

**MEDIA RELEASE • COMMUNIQUE AUX MEDIAS • MEDIENMITTEILUNG****Novartis announces typhoid vaccine research program in partnership with the Wellcome Trust**

- *Novartis Vaccines Institute for Global Health (NVGH) developing bivalent vaccine to prevent Typhoid, which affects over 21 million people worldwide annually*
- *New grant from the Wellcome Trust funds progression of vaccine from preclinical through Phase I and II studies with view to protect against both S. Typhi and S. Paratyphi strains*
- *New vaccines an urgent priority as no vaccine available for S. Typhi for use in young children and infants and no vaccine available at all for S. Paratyphi A.*

**Basel, June 4, 2009** — Novartis announced that the Novartis Vaccines Institute for Global Health (NVGH) has been awarded a grant from the Wellcome Trust to develop a bivalent vaccine for Typhoid fever, a disease that affects more than 21 million people worldwide every year.

The Euro 5.15 million grant will fund preclinical development and Phase I and II studies for a vaccine that protects against both S. Typhi and S. Paratyphi A; two very similar illnesses which, if left untreated, can result in complications and death. The currently available vaccines for S. Typhi do not protect infants and young children. S. Paratyphi A is a growing problem causing 25-50% of all Typhoid cases.

“With more than 21 million cases of Typhoid fever worldwide and more than 600,000 deaths each year, this disease is a serious global health issue, especially in the developing world,” said Dr. Daniel Vasella, Chairman and CEO of Novartis. “The bivalent vaccine being developed by NVGH will use a novel approach to increase efficacy and address the needs of patients that other vaccines have not. This will ultimately have the potential to eradicate this disease.”

The NVGH opened in 2008 with a focus on addressing the unmet medical need for vaccines for diseases of the developing world. In addition to leveraging prior experience in R&D for the development of conjugate vaccines targeting Salmonella, NVGH research will build upon a promising prototype conjugate vaccine developed by the National Institutes of Health (NIH). NVGH aims to have a product ready for clinical trials by the end of 2010.

Expert advice, project support, and strategic oversight will be provided by the Wellcome Trust.

“This initiative is a welcome and important contribution to the fight against infection” said Dr. Ted Bianco, Director of Technology Transfer at the Wellcome Trust. “Partnerships between public and private sector research give us the best chance of effectively addressing the R&D needs of neglected diseases. The concept of developing a vaccine that can protect against both causative agents of Typhoid Fever makes great sense from

a public health perspective, but requires a team of great skill to bring to fruition. I wish the NVGH team every success in this exciting endeavor.”

### **About NVGH**

NVGH is a research institute in Siena with a nonprofit mission to exclusively focus on the development of vaccines for diseases of the developing world. It is the first institute of its kind to be set up by a major vaccine manufacturer. NVGH is a public private partnership and is dedicated to collaborating with external organizations to build strength in resources. NVGH shares the world-class facilities and technologies of the company’s vaccines research headquarters. The Institute will work with universities, research institutes and other public and private organizations to develop the scientific basis for vaccine development and bridge an existing gap between the discovery of promising vaccine candidates in academic research institutes and their manufacturing and distribution, by providing the facilities and expertise for scale vaccine production and human proof of concept studies.

### **About the Wellcome Trust**

The Wellcome Trust is the largest charity in the UK. It funds innovative biomedical research, in the UK and internationally, spending around GBP 600 million each year to support the brightest scientists with the best ideas. The Wellcome Trust supports public debate about biomedical research and its impact on health and wellbeing.

<http://www.wellcome.ac.uk>

### **Disclaimer**

The foregoing release contains forward-looking statements that can be identified by terminology such as “developing,” “will,” “with a view to,” “can,” “potential,” “aims to,” or similar expressions, or by express or implied discussions regarding the potential development and approval of a typhoid vaccine, or regarding potential future revenues from a typhoid vaccine. You should not place undue reliance on these statements. Such forward-looking statements reflect the current views of management 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 a typhoid vaccine will be approved for sale in any market. Nor can there be any guarantee that a typhoid vaccine will achieve any particular levels of revenue in the future. In particular, management’s expectations regarding a typhoid vaccine could be affected by, among other things, unexpected research and development delays or results; 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; the impact that the foregoing factors could have on the values attributed to the Novartis Group’s assets and liabilities as recorded in the Group’s consolidated balance sheet, 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 AG provides healthcare solutions that address the evolving needs of patients and societies. Focused solely on healthcare, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, cost-saving generic pharmaceuticals, preventive vaccines, diagnostic tools and consumer health products. Novartis is the only company with leading positions in these areas. In 2008, the Group's continuing operations achieved net sales of USD 41.5 billion and net income of USD 8.2 billion. Approximately USD 7.2 billion was invested in R&D activities throughout the Group. Headquartered in Basel, Switzerland, Novartis Group companies employ approximately 98,000 full-time-equivalent associates and operate in more than 140 countries around the world. For more information, please visit <http://www.novartis.com>.

In 2008, the Novartis access-to-medicines programs, were valued at USD 1.26 billion and reached 74 million patients globally. These initiatives range from drug donation and research programs to combat neglected diseases such as malaria, tuberculosis, TB and leprosy in developing nations to patient assistance programs that help cancer patients receive the most innovative and effective treatments.

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