



MEDIA ADVISORY

PRESS CONFERENCE: THURSDAY, 5 NOV, 10:15 AM, MIM PRESS ROOM, KICC

- Dr. Janet Hemingway, International Vector Control Consortium (IVCC)
- Dr. Stephan Duparc, Medicines for Malaria Venture (MMV)
- Dr. Christian Lengeler, Swiss Tropical Institute
- Dr. Robert Ridley, WHO Special Programme for Research and Training in Tropical Diseases (TDR)

Malaria Researchers Hunt for Solution to Potential Threat of Drug and Insecticide Resistance

NAIROBI, 5 NOVEMBER 2009 – Scientists gathered at the world’s largest malaria conference will debate the challenge of malaria drug and insecticide resistance and call on researchers and policymakers to act urgently to contain the problem. The threat of failure of frontline tools for malaria control and treatment—treated bednets, insecticides, and artemisinin combination therapies (ACTs)—could leave millions of people vulnerable to the disease, with little recourse for prevention or effective treatment. This could reverse the massive gains achieved with these tools over the last five years.

Staying one step ahead of the malaria parasite, which constantly evolves to become resistant to malaria drugs, will require a redoubling of efforts to develop new classes of effective medicines. The insecticide research and development pipeline will likewise need to be filled with new active ingredients that malaria-carrying mosquitoes have not yet learned to tolerate.

DRUG RESISTANCE

Artemisinin is the most effective front-line drug against malaria in the world today. It was recommended as first-line therapy by the WHO in 2002 and has saved millions of lives since then. However, resistance to this life-saving drug is emerging. Some studies published in 2008-2009 reported a doubling of the time to clear the parasite from the blood in some malaria patients in the western region of Cambodia. However, efficacy at 28 days was maintained, and the patients were still cured with the ACTs they had been given.

This ‘resistance’, first observed in West Cambodia, has now also been reported in the west of Thailand and in eastern Myanmar. But it has not yet been possible to ascertain if this additional ‘resistance’ is due to the Cambodian strains or to different strains. DHA/PQP (Eurartesim®), a new ACT developed by Sigma Tau and Medicines for Malaria Venture (MMV), and recently submitted to the European Agency EMEA, will also be submitted to the regulatory authorities of Cambodia. The drug could be used for the containment of the strains resistant to artemisinin, if requested by the WHO and the government of Cambodia.

In addition, a new generation of drug combinations is under development that could one day replace ACTs.

INSECTICIDE RESISTANCE

Bednets and indoor spraying are the cornerstones of malaria control, having saved millions of lives, and yet they are entirely dependent on mosquito populations remaining susceptible to insecticides. Bednets are especially vulnerable, as pyrethroids are the only class of insecticides currently available for bednets. If pyrethroid resistance becomes widespread, we lose this vital barrier against infection.

The ramp up of control programs will increase pesticide use, and the spread of resistance to all classes of insecticides could become inevitable. High levels of pyrethroid resistance have already been detected in west and southern Africa, and it appears that this is already having an impact on the effectiveness of bednets.

New insecticides that work in an entirely different way to current classes are therefore urgently needed to ensure that the expansion of control efforts does not result in a total failure of one of the only weapons we have against mosquitoes. The International Vector Control Consortium (IVCC) is working in partnership with the major chemical companies to develop new active ingredients. Their partners are using data mining programs to find development candidates for these new active ingredients within their extensive chemical libraries.

Developing entirely new insecticides takes a great deal of time and hundreds of millions of dollars, but it is crucial that the global community act now to prevent the failure of control programs and avert a new public health catastrophe in the developing world. In the meantime, careful and judicious use of the current insecticides is strongly advised.

About the Multilateral Initiative on Malaria (MIM)

The Multilateral Initiative on Malaria (MIM) was established in 1997 with the dual mission of maximizing the impact of scientific research through coordinated worldwide collaboration and of strengthening African research capacity to develop new tools for prevention and treatment.

MIM Pan-African Malaria Conference Website: <http://mimalario.org/pamc>

Virtual Press Room: <http://mim.globalhealthstrategies.com>

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