

## Publications

### [Open access](#) | **Polymorphism of PfATPase in Niger: detection of three new point mutations**

Maman Laminou Ibrahim, Nimol Khim, Hassane Hadiza Adam, Frederic Arieu, Jean Bernard Duchemin

Malaria Journal 2009, 8:28 (18 February 2009)

The paper reports sequence data relative to the SERCA-like ATPase6 gene of *Plasmodium falciparum* among natural parasite populations of Niger. The PfATPase6 gene has been previously proposed as a putative modulator of response to artemisinins and the data presented may be useful as an additional tool for surveillance of ACT efficacy in this country.

### [Open access](#) | **Micro-geographic risk factors for malarial infection**

Ward P Myers, Andrea P Myers, Janet Cox-Singh, Hui C Lau, Benny Mokuai, Richard Malley

Malaria Journal 2009, 8:27 (13 February 2009)

A study designed to evaluate whether geographic parameters are associated with malarial infection in the East Sepik province of Papua New Guinea (PNG), a remote area where malaria is a major cause of morbidity and mortality. Lower elevation and greater distance from administrative centre were noted as risk factors.

### [Open access](#) | **Anti-malarial activities of *Andrographis paniculata* and *Hedyotis corymbosa* extracts and their combination with curcumin**

Kirti Mishra, Aditya P Dash, Bijay K Swain, Nrisingha Dey

Malaria Journal 2009, 8:26 (12 February 2009)

The study investigates the possible anti-malarial activity of extracts from two ancient medicinal plants, which are used in Asia to treat fever. Both extracts show promising activity, especially when combined.

### [Open access](#) | **Rural Gambian women's reliance on health workers to deliver sulphadoxine-pyrimethamine as recommended intermittent preventive treatment for malaria in pregnancy**

Loretta Brabin, Elizabeth Stokes, Isatou Dumbaya, Stephen Owens

Malaria Journal 2009, 8:25 (12 February 2009)

The paper gives an interesting insight into the local understanding of pregnancy and on how this may influence adherence to intermittent preventive anti-malarial treatment. Poor knowledge on foetal development, modern drugs and the IPT dosing schedule causes women to completely depend on health workers

### [Open access](#) | **News and analysis: Genome watch: *Plasmodium* genomics: latest milestone**

Arnab Pain & Christiane Hertz-Fowler

Nature Reviews Microbiology, Volume 7, Number 2 : 180-181

Our knowledge on comparative genomics of the malaria parasites has advanced a step forward with the publication of the genomes of two primate-infecting malaria parasites: *Plasmodium vivax* and *Plasmodium knowlesi*. Even though the genomes of these organisms are the fifth and sixth *Plasmodium* genomes to be sequenced, respectively,



both have revealed previously unknown features, which are discussed in this month's Genome Watch.

**Open access | High-Level Production of Amorpha-4,11-Diene, a Precursor of the Antimalarial Agent Artemisinin, in Escherichia coli**

Tsuruta H, Paddon CJ, Eng D, Lenihan JR, Horning T, et al.

PLoS ONE 4(2): e4489

Artemisinin derivatives are the key active ingredients in Artemisinin combination therapies (ACTs), the most effective therapies available for treatment of malaria. Because the raw material is extracted from plants with long growing seasons, artemisinin is often in short supply, and fermentation would be an attractive alternative production method to supplement the plant source. Previous work showed that high levels of amorpha-4,11-diene, an artemisinin precursor, can be made in *Escherichia coli* using a heterologous mevalonate pathway derived from yeast (*Saccharomyces cerevisiae*), though the reconstructed mevalonate pathway was limited at a particular enzymatic step.

**A Maurer's cleft-associated Plasmodium falciparum membrane-associated histidine-rich protein peptide specifically interacts with the erythrocyte membrane**

Jeison García, Hernando Curtidor, Olga L. Gil, Magnolia Vanegas, Manuel E. Patarroyo  
Biochemical and Biophysical Research Communications, Volume 380, Issue 1, 27 February 2009, Pages 122-126

The membrane-associated histidine-rich protein-1 (MAHRP-1) is a Maurer's cleft-resident molecule that has been recently described as an important protein for the trafficking of PfEMP-1 to infected erythrocyte membrane, a major virulence factor. We have studied the specific interactions between 20-mer-long synthetic peptides spanning the complete MAHRP-1 sequence and erythrocytes.

**Wave expansion of CD34+ progenitor cells in the spleen in rodent malaria**

Felipe Pessoa de Melo Hermida, Daniel Perez Vieira, Elaine Raniero Fernandes, Heitor Franco de Andrade Jr

Experimental Parasitology, Volume 121, Issue 3, Pages Pages 230-237 (March 2009)

Defense against malaria depends upon amplification of the spleen structure and function for the clearance of parasitized red blood cells (pRBC). We studied the distribution and amount of CD34<sup>+</sup> cells in the spleens of mice infected with rodent malaria.

**Plasmodium yoelii: Assessment of production and role of nitric oxide during the early stages of infection in susceptible and resistant mice**

Qing-hui Wang, Ying-jie Liu, Jun Liu, Guang Chen, Wei Zheng, Ji-chun Wang, Ya-ming Cao

Experimental Parasitology, Volume 121, Issue 3, March 2009, Pages 268-273

There is conflicting evidence regarding the role of nitric oxide (NO) in the process of resistance against blood-stage malaria parasites. In this study, we used two strains of mice infected with *Plasmodium yoelii* 17XL in order to assess the NO production profile and its possible role during the early stage of malaria infection.

**Minireview: Genome-wide association studies are coming for human infectious diseases**

Sonia Davila and Martin L Hibberd

Genome Med 2009, 1:19

A genetic contribution to infectious disease in human populations has long been suspected and is now supported by more than 50 years of epidemiological evidence showing, for example, infection rates to be much higher than disease rates.



The recent arrival of the genome-wide association study format, currently being applied to Kawasaki disease, tuberculosis, malaria, HIV, dengue and others, gives us hope that these challenges can finally be met, with implications for population-based treatment and prognosis strategies.

**Strain-specific immunity may drive adaptive polymorphism in the merozoite surface protein 1 of the rodent malaria parasite *Plasmodium chabaudi***

Sandra Cheesman, Kazuyuki Tanabe, Hiromi Sawai, Elaine O'Mahony, Richard Carter  
*Infection, Genetics and Evolution*, Volume 9, Issue 2, March 2009, Pages 248-255  
Clinical immunity against malaria is slow to develop, poorly understood and strongly strain-specific. Understanding how strain-specific immunity develops and identifying the parasite antigens involved is crucial to developing effective vaccines against the disease. In the present study, we sequenced the whole msp1 gene of several genetically distinct strains of *P. chabaudi* and found high levels of genetic diversity.

**Multiplex PCR assay and phylogenetic analysis of sequences derived from D2 domain of 28S rDNA distinguished members of the *Anopheles culicifacies* complex into two groups, A/D and B/C/E**

K. Raghavendra, Anthony J. Cornel, B.P. Niranjan Reddy, Frank H. Collins, Nutan Nanda, Dinesh Chandra, Vaishali Verma, Aditya Prasad Dash, Sarala K. Subbarao  
*Infection, Genetics and Evolution*, Volume 9, Issue 2, March 2009, Pages 271-277  
A multiplex PCR assay was developed using the sequences of the D2 region of 28S ribosomal DNA (rDNA) to discriminate the five members of the *Anopheles culicifacies* complex provisionally designated as species A, B, C, D and E.

**Short Communication: Limited genetic variation in the *Plasmodium falciparum* heme detoxification protein (HDP)**

Sumiti Vinayak, Dharmendar Rathore, Simon Kariuki, Laurence Slutsker, Ya Ping Shi, Leopoldo Villegas, Ananias A. Escalante, Venkatachalam Udhayakumar  
*Infection, Genetics and Evolution*, Volume 9, Issue 2, March 2009, Pages 286-289  
Malaria parasites infecting host red blood cells degrade hemoglobin by detoxifying heme into hemozoin. This conversion of heme to hemozoin is performed by a potent protein called heme detoxification protein (HDP), making HDP an attractive target for antimalarial drug development. We studied the genetic variation in *Plasmodium falciparum* HDP and also investigated if HDP due to its involvement in the heme detoxification pathway is under any potential chloroquine (CQ) selection pressure.

**Immunoglobulin G Subclass-Specific Responses against *Plasmodium falciparum* Merozoite Antigens Are Associated with Control of Parasitemia and Protection from Symptomatic Illness**

Danielle I. Stanisic et al.  
*Infect. Immun.* 2009;77 1165-1174

Substantial evidence indicates that antibodies to *Plasmodium falciparum* merozoite antigens play a role in protection from malaria, although the precise targets and mechanisms mediating immunity remain unclear. Different malaria antigens induce distinct immunoglobulin G (IgG) subclass responses, but the importance of different responses in protective immunity from malaria is not known and the factors determining subclass responses *in vivo* are poorly understood. We examined IgG and IgG subclass responses to the merozoite antigens MSP1-19 (the 19-kDa C-terminal region of merozoite surface protein 1), MSP2 (merozoite surface protein 2), and AMA-1 (apical membrane antigen 1), including different polymorphic variants of these antigens, in a longitudinal cohort of children in Papua New Guinea.



### **Evidence for Multiple B- and T-Cell Epitopes in Plasmodium falciparum Liver-Stage Antigen 3**

Aissatou Toure-Balde, Blanca-Liliana Perlaza, Jean-Pierre Sauzet, Mouhamadou Ndiaye, Georgette Aribot, Adama Tall, Cheikh Sokhna, Christophe Rogier, Giampietro Corradin, Christian Roussilhon, and Pierre Druilhe

*Infect. Immun.* 2009;77 1189-1196

Liver-stage antigen 3 (LSA-3) is a new vaccine candidate that can induce protection against *Plasmodium falciparum* sporozoite challenge. Using a series of long synthetic peptides (LSP) encompassing most of the 210-kDa LSA-3 protein, a study of the antigenicity of this protein was carried out in 203 inhabitants from the villages of Dielmo (n = 143) and Ndiop (n = 60) in Senegal (the level of malaria transmission differs in these two villages).

### **Cerebral malaria and the hemolysis/methemoglobin/heme hypothesis: Shedding new light on an old disease**

Ana Pamplona, Thomas Hanscheid, Sabrina Epiphonio, Maria M. Mota, Ana M. Vigário

*The International Journal of Biochemistry & Cell Biology*, Volume 41, Issue 4, April 2009, Pages 711-716

Malaria causes more than 1 million deaths every year with cerebral malaria (CM) being a major cause of death in Sub-Saharan African children. The nature of the malaria-associated pathogenesis is complex and multi-factorial. A unified hypothesis involving sequestration of infected red blood cells, systemic host inflammatory response and hemostasis dysfunction has been proposed to explain the genesis of CM. In this review, we discuss the role of hemolysis, methemoglobin and free heme in CM, brought to light by our recent studies in mice as well as by other studies in humans.

### **Plasmodium falciparum: Organelle-specific acquisition of lipoic acid**

Svenja Günther<sup>1</sup>, a, Janet Storma and Sylke

*The International Journal of Biochemistry & Cell Biology*, Volume 41, Issue 4, April 2009, Pages 748-752

Lipoic acid is an essential cofactor of multienzyme complexes that are integral to energy metabolism, amino acid degradation and folate metabolism. In recent years it has been shown that the malaria parasite *Plasmodium falciparum* possesses organelle-specific pathways that guarantee the lipoylation of their multienzyme complexes which occur in the mitochondrion (LA salvage) and in a plastid-like organelle, the apicoplast (LA biosynthesis). The unique distribution of the lipoylation machineries and the unique metabolic requirements of the parasites present a situation that is potentially exploitable for new ways to improve malaria control.

### **Localisation of Plasmodium falciparum uroporphyrinogen III decarboxylase of the heme-biosynthetic pathway in the apicoplast and characterisation of its catalytic properties**

Viswanathan Arun Nagaraj, Rajavel Arumugam, Nagasuma R. Chandra, Dasari Prasad, Pundi N. Rangarajan, Govindarajan Padmanaban

*International Journal for Parasitology*, Volume 39, Issue 5, April 2009, Pages 559-568

Uroporphyrinogen decarboxylase (UROD) is a key enzyme in the heme-biosynthetic pathway and in *Plasmodium falciparum* it occupies a strategic position in the proposed hybrid pathway for heme biosynthesis involving shuttling of intermediates between different subcellular compartments in the parasite. In the present study, we demonstrate that an N-terminally truncated recombinant *P. falciparum* UROD (r( $\Delta$ )PfUROD) over-expressed and purified from *Escherichia coli* cells, as well as the native enzyme from the parasite were catalytically less efficient compared with the host enzyme, although they were similar in other enzyme parameters.



**Short communication: Evaluation of the toxicity of different phytoextracts of *Ocimum basilicum* against *Anopheles stephensi* and *Culex quinquefasciatus***

Prejwlta Maurya, Preeti Sharma, Lalit Mohan, Lata Batabyal, C.N. Srivastava

Journal of Asia-Pacific Entomology, In Press, Accepted Manuscript, Available online 13 February 2009

The larvicidal effect of the crude carbon tetrachloride, methanol and petroleum ether leaf extracts of a widely grown medicinal plant, *Ocimum basilicum*, against *Anopheles stephensi* and *Culex quinquefasciatus* was evaluated. These extracts are highly toxic against mosquito larvae from a range of species; therefore, they may be useful for the management of mosquito larvae to control vector borne diseases.

**Letter to the editor: Missed opportunities to diagnose *Plasmodium falciparum* malaria: Results of a regional service evaluation**

S.T. Green, H.R. Jary, T.C. Darton, T.C. Darton

Journal of Infection, Volume 58, Issue 2, Pages 172-173 (February 2009)

No Abstract available

**Decreasing Efficacy of Antimalarial Combination Therapy in Uganda Is Explained by Decreasing Host Immunity Rather than Increasing Drug Resistance**

Bryan Greenhouse et al.

The Journal of Infectious Diseases. Volume 199, Issue 5, Page 758–765, Mar 2009

Improved control efforts are reducing the burden of malaria in Africa but may result in decreased antimalarial immunity. Declining immunity in our study population appeared to be the primary factor underlying decreased efficacy of amodiaquine plus sulfadoxine-pyrimethamine. With improved malaria-control efforts, decreasing immunity may unmask resistance to partially efficacious drugs.

**In Vivo Selection of *Plasmodium falciparum* Parasites Carrying the Chloroquine-Susceptible *pfcr* K76 Allele after Treatment with Artemether-Lumefantrine in Africa**

Christin Sisowath, Ines Petersen, M. Isabel Veiga, Andreas Mårtensson, Zul Premji, Anders Björkman, David A. Fidock, and José P. Gil

The Journal of Infectious Diseases. Volume 199, Issue 5, Page 750–757, Mar 2009

Artemether-lumefantrine (AL) is a major and highly effective artemisinin-based combination therapy that is becoming increasingly important as a new first-line therapy against *Plasmodium falciparum* malaria. However, recrudescences occurring after AL treatment have been reported. Identification of drug-specific parasite determinants that contribute to treatment failures will provide important tools for the detection and surveillance of AL resistance. Our findings suggest that the *pfcr* K76T mutation is a drug-specific contributor to enhanced *P. falciparum* susceptibility to lumefantrine in vivo and in vitro, and they highlight the benefit of using AL in areas affected by chloroquine-resistant *P. falciparum* malaria.

**Methylparaben in *Anopheles gambiae* s.l. sugar meals increases longevity and malaria oocyst abundance but is not a preferred diet**

Mark Q. Benedict, Rebecca C. Hood-Nowotny, Paul I. Howell, Elien E. Wilkins

Journal of Insect Physiology, Volume 55, Issue 3, March 2009, Pages 197-204 Pages 197-204

The antimicrobial and antifungal chemical methylparaben (methyl-4-hydroxybenzoate) was added to the adult sucrose diet of *Anopheles gambiae* and *Anopheles arabiensis*, and its effect on longevity was determined.

**Pre-referral rectal artesunate in severe malaria**

Lorenz von Seidlein, Jacqueline L Deen



The Lancet, Volume 373, Issue 9663, Pages 522-523  
No Abstract available

**Pre-referral rectal artesunate to prevent death and disability in severe malaria: a placebo-controlled trial**

MF Gomes et al.

The Lancet, Volume 373, Issue 9663, Pages 557-566 (14 February 2009-20 February 2009)

Most malaria deaths occur in rural areas. Rapid progression from illness to death can be interrupted by prompt, effective medication. Antimalarial treatment cannot rescue terminally ill patients but could be effective if given earlier. If patients who cannot be treated orally are several hours from facilities for injections, rectal artesunate can be given before referral and acts rapidly on parasites. We investigated whether this intervention reduced mortality and permanent disability.

**Drug Resistance in Plasmodium: Natural Products in the Fight Against Malaria**

Simon Turschner, Thomas Efferth

Mini-Reviews in Medicinal Chemistry, Volume 9 Issue 2: pp.206-214 (9)

This review outlines the major anti-malarials, summarizing recent knowledge about their mode of action and the development of drug resistance. Furthermore, the most promising and recently discovered natural products with anti-malarial potential will be introduced.

**The complementation of yeast with human or Plasmodium falciparum Hsp90 confers differential inhibitor sensitivities**

Diana Wider, Marie-Pierre Péli-Gulli, Pierre-André Briand, Utpal Tatu, Didier Picard

Molecular and Biochemical Parasitology, Volume 164, Issue 2, April 2009, Pages 147-152

Developing novel drugs against the unicellular parasite Plasmodium is complicated by the paucity of simple screening systems. Heat-shock proteins are an essential class of proteins for the parasite's cyclical life style between different cellular milieus and temperatures. The molecular chaperone Hsp90 assists a large variety of proteins, but its supporting functions for many proteins that are important for cancer have made it into a well-studied drug target. With a better understanding of the differences between Hsp90 of the malarial parasite and Hsp90 of its human host, new therapeutic options might become available. We have generated a set of isogenic strains of the budding yeast Saccharomyces cerevisiae where the essential yeast Hsp90 proteins have been replaced with either of the two human cytosolic isoforms Hsp90 $\alpha$  or Hsp90 $\beta$ , or with Hsp90 from Plasmodium falciparum (Pf).

**Short communication: Plasmodium falciparum secretory pathway: Characterization of PfStx1, a plasma membrane Qa-SNARE**

Lindsay A. Parisha and Julian C. Rayner

Molecular and Biochemical Parasitology, Volume 164, Issue 2, April 2009, Pages 153-156

SNAREs (soluble N-ethylmaleimide-sensitive factor attachment protein receptors) play a central role in regulating and facilitating vesicular traffic in eukaryotic cells. While SNAREs have been well characterized in other eukaryotes, little is known about their role in the unique protein trafficking pathways in Plasmodium falciparum. We have identified seven Qa-SNAREs in the P. falciparum genome and confirmed the gene structure of all seven, which in one case differs from the predicted structure in the database.

**Individual efficacy of intermittent preventive treatment with sulfadoxine-pyrimethamine in primi- and secundigravidae in rural Burkina Faso: impact on parasitaemia, anaemia and birth weight**



Sabine Gies, Sheick Oumar Coulibaly, Florence Tiemegna Ouattara, Umberto D'Alessandro

Tropical Medicine & International Health, Volume 14 Issue 2, Pages 174 – 182, Published Online: 18 Jan 2009

**Objective:** To assess the efficacy at individual level of intermittent preventive treatment with sulfadoxine–pyrimethamine (IPTp-SP) in primi- and secundigravidae in rural Burkina Faso. The risk of malaria infection was significantly reduced by IPTp with SP in primi- and secundigravidae in rural Burkina Faso. The impact on clinical outcomes is lower and mainly limited to primigravidae for LBW. Incomplete uptake of IPTp-SP and limited effect in low risk groups together may substantially dilute the measurable impact of effective interventions. This needs to be taken into account when evaluating interventions at community level.

### **Community-based distribution of sulfadoxine-pyrimethamine for intermittent preventive treatment of malaria during pregnancy improved coverage but reduced antenatal attendance in southern Malawi**

K. P. Msyamboza, E. J. Savage, P. N. Kazembe, S. Gies, G. Kalanda, U. D'Alessandro, B. J. Brabin

Tropical Medicine & International Health, Volume 14 Issue 2, Pages 183 - 189

**Objective:** To evaluate the impact of a 2-year programme for community-based delivery of sulfadoxine-pyrimethamine (SP) on intermittent preventive treatment during pregnancy coverage, antenatal clinic attendance and pregnancy outcome. Better coverage of community-based intermittent preventive treatment during pregnancy can lower attendance at antenatal clinics; thus its effect on pregnancy outcome and antenatal attendance need to be monitored.

### **Evolutionary lability of odour-mediated host preference by the malaria vector *Anopheles gambiae***

Thierry Lefèvre, Louis-Clément Gouagna, Kounbrobr Roch Dabire, Eric Elguero, Didier Fontenille, Carlo Costantini, Frédéric Thomas

Tropical Medicine & International Health, Volume 14 Issue 2, Pages 228 - 236

We explored differential behavioural responses to host odours between two populations of the same sibling species, *An. gambiae* in semi-field conditions in Burkina Faso. The behavioural responses (i.e. degree of activation and strength of anemotaxis) were investigated using a Y-olfactometer designed to accommodate whole hosts as a source of odour stimuli.

### **Process development for the production of an *E. coli* produced clinical grade recombinant malaria vaccine for *Plasmodium vivax***

Brian A. Bella et al.

Vaccine, Volume 27, Issue 9, 25 February 2009, Pages 1448-1453

The global eradication of malaria will require the development of vaccines to prevent infection cause by *Plasmodium vivax* in addition to *Plasmodium falciparum*. In an attempt to contribute to this effort we have previously reported the cloning and expression of a vaccine based on the circumsporozoite protein of *P. vivax*.

## **Events**

### **First West African Regional Workshop on The Cell Biology of Protozoan Pathogens**

Target group: Young Biomedical Scientists in West Africa

Date: July 13-24, 2009

Location: University of Ghana, Accra



Deadline for completed applications – April 3, 2009

An international faculty will lead a two-week workshop to train graduate students and young scientists from Africa in basic and applied research on protozoan pathogens, including malaria parasites and trypanosomes. The 2008 Workshop will provide training in several areas including: The Cell Cycles of Parasites; Parasite Infection Motility and Invasion; Functional Genomics & Bioinformatics; Scientific Communication Skills; Research Ethics; Methods to Study Gene Control and Function; T-Cell Biology & Immunity; Antigenic Variation in Human Parasites; Vaccine & Drug Discovery; Developing Research Proposals

Sponsoring: Selected students who reside in West Africa are sponsored to attend the workshop

## News

### Africa

19 February 2009, IPS

#### **Africa: Climate Change Spreads Malaria**

Climate change is bringing malaria to regions of Africa where the disease was previously unknown, researchers report from the conference of the American Association for the Advancement of Science in Chicago this week.

19 February 2009, IRIN

#### **Burundi: Ambitious Target to Cut Malaria Infections**

The government has set itself the challenge of reducing malaria cases by half by the end of 2010 and 80 percent two years later, the health ministry said.

19 February 2009, IRIN

#### **Africa: In Brief - Unleashing Mutated Mosquitoes to Fight Malaria**

*Anopheles gambiae* may meet its match in Medea.

19 February 2009, Ghanaian Chronicle

#### **Ghana: Malaria Elimination is Dear to My Heart -Sipa Yankey**

The Minister designate for Health, Dr. George Sipa Yankey has indicated that one of his priorities when given the nod to become a Minister would be the elimination of malaria in the country, which is weighing heavily on the economy.

16 February 2009, GBC

#### **Ghana: Seven health facilities reports of increase in malaria cases**

Records from Out Patient's Departments(OPD) of seven health facilities in the Asikuma-Odoben-Brakwa district indicate that malaria cases continue to increase despite efforts made by health personnel to fight it.

16 February 2009, Public Agenda

#### **Ghana: Anti-Malaria Programme Gains Roots**

The Anglican Diocesan Development and Relief Organization, (ADDRO) in the Upper East Region has extended its anti-malaria programme to the Eastern and Western regions as part of the organization's move to reduce malaria in these areas.

16 February 2009, Independent Online

#### **South Africa: Seven cases of malaria reported in Durban**



Seven malaria cases have been reported at private hospitals in Durban, but the KwaZulu-Natal health department says there is no outbreak of malaria or "malaria-carrying mosquitoes" in the city.

15 February 2009, Independent Online

**South Africa: Three cases of malaria reported in Durban**

Durban health officials were called to a Mount Edgecombe residential estate this week after a case of malaria was reported. Two other cases were reported in other parts of the city.

15 February 2009, Arusha Times

**Tanzania: After Unrest, Malaria Net Factory Expels Male Workers From Quarters**

Following the recent chaos that erupted at the A-to-Z textile mills in Kisongo, the factory management has decided to stop accommodating male employees at their workers' residential quarters located within the premises.

13 February 2009, Angola Press

**Angola: Unicef official learns of preventive measures against malaria**

Unicef official Lone Hvass is working since Wednesday in Malanje City, in order to learn about the preventive and control measures in the fight against malaria, in hospitals, ANGOP has learnt.

13 February 2009, IPPMedia

**Tanzania: Global Fund grants Tanzania 898bn/- to combat Aids, TB and malaria**

The battle against the three leading killer diseases of Aids, tuberculosis and malaria has received a major boost in the form of grants amounting to USD680 million from the Global Fund.

13 February 2009, The Punch

**Nigeria: Malaria epidemics loom as parasite develops resistance to new drug**

There are fears among researchers and the Roll Back Malaria partners that there may be a recurrence of epidemics of malaria, which occurred in 1950s, as the malarial parasite has developed resistance to the new anti-malarial drug, artemisinin.

13 February 2009, The Zimbabwean

**Zimbabwe: Put malaria – another potential high risk emergency – back on the agenda, says Oxfam**

The international aid agency Oxfam, has called on the Government of National Unity (GNU) to tackle malaria in Zimbabwe - the second largest cause of death for children under-five, after HIV/AIDS. While cholera and food shortages are hitting headlines and attracting international attention, malaria, a more silent killer, is almost forgotten.

12 February 2009, Business Daily

**Kenya: Malaria experts root for treated nets**

Indoor Residual Spraying of insecticides (IRS) and distribution of treated bed nets have proved to be some of the most effective methods of controlling mosquitoes that transmit malaria.

11 February 2009, Daily Nation

**Kenya: Malaria mosquito fights back**

The malaria transmitting mosquito has built resistance against popular insecticides used for indoor spraying and to treat bed nets, effectively removing one of the most important weapons used to fight the disease in Kenya.



11 February 2009, Le Mali en ligne

**Mali: Company allays fears over malaria drug**

Novartis, the makers of Coartem, a drug used in the treatment of Malaria, has allayed fears over the efficacy of artemisinin-based malaria treatments. A spokesperson for the company, Laura Daunis, said in a statement obtained by PANA here Wednesday that the combination of artemether and lumefantrine in Coartem helps to minimize the development of resistance of the malaria parasite to treatment using Coartem.

Asia

20 February 2009, The Nation

**Pakistan: Pakistan faces 50,000 deaths every year**

Experts on Tuesday warned the citizens to be cautious against malaria and contagious infections of viral fever, being spread as epidemic in the City. They stressed the need for holding fumigation drive to eradicate mosquitoes, causing malaria and dengue fever.  
Oceania

18 February 2009, Xinhua

**China: Malaria claims 92 people's lives in Bangladesh last year**

Malaria claimed at least 92 people's lives and hit over 65,000 others last year in three districts of Bangladesh's southeastern Chittagong hill tracts, local newspaper The Daily Star reported on Wednesday.

Oceania

18 February 2009, ABC Science

**Australia: Temperature spikes key to malaria spread**

Climate change is influencing the spread of malaria in ways far more complicated than previously thought, according to US researchers.

17 February 2009, Port Villa Press

**Vanuatu: Australia donates VT 460 million for malaria eradication**

Australian High Commissioner Pablo Kang confirmed the government of Australia has donated VT 460 million (or AUD 6m) to Vanuatu for the malaria elimination program covering the next three years to 2011.

15 February 2009, Solomon Star

**Solomon Islands: War here against malaria**

The country has declared war on malaria, one of the leading killer diseases here and in the world. This will include tackling the disease head on, ending malaria-related deaths and reducing parasite incidence by 65 per cent.

13 February 2009, Radio Australia

**Australia: New malaria network to research Pacific strain**

One of the first tasks of the new Asia-Pacific Malaria Elimination Network will be to gain a better understanding of the malaria strain found in the Pacific. The Chairman of the new organisation Professor Sir Richard Feachem is visiting Solomon Islands after having successfully guided representatives of the 10 countries in the group through its inaugural meeting in Brisbane.

12 February 2009, The Australian

**Australia: Child-focused malaria drug to save millions: scientist**



An Australian scientist has headed the effort to change a common malaria treatment from a bitter-tasting tablet to a sweet drink, in a move expected to save millions of the world's poorest children.

Americas

Americas

17 February 2009, American Chronicle

**USA: Can the use of stabilized oxygen cure malaria patient of the Jharkhand State of India?**

Jharkhand state of India has recorded a sudden increase in malaria from last several years. Last year malaria caused more than 100 deaths and detecting thousands people affected by the disease. The highest number of cases was detected in West Singhbhum district.

17 February 2009, Smart Brief

**USA: Health official voices concern over malaria threat in Indonesia**

Indonesia's health minister said about 45% of the country's population is in danger of contracting malaria. Jakarta and Bali remain free from the infection, but in the provinces of the Moluccan Islands, Papua, North Sumatra and East Nusa Tenggara, more than five out of every 1,000 people on average are expected to catch the disease each year, the minister said.

17 February 2009, The Michigan Journal

**USA: Pistons partner up with foundation to fight malaria**

Partnering up with Chip Away Malaria, the rulers of the Palace are offering regularly priced \$40 tickets for \$20. Half of the discounted ticket prices directly go toward the fight against malaria in Africa.

16 February 2009, Scientific American

**USA: Rise in Malaria Rates, Drug Resistance Tied to Climate**

Warmer temperatures are at least partly to blame for a surge in malaria in East Africa and the increase in drug-resistant strains of the disease, according to a University of Michigan researcher.

16 February 2009, Starts & Stripes

**USA: Military reports 83 Malaria infections in '08**

More than 80 U.S. military personnel contracted malaria last year despite all the medications and precautions made available to the forces, according to a recent Pentagon study.

16 February 2009, Bloomberg

**USA: Malaria Threatens Almost 120 Million Indonesians, Minister Says**

Almost half of Indonesia's 243 million people are at risk of catching malaria, which has become entrenched in most of the nation's districts and cities, said Health Minister Siti Fadilah Supari.

15 February 2009, Medill

**USA: Curing malaria by reconstructing life: the promise of synthetic biology**

Scientists have developed a promising new malaria medicine that one day could lead to better treatment for the hundreds of millions of people infected with the deadly disease each year. Using genetically altered yeast microbes, a team of researchers led by University of California Berkeley chemical engineer Jay Keasling is developing a cheaper way to make the medicine.



14 February 2009, Canada.com

**Canada: Holiday bugs can be easily avoided. Visit a physician before heading out on your vacations**

And with travel bargains as common as Wall Street bailout packages, people are anxious to get to a beach, pronto. In fact, according to a Leger Marketing poll in Canada, 60% more people this year plan to take a spontaneous holiday.

Dr. Andy Pattullo, an infectious diseases specialist based in Calgary, says this is a perfect storm of factors that can lead to travel illnesses like malaria, hepatitis or even yellow fever.

14 February 2009, VOXM

**Canada: MUN Students Raise Awareness About Malaria in Africa**

Memorial University students will be giving people a unique way of celebrating Valentine's Day this year. MUN's Red Cross Society will be at the Avalon Mall encouraging shoppers to "Love a Child on Valentine's Day," and buy an anti-malaria bed net.

14 February 2009, EurekAlert!

**USA: Climate change may alter malaria patterns**

Temperature is an important factor in the spread of malaria and other mosquito-borne diseases, but researchers who look at average monthly or annual temperatures are not seeing the whole picture. Global climate change will affect daily temperature variations, which can have a more pronounced effect on parasite development, according to a Penn State entomologist.

13 February 2009, IRIN

**USA: Global: Paltry funding for tackling deadly diseases**

Diseases that kill millions of people annually in the developing world are overlooked as donors and pharmaceutical companies spend most of their money on creating products to treat HIV/AIDS, tuberculosis and malaria, according to a study by George Institute for International Health.

13 February 2008, Reuters

**USA: Glaxo proposes patent pool for neglected diseases**

GlaxoSmithKline Plc's (GSK.L) chief executive urged creation of a voluntary patent pool to spark development of new treatments for neglected diseases in the world's poorest countries.

Europe

16 February 2009, TropIKA

**Switzerland: Effect of climate change on malarial mosquitoes may depend on daily temperature fluctuations**

Scientists studying the likely effects of global warming on malarial mosquitoes have focused on changes in average annual or monthly temperatures, but a leading entomologist says that the variations within each day could be the crucial factor.

13 February 2009, Destination Santé

**France: Malaria – the Gambia success story**

When it comes to fighting malaria, Gambia is leading the way.

Engaged in a relentless battle against this disease since the start of this century, the country is now beginning to reap the rewards of its efforts with malaria quite plainly in freefall in the Gambia.



**MalariaWorld - Knowledge for Solutions**

K&S Consulting is an independent consultancy firm concerned with medical information provision, training activities, and infectious diseases consultations.

Ingeborg (Inga) van Schayk, MSc & Bart Knols, PhD MBA  
K&S Consulting, Kalkestraat 20, 6669 CP Dodewaard, The Netherlands, Tel:  
+31-488-411156

**<mailto:inga@malaria-world.com>**      **[www.malaria-world.com](http://www.malaria-world.com)**

The information included in MalariaWorld does not represent the opinion of K&S Consulting or any of our individual partners. K&S Consulting does not accept any responsibility for errors or omissions or results of any actions based upon this information.