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## Press release

### MMV develops framework to assess risk of resistance for antimalarial compounds

*Geneva, 22 August 2012.* Medicines for Malaria Venture has developed a framework to evaluate the risk of resistance for the antimalarial compounds in its portfolio. A paper based on this work: **A framework for assessing the risk of resistance for antimalarials in development** has been published in the Malaria Journal today. <http://www.malariajournal.com/>

Resistance defines the longevity of every anti-infective drug, so it is important when developing new medicines for malaria, to check how easily promising antimalarial compounds will select for resistance. Once this is known, it facilitates the prioritization of not only the most efficacious compounds but also the most robust ones.

“By profiling our portfolio as early as possible in terms of resistance liabilities, be they pre-existing or acquired, we are attempting to ensure that none of the compounds will fall to potential resistance,” said Tim Wells, Chief Scientific Officer, MMV, and one of the authors of the paper. “This will also help us cost-effectively accelerate the drug development process, and be prepared in advance with a full resistance profile which is required by regulatory authorities before a new drug can be approved.”

A cross-resistance test using a panel of multi-drug resistant strains of the parasite will check for pre-existing resistance liability. This will ensure that none of MMV’s compounds are cross-resistant with other drugs, e.g., if a parasite is resistant to chloroquine, its resistance will also be profiled against MMV compounds.

The framework also includes selection experiments in the laboratory that measure how easy it is for the parasite to develop resistance, in other words, the likelihood of the occurrence of mutations that confer resistance. This is achieved by measuring the minimal inoculum for resistance (MIR) – the minimum number of parasites from which a resistant one is likely to be selected by drug pressure. Although this is already being done, the framework offers a standard, systematic method.

This new framework will result in a fully profiled portfolio for MMV in terms of resistance and could also be used by other malaria researchers to test their compounds for potential resistance, measure the genetic ability of parasites to develop resistance and the intensity of the resistance.

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## About MMV

MMV is recognized as the leading product development partnership (PDP) in the field of antimalarial drug research and development. It was established as a foundation in 1999, and registered in Switzerland.

**MMV's mission** is to reduce the burden of malaria in disease-endemic countries by discovering, developing and facilitating delivery of new, effective and affordable antimalarial drugs.

**MMV's vision** is a world in which these innovative medicines will cure and protect the vulnerable and under-served populations at risk of malaria, and help to ultimately eradicate this terrible disease. MMV's strength comes from its product development partnership (PDP) model reflected in its network of more than 170 pharmaceutical, academic and endemic-country partners in over 40 countries. MMV also works in close partnership with a number of WHO programmes that include TDR, the Global Malaria Programme (GMP) and Roll Back Malaria (RBM).

With more than 65 promising projects, MMV is currently managing the largest portfolio of antimalarial R&D projects ever assembled.

In February 2012, one MMV-supported artemisinin combination therapy (ACT), Pyramax<sup>®</sup>, co-developed with Shin Poong, received a positive scientific opinion from the European Medicines Agency (EMA). In October 2011, dihydroartemisinin-piperaquine (Eurartesim<sup>®</sup>), an ACT developed in partnership with Sigma Tau, was granted regulatory approval by the EMA and in November 2010, Guilin's artesunate injection for the treatment of severe malaria was approved by the WHO's Prequalification programme with assistance from MMV. In addition, Coartem<sup>®</sup> *Dispersible*, a child-friendly version of the ACT Coartem<sup>®</sup>, was developed by Novartis in partnership with MMV and launched in 2009. Since June 2012, 137 million courses of Coartem<sup>®</sup> *Dispersible* treatment have been supplied to 35 malaria-endemic countries.

The key to MMV's success lies in the focus of its mission, and the diversity of its team of more than 50 personnel from over 20 countries, handpicked for their expertise and commitment to global health. Governed by the values of respect, integrity, trust and excellence, MMV is recognized for its industry-style portfolio management and wise administration of funds. It manages over USD 515 million received and committed from long-term donors such as government agencies, private foundations, international organizations, and corporate foundations. In addition, it receives in-kind donations in the form of staff, facilities, and technology from its industry partners, estimated to be equal in dollar value to the funds from donors.

## Disclaimer

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We ask you not rely unduly on these statements. Such forward-looking statements reflect the current views of Medicines for Malaria Venture (MMV) and its partner(s) regarding future events, and involve known and unknown risks and uncertainties.

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