigna should not be used in patients with hypokalemia, hypomagnesemia, or long QT syndrome. Hypokalemia or hypomagnesemia must be corrected prior to Tasigna administration and should be periodically monitored. Drugs known to prolong the QT interval and strong CYP3A4 inhibitors should be avoided. Patients should avoid food 2 hours before and 1 hour after taking dose. Use with caution in patients with hepatic impairment. ECGs should be obtained to monitor the QTc at baseline, seven days after initiation, and periodically thereafter, as well as following any dose adjustments.

#### Warnings and precautions

**Myelosuppression:** Associated with Grade 3/4 neutropenia, thrombocytopenia, and anemia. Complete blood counts should be performed every 2 weeks for the first 2 months, then monthly thereafter as clinically indicated. Myelosuppression with Tasigna was generally reversible and usually managed by withholding Tasigna temporarily or dose reduction.

**QT prolongation:** Tasigna prolongs the QT interval. Correct hypokalemia or hypomagnesemia prior to administration and monitor periodically. Avoid drugs known to prolong the QT interval and strong CYP3A4 inhibitors. Use caution in patients with hepatic impairment. Obtain ECGs at baseline, seven days after initiation, and periodically thereafter, as well as following any dose adjustments.

**Sudden deaths:** There were sudden deaths reported in the safety population and the expanded access program. Ventricular repolarization abnormalities may have contributed to their occurrence.

**Elevated serum lipase:** Caution is recommended in patients with history of pancreatitis. Check serum lipase periodically. **Liver function abnormality** Serum bilirubin and hepatic transaminases: Tasigna may result in elevations in bilirubin, AST/ALT, and alkaline phosphatase. Check hepatic function tests periodically.

**Electrolyte abnormalities:** Tasigna can cause hypophosphatemia, hypokalemia, hyperkalemia, and

hyponatremia. Correct electrolyte abnormalities prior to initiating TASIGNA and monitor periodically during therapy.

Hepatic impairment: Metabolism of Tasigna is mainly hepatic. Tasigna has not been investigated in patients with hepatic impairment. Caution is recommended in these patients and QT interval should be monitored closely.

Drug interactions: Avoid concomitant use of QT prolonging drugs and strong inhibitors or inducers of CYP3A4 should be avoided as they may affect serum concentration of Tasigna.

#### Concomitant strong CYP3A4 inhibitors

The concomitant use of strong CYP3A4 inhibitors should be avoided (including, but not limited to, ketoconazole, itraconazole, clarithromycin, atazanavir, indinavir, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin, voriconazole). Should treatment with any of these agents be required, it is recommended that therapy with Tasigna be interrupted. If interruption of treatment with Tasigna is not possible, patients who require treatment with a drug that prolongs QT or strongly inhibits CYP3A4 should be closely monitored for prolongation of the QT interval, and a dose reduction to 1/2 the daily dose is recommended (400 mg once daily). If the strong inhibitor is discontinued, a washout period should be allowed before Tasigna is adjusted upward to the indicated dose. Close monitoring for prolongation of the QT interval is indicated for patients who cannot avoid strong CYP3A4 inhibitors. Grapefruit products and other foods that are known to inhibit CYP3A4 should also be avoided.

#### Concomitant strong CYP3A4 inducers

The concomitant use of strong CYP3A4 inducers should be avoided (including, but not limited to, dexamethasone, phenytoin, carbamazepine, rifampin, rifabutin, rifapentin, phenobarbital). Patients should also refrain from taking St John's Wort. If patients must be co-administered a strong CYP3A4 inducer, the dose of Tasigna may need to be increased, depending on patient tolerability. If the strong inducer is discontinued, the Tasigna dose should be reduced to the indicated dose. Tasigna is a competitive inhibitor of CYP3A4, CYP2C8, CYP2C9, CYP2D6, and UGT1A1. Since warfarin is metabolized by CYP2C9 and CYP3A4, it should be avoided if possible. Tasigna inhibits human P-glycoprotein. If Tasigna is administered with drugs that are substrates of Pgp, increased concentrations of the substrate are likely and caution should be exercised. Tasigna may also induce CYP2B6, CYP2C8, and CYP2C9. Therefore, Tasigna may alter serum concentration of other drugs.

Food effects: Food increases blood levels of Tasigna. Patients should avoid food 2 hours before and 1 hour after taking dose. Since the capsules contain lactose, Tasigna is not recommended for patients with rare hereditary problems of galactose intolerance, severe lactase deficiency, or of glucose-galactose malabsorption.

Pregnancy: Fetal harm can occur when Tasigna is administered to a pregnant woman. Women should be advised not to become pregnant when taking Tasigna.

#### Adverse reactions

In chronic phase patients, the most commonly reported adverse reactions (>10%) were rash (33%), pruritus (29%), nausea (31%), fatigue (28%), headache (31%), constipation (21%), diarrhea (22%), and vomiting (21%). The most common (>10%) Grade 3/4 adverse reactions were thrombocytopenia (28%), neutropenia (28%), elevated lipase (15%), and hyperglycemia (11%). In accelerated phase patients, the most commonly reported adverse reactions (>10%) were rash (28%), pruritus (20%), and constipation (18%). The most

common (>10%) Grade 3/4 adverse reactions were thrombocytopenia (37%), neutropenia (37%), anemia (23%), and elevated lipase (17%). Other serious adverse reactions included pneumonia, febrile neutropenia, leukopenia, intracranial hemorrhage, and pyrexia (Grade 3/4: 2%).

Dose adjustments or modifications: Tasigna may need to be temporarily withheld and/or dose reduced for QT prolongation, hematological toxicities that are not related to underlying leukemia, clinically significant moderate or severe nonhematologic toxicities, laboratory abnormalities, or concomitant use of strong CYP3A4 inhibitors. With concomitant use of strong CYP3A4 inducers, the dose of Tasigna may need to be increased, depending on patient tolerability.

Other patients in whom Tasigna should be used with caution: Tasigna should not be used during pregnancy. Sexually active female patients should use effective contraception during treatment. Women should not breast feed while taking Tasigna. There are no data to support the use of Tasigna in pediatric patients. Use with caution in patients with hepatic impairment.

Please see full Prescribing Information.

#### Disclaimer

The foregoing release contains forward-looking statements that can be identified by terminology such as "pipeline", "to develop", "to highlight", "to feature", "to be", "will", "potential", or similar expressions, or by express or implied discussions regarding potential new products, potential new indications or labelling for existing products, or regarding potential future revenues from such products. Such forward-looking statements reflect the current views of the Company regarding future events, and involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantee that any new products will be approved for sale in any market, or that any new indications or labelling will be approved for any existing products. Nor can there be any guarantee that any such products will achieve any particular levels of revenue in the future. In particular, management's expectations could be affected by, among other things, unexpected clinical trial results, including unexpected new clinical data and unexpected additional analysis of existing clinical data; unexpected regulatory actions or delays or government regulation generally; the company's ability to obtain or maintain patent or other proprietary intellectual property protection; competition in general; government, industry and general public pricing pressures, and other risks and factors referred to in Novartis AG's current Form 20-F on file with the US Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. Novartis is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements contained in this press release as a result of new information, future events or otherwise.

#### About Novartis

Novartis Pharmaceuticals Corporation researches, develops, manufactures and markets leading innovative prescription drugs used to treat a number of diseases and conditions, including those in the cardiovascular, metabolic, cancer, organ transplantation, central nervous system, dermatological, gastrointestinal and respiratory areas. The company's mission is to improve people's lives by pioneering novel healthcare solutions.

Located in East Hanover, New Jersey, Novartis Pharmaceuticals Corporation is an affiliate of Novartis AG (NYSE: NVS), a world leader in offering medicines to protect health, cure disease and improve well-being. Our goal is to discover, develop and successfully market innovative products to treat patients, ease suffering and

enhance the quality of life. We are strengthening our medicine-based portfolio, which is focused on strategic growth platforms in innovation-driven pharmaceuticals, high-quality and low-cost generics, human vaccines and leading self-medication OTC brands. Novartis is the only company with leadership positions in these areas. In 2006, the Group's businesses achieved net sales of USD 37.0 billion and net income of USD 7.2 billion. Approximately USD 5.4 billion was invested in R&D. Headquartered in Basel, Switzerland, Novartis Group companies employ approximately 100,000 associates and operate in over 140 countries around the world. For more information, please visit <http://www.pharma.us.novartis.com/>.

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