

**MEDIA RELEASE • COMMUNIQUE AUX MEDIAS • MEDIENMITTEILUNG**

**Novartis partners with East African Botanicals to expand cultivation and extraction of natural ingredient used in anti-malarial Coartem®**

- *Contracts to purchase extracted artemisinin stimulate cultivation of more than 1,000 hectares of *Artemisia annua* in Kenya, Tanzania and Uganda*
- *East African Botanicals scale-up efforts boosted by financial and technical support from Novartis*
- *Local economies benefit from job creation in agricultural and manufacturing sectors*

**Basel, June 6, 2005** – As the leading global supplier of artemisinin-based combination therapies (ACTs) to treat multi drug-resistant forms of malaria, Novartis has established a close partnership with Kenya-based East African Botanicals (EAB) to significantly increase agricultural cultivation of *Artemisia annua* and extraction of artemisinin. Artemisinin is used to produce artemether, one of two active ingredients in Coartem® (artemether-lumefantrine), a highly effective anti-malarial that Novartis provides on a not-for-profit basis to the public sector in malaria-endemic developing countries.

Based on orders from Novartis for artemisinin plus financial and technical support, EAB is expanding the cultivation of *Artemisia annua* to more than 1,000 hectares in Kenya, Tanzania and Uganda. Combined with the areas already under cultivation, mostly in China, this new planting will bring agricultural production to a level of approximately 10,000 hectares. This is sufficient to allow Novartis to increase its production significantly in 2005 and 2006 exceeding 100 million treatments by year end 2006, while also helping to improve local economies in Asia and Africa.

“Novartis has proven to be our most important partner as we move to large-scale production of artemisinin in East Africa,” said Patrick Henfrey, Chief Executive Officer of Advanced Bio Extracts (ABE). The main operating entities of ABE are African Artemisia (AA) operating in Tanzania, East African Botanicals Kenya and East African Botanicals Uganda. “By placing firm orders for extracted artemisinin, providing financial support for infrastructure improvements, and delivering technical support and know-how, Novartis has made a major contribution to creating a sustainable market for this key natural ingredient.”

Prior to 2005, *Artemisia annua* was mainly sourced from remote mountain regions in China, where the plant grows wild. Due to recent dramatic increases in demand for ACTs, however, new sources utilizing commercial agricultural production both in Asia and Africa are necessary to create a sustainable supply chain for Novartis and other ACT producers.

Future demand for ACTs in general is anticipated to rise to several hundred million treatments over the next few years. In order to produce these quantities, immense volumes of

raw material extracted from *Artemisia annua* are required. To spread the risk of climatic factors that might impact the harvest of *Artemisia annua*, it is important to diversify the geographic areas under cultivation. In addition, expanding cultivation and extraction capacity in Africa makes sense given the fact that most patients affected by malaria live on the African continent.

“Our goal is to help EAB quickly and significantly increase its production capacity and create a stable market for artemisinin,” said Silvio Gabriel, Executive Vice President, Malaria Initiatives, Novartis AG. “This will allow us to meet our own production goals for Coartem and bring this life-saving medicine to millions more patients suffering from malaria.”

East African Botanicals plans to extract artemisinin from *Artemisia annua* in its Kenyan facility beginning in the fourth quarter of 2005.

The partnership between Novartis and East African Botanicals is also having a positive impact in Kenya, Tanzania and Uganda. Novartis financing has enabled EAB to offer firm purchasing agreements to numerous farmers, including many on small lots. The financial support also helps EAB with the construction of an extraction-and-purification facility in Athi River, Kenya; the purchase and expansion of an extraction factory in Uganda; and the acquisition of building materials from local manufacturers. Overall, these activities will create hundreds of jobs, improving the local economy and upgrading safety standards.

With the support provided to East African Botanicals, Novartis is building on its partnership model with strategic suppliers. Since 1994, Novartis has been working intensively with Chinese suppliers of artemether and lumefantrine used in the manufacture of Coartem. That collaboration continues today with a focus on technology transfer to China, helping local drug substance manufacturers upgrade their facilities to international GMP standards and providing quality assurance support as they expand manufacturing capacity to meet surging demand for ACTs.

Novartis said its Chinese partners remain central to the supply of Coartem. The Chinese researched and discovered the medicinal value of artemisinin and Chinese scientists played a pivotal role in the research and development of artemether, a derivative of artemisinin, used to manufacture Coartem. Finally, Chinese scientists from the Institute of Microbiology and Epidemiology of the Academy of Military Medical Sciences contributed to research leading to the combination of artemether and lumefantrine, which has become the world’s leading ACT to combat multi drug-resistant malaria.

### **About Coartem**

Coartem is a highly effective and well tolerated anti-malarial that achieves cure rates of up to 95%, even in areas of multi-drug resistance. It is indicated for the treatment of falciparum malaria, the most dangerous form of malaria. Coartem is the only pre-qualified, fixed-dose ACT combining artemether and lumefantrine. This fixed-dose combination is of great benefit to patients as it facilitates treatment compliance and supports optimal clinical effectiveness.

Coartem was co-developed by Novartis in collaboration with Chinese partners who also continue to supply the active ingredients artemether and lumefantrine. The final Coartem tablets are produced by Novartis in China. Coartem is currently registered in 77 countries worldwide and more than seven million patients have benefited from this innovative treatment since its first registration in October 1998. Coartem has been extensively studied in multi-center clinical trials involving more than 3,000 patients.

This release contains certain forward-looking statements that can be identified by the use of forward-looking terminology, such as “continues” “will bring”, “to increase production

significantly in 2005 and 2006”, “has made a major contribution to creating a sustainable market”, “is anticipated”, “our goal is”, “will allow”, “plans to”, “will create”, or similar expressions, or by express or implied discussions regarding Novartis’ ability to meet its projected production goals of Coartem. 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 the actual results with Coartem to be materially different from any future results, performance, or achievements expressed or implied by such statements. There can be no guarantee that Novartis will be able to achieve any particular level of Coartem production in the future. Any such results can be affected by, among other things, the ability to obtain the necessary raw materials, uncertainties relating to regulatory actions or government regulation generally, as well as factors discussed in the Company's Form 20-F filed 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 described herein as 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 AG (NYSE: NVS) is a world leader in pharmaceuticals and consumer health. In 2004, the Group's businesses achieved sales of USD 28.2 billion and pro forma net income of USD 5.6 billion. The Group invested approximately USD 4.2 billion in R&D. Headquartered in Basel, Switzerland, Novartis Group companies employ about 81,400 people and operate in over 140 countries around the world.

Novartis was recently honored with the 2005 Excellence in Corporate Philanthropy Award from the Committee to Encourage Corporate Philanthropy. In 2004, over 4.25 million patients around the world benefited from Novartis programs valued at USD 570 million. These initiatives range from drug donation and research programs to combat neglected diseases like malaria, tuberculosis and leprosy in developing nations to patient assistance programs that help cancer patients receive the most innovative and effective treatments available. For further information please consult <http://www.novartis.com>.

# # #

### **Contacts**

**Nehl Horton**

Novartis Global Media Relations

Tel +41 61 324 5749

or +41 61 324 2200

[nehl.horton@novartis.com](mailto:nehl.horton@novartis.com)