



... Publications ...

**What does it take to control malaria?** (Subscription)

Walther, B. and Walther, M.

*Annals of Tropical Medicine and Parasitology*, Volume 101, Number 8, December 2007 , pp. 657-672(16)

This review explains the effects and limitations of the available control tools, summarises the extent to which they are currently employed, describes how their use could be improved, and discusses the particular importance of a vaccine in controlling the disease.

**Conflicting Requirements of Plasmodium falciparum Dihydrofolate Reductase Mutations Conferring Resistance to Pyrimethamine-WR99210 Combination** (Subscription)

Deanpen Japrunng, Ubolsree Leartsakulpanich, Sudsanguan Chusacultanachai, and Yongyuth Yuthavong

*Antimicrob. Agents Chemother.* 2007;51 4356-4360

Thus, a combination of inhibitors from these two drug classes should be effective in impeding the emergence of *P. falciparum* resistance to antifolates.

**Pharmacodynamics of Doxycycline in a Murine Malaria Model** (Subscription)

Kevin T. Batty, Angela S. F. Law, Verity Stirling, and Brioni R. Moore

*Antimicrob. Agents Chemother.* 2007;51 4477-4479

Doxycycline lowered the rate of parasite growth within 2 days, with maximum effect in 6 days. Addition of dihydroartemisinin led to an additive antimalarial effect.

**Extensive Genetic Diversity in the Plasmodium falciparum Na<sup>+</sup>/H<sup>+</sup> Exchanger 1 Transporter Protein Implicated in Quinine Resistance** (Subscription)

Sumiti Vinayak, Mohammad Tauqeer Alam, Mala Upadhyay, Manoj K. Das, Vas Dev, Neeru Singh, Aditya P. Dash, and Yagya D. Sharma

*Antimicrob. Agents Chemother.* 2007;51 4508-4511

Interestingly, areas with a high prevalence of chloroquine and sulfadoxine-pyrimethamine resistance showed more *Pfnhe-1* DNNND repeats compared to low drug resistance areas. The extent of genetic diversity at the ms4760 locus also varied from one region to another, with expected heterozygosity values ranging from 0.47 to 0.88.

**Plasmodium falciparum GPI mannosyltransferase-III has novel signature sequence and is functional** (Subscription)

Suresh H. Basagoudanavar, Xiaorong Feng, Gowdahalli Krishnegowda, Arivalagan Muthusamy and D. Channe Gowda

*Biochemical and Biophysical Research Communications*, Volume 364, Issue 4, 28 December 2007, Pages 748-754

These data demonstrate that *PfPIG-B* is functional and encodes mannosyltransferase-III of the parasite GPI biosynthesis. The parasite *PfPIG-B* is novel in that its signature sequence HKEHKEI is unique and is only partially conserved as compared to HKEHKEI signature motif of mammalian *PIG-B* enzymes.

**Production of artemisinin by genetically-modified microbes** (Subscription)

Qingping Zeng, Frank Qiu and Ling Yuan

*Biotechnology Letters*, Online first

In this review, we update the current trends and summarize the future prospects on genetic engineering of the microorganisms capable of accumulating artemisinin precursors through heterologous and functional expression of the artemisinin biosynthetic genes.

**Editorial: Preventing malaria in endemic areas** (Subscription)

Donald R Roberts

*BMJ* 2007;335:1001-1002 (17 November)

Policymakers should remember that indoor residual spraying is highly effective.

**Plant based insect repellent and insecticide treated bed nets to protect against malaria in areas of early evening biting vectors: double blind randomised placebo controlled clinical trial in the Bolivian Amazon** (Subscription)

N Hill, A Lenglet, A M Arnéz, I Carneiro

*BMJ* 2007;335:1023 (17 November)

Insect repellents can provide protection against malaria. In areas where vectors feed in the early evening, effectiveness of treated nets can be significantly increased by using repellent between dusk and bedtime. This has important implications in malaria vector control programmes outside Africa and shows that the combined use of treated nets and insect repellents, as advocated for most tourists travelling to high risk areas, is fully justified.

**Relative developmental and reproductive fitness associated with pyrethroid resistance in the major southern African malaria vector, *Anopheles funestus*** (Subscription)

P.N. Okoye, B.D. Brooke, R.H. Hunt and M. Coetzee

*Bulletin of Entomological Research* (2007), 97: 599-605

Our results show that pyrethroid resistance in southern African *An. funestus* does not incur any loss of fitness under laboratory conditions. These results suggest that the removal of pyrethroid insecticide selection pressure may not lead to a regression of resistance alleles in pyrethroid resistant *An. funestus* populations in southern Africa.

**The parasite invasion marker SRPN6 reduces sporozoite numbers in salivary glands of *Anopheles gambiae*** (Subscription)

Sofia B. Pinto, Fotis C. Kafatos and Kristin Michel

*Cellular Microbiology* (OnlineAccepted Articles)

Despite several differences between the passage of *Plasmodium* through the midgut and the salivary glands, this study identifies a striking overlap in the molecular responses of these two epithelia to parasite invasion.

**Towards the development of a cryopreserved live attenuated vaccine against malaria** (Subscription)

Eric R. James, Aderonke O. Awe, Rana Chattopadhyay, Mark Loyevsky, Donna Hylton and Stephen L. Hoffman

*Cryobiology*, Volume 55, Issue 3, December 2007, Pages 352-353

No abstract available

**The role of specific P450 isoforms in the conversion of phenoxypropoxybiguanide analogs in human liver microsomes to potent antimalarial dihydrotriazines** (Open access)

Damaris S. Diaz, Michael P. Kozar, Kirsten S. Smith, Constance O. Asher, Jason C. Sousa, Guy A. Schiehser, David P. Jacobus, Wilbur K. Milhous, Donald R. Skillman, and Todd W. Shearer

*Drug Metabolism and Disposition*, Fast Forward Published, November 15, 2007

These results are encouraging, considering the prominence of CYP2C19 and CYP2D6 polymorphisms in certain populations at risk for contracting malaria, since the current clinical prodrug candidate from this series is less dependent on these enzymes for metabolic activation.

**The antiplasmodial activity of spermine alkaloids isolated from *Albizia gummifera*** (Subscription)

G.M. Rukunga, F.W. Muregi, F.M. Tolo, S.A. Omar, P. Mwitari, C.N. Muthaura, F. Omlin, W. Lwande, A. Hassanali, J. Githure, F.W. Iraqi, G.M. Mungai, W. Kraus and W.M. Kofi-Tsekpo  
*Fitoterapia*, Volume 78, Issues 7-8, December 2007, Pages 455-459

The use of the extracts *A. gummifera* for treatment of malaria in traditional medicine seems to have a scientific basis.

**Common variation in the ABO glycosyltransferase is associated with susceptibility to severe *Plasmodium falciparum* malaria** (Subscription)

Andrew E. Fry, Michael J. Griffiths, Sarah Auburn, Mahamadou Diakite, Julian T. Forton, Angela Green, Anna Richardson, Jonathan Wilson, Muminatou Jallow, Fatou Sisay-Joof, Margaret Pinder, Norbert Peshu, Thomas N. Williams, Kevin Marsh, Malcolm E. Molyneux, Terrie E. Taylor, Kirk A. Rockett, and Dominic P. Kwiatkowski

*Human Molecular Genetics*, Advance Access published on November 13, 2007

This low F<sub>ST</sub> region may be a signal of longstanding balancing selection at the ABO locus, caused by multiple infectious pathogens including *P. falciparum*.

**Evidence for a Common Role for the Serine-Type *Plasmodium falciparum* Serine Repeat Antigen Proteases: Implications for Vaccine and Drug Design**

(Subscription)

Joanne E. McCoubrie, Susanne K. Miller, Tobias Sargeant, Robert T. Good, Anthony N. Hodder, Terence P. Speed, Tania F. de Koning-Ward, and Brendan S. Crabb

*Infect. Immun.* 2007;75 5565-5574

While SERA5 is to some extent further validated as a target for vaccine and drug development, our data suggest that the expression level of other serine-type SERAs is the only barrier to escape from anti-SERA5-specific interventions.

**Macrophage-Mediated but Gamma Interferon-Independent Innate Immune Responses Control the Primary Wave of *Plasmodium yoelii* Parasitemia**

(Subscription)

Kevin N. Couper, Daniel G. Blount, Julius C. R. Hafalla, Nico van Rooijen, J. Brian de Souza, and Eleanor M. Riley

*Infect. Immun.* 2007;75 5806-5818

Somewhat unexpectedly, we could find no clear role for either NK cells or gamma interferon (IFN- $\gamma$ ) in controlling primary *P. yoelii* infection. In contrast, depletion of monocytes/macrophages exacerbated parasite growth and anemia during both lethal and nonlethal acute *P. yoelii* infections, indicating that there is an IFN- $\gamma$ -, NK cell-, and T-cell-independent pathway for induction of effector macrophages during acute malaria infection.

**Combination of Protein and Viral Vaccines Induces Potent Cellular and Humoral Immune Responses and Enhanced Protection from Murine Malaria Challenge**

(Subscription)

Claire L. Hutchings, Ashley J. Birkett, Anne C. Moore, and Adrian V. S. Hill

*Infect. Immun.* 2007;75 5819-5826

For diseases such as malaria in which different potent immune responses are required to protect against different stages, using combinations of partially effective vaccines may offer a more rapid route to achieving deployable levels of efficacy than individual vaccine strategies.

**In Immunization with *Plasmodium falciparum* Apical Membrane Antigen 1, the Specificity of Antibodies Depends on the Species Immunized** (Subscription)

Kazutoyo Miura, Hong Zhou, Olga V. Muratova, Andrew C. Orcutt, Birgitte Giersing, Louis H. Miller, and Carole A. Long

*Infect. Immun.* 2007;75 5827-5836

This is the first report that a malarial vaccine candidate induced different specificities of functional antibodies depending on the animal species immunized. These observations, as well as data available on human immune responses in areas of endemicity, suggest that polymorphism in the AMA1 protein may not be as formidable a problem for vaccine development as anticipated from studies with rabbits and mice.

**Malaria Vaccine-Related Benefits of a Single Protein Comprising Plasmodium falciparum Apical Membrane Antigen 1 Domains I and II Fused to a Modified Form of the 19-Kilodalton C-Terminal Fragment of Merozoite Surface Protein 1** (Subscription)

Bart W. Faber, Edmond J. Remarque, William D. Morgan, Clemens H. M. Kocken, Anthony A. Holder, and Alan W. Thomas

*Infect. Immun.* 2007;75 5947-5955

These results suggest that compared with the individual modules delivered separately or as a mixture, fusion proteins containing these two modules offer the potential for significant vaccine-related advantages in terms of ease of production, immunogenicity, and functionality.

**Characterization of the Antibody Response against Plasmodium falciparum Erythrocyte Membrane Protein 1 in Human Volunteers** (Subscription)

Darren R. Krause, Michelle L. Gatton, Sarah Frankland, Damon P. Eisen, Michael F. Good, Leann Tilley, and Qin Cheng

*Infect. Immun.* 2007;75 5967-5973

Analysis of sera from tourists naturally infected with *P. falciparum* suggests that the anti-PfEMP1 antibodies often persisted for more than 100 days after a single infection. These results help to further our understanding of the development of acquired immunity to *P. falciparum* infections.

**The role of tryptophan and its derivatives for development of malaria parasite in vector mosquito** (Subscription)

Hiroyuki Matsuoka, Meiji Arai, Hajime Yoshida, Ryuta Hattori, Yuichi Kasahara and Makoto Hirai

*International Congress Series*, Volume 1304, 1 November 2007, Pages 278-285

Taking these results together, we conclude that transmission efficacy is controlled by the amount of XA in the salivary gland.

**High-performance liquid chromatographic assay for the determination of sulfadoxine and N-acetyl sulfadoxine in plasma from patients infected with sensitive and resistant Plasmodium falciparum malaria** (Subscription)

Virendra K. Dua, N.C. Gupta, Prerana Sethi, G. Edwards and A.P. Dash

*Journal of Chromatography B*, In Press, Corrected Proof, Available online 22 October 2007

The method described should find an application in the therapeutic monitoring of malaria patients.

**Young Zanzibari Children with Iron Deficiency, Iron Deficiency Anemia, Stunting, or Malaria Have Lower Motor Activity Scores and Spend Less Time in Locomotion** (Subscription)

Deanna K. Olney, Ernesto Pollitt, Patricia K. Kariger, Sabra S. Khalfan, Nadra S. Ali, James M. Tielsch, Sunil Sazawal, Robert Black, Darrell Mast, Lindsay H. Allen, and Rebecca J. Stoltzfus

*J. Nutr.* 2007 137: 2756-2762

Improvements in iron status and growth and prevention or effective treatment of malaria may improve children's motor, cognitive, and social-emotional development either directly or through improvements in motor activity. However, the relative importance of these factors is dependent on motor development, with malaria being important for the younger, less developmentally advanced children and Hb and LAZ becoming important as children begin to attain walking skills.

**Correspondence: Towards sustainable malaria control** (Subscription)

Roger England

*The Lancet*, Current Issue, Volume 370, Number 9600: 1684

Awash Teklehaimanot and co-authors (June 30, p 2143) claim that the social marketing of long-lasting insecticidal nets (LLINs) should be abandoned in favour of free distribution. Their argument fails to convince.....

**Correspondence: Towards sustainable malaria control** (Subscription)

Junko Yasuoka, Krishna C Poudel, Masamine Jimba

*The Lancet*, Current Issue, Volume 370, Number 9600: 1684

As Awash Teklehaimanot and colleagues claim in their Comment, antimalarial commodities such as bednets and drugs should ideally be available free of charge for mass distribution to affected communities. In reality, however, heavy reliance on free distribution cannot be sustainable in the fight against malaria.....

**Correspondence: Towards sustainable malaria control - Authors' reply**

(Subscription)

Awash Teklehaimanot, Jeffrey Sachs, Christopher Curtis

*The Lancet*, Current Issue, Volume 370, Number 9600: 1684-1685

Citing the Ethiopian example, Roger England attributes the low bednet distribution and uptake attained by social marketing from 1990 to 2004 to low supply. In fact, bednets targeted for social marketing were kept in store for extended periods, sometimes up to a year, owing to low demand. People were too poor to afford the subsidised nets even during epidemics.....

**Identification of the main malaria vectors in the *Anopheles gambiae* species complex using a TaqMan real-time PCR assay** (Open access)

Chris Bass, Martin S Williamson, Craig S Wilding, Martin J Donnelly, Linda M Field  
*Malaria Journal* 2007, 6:155 (22 November 2007)

This paper describes an improved method for accurate molecular identification of specimens of the *An. gambiae* species complex.

**Sequence diversity and natural selection at domain I of the apical membrane antigen 1 among Indian *Plasmodium falciparum* populations** (Open access)

Sheena Garg, Mohammad T Alam, Manoj K Das, Vas Dev, Ashwani Kumar, Aditya P Dash, Yagya D Sharma

*Malaria Journal* 2007, 6:154 (22 November 2007)

The level of genetic diversity and diversifying selection were higher in Assam, Orissa, and Andaman and Nicobar Islands populations as compared to Uttar Pradesh and Goa. The amounts of gene flow among these populations were moderate. The data reported here will be valuable for the development of AMA1-based malaria vaccine.

**Brief communication: An FKBP destabilization domain modulates protein levels in *Plasmodium falciparum*** (Subscription)

Christopher M Armstrong & Daniel E Goldberg

*Nature Methods*, Published online: 11 November 2007

To enhance the repertoire of molecular tools for studying malaria parasite biology, we adapted a ligand-regulatable FKBP protein destabilization domain (ddFKBP) for use in *P. falciparum*. We destabilized the reporter yellow fluorescent protein (YFP) and the *P. falciparum* protease falcipain-2 in a ligand-reversible manner by tagging with ddFKBP. The swollen food vacuole phenotype of falcipain-2 knockout parasites could be rescued in a Shd1 ligand-dependent fashion by falcipain-2-ddFKBP expression.

**Research highlights: Malaria and the liver: exploring the silent pathway**

(Subscription)

*Nature Reviews Microbiology* 5, 912-916

No abstract available

**Peroxiredoxins in malaria parasites: Parasitologic aspects** (Open access)

Shin-ichiro Kawazu, Kanako Komaki-Yasuda, Hiroyuki Oku and Shigeyuki Kano  
*Parasitology International*, Volume 57, Issue 1, March 2008, Pages 1-7

In this review, we summarize the accumulated knowledge on the Prx family with respect to their functions in mammalian cells and their possible function(s) in malaria parasites.

**Malaria education from school to community in Oudomxay province, Lao PDR**  
(Open access)

Daisuke Nonaka, Jun Kobayashi, Masamine Jimba, Bounsou Vilaysouk, Katsuyuki Tsukamoto, Shigeyuki Kano, Bounlay Phommasack, Pratap Singhasivanon, Jitra Waikagul, Seiki Tateno and Tsutomu Takeuchi

*Parasitology International*, Volume 57, Issue 1, March 2008, Pages 76-82

In conclusion, our results suggest that school children can act as health information messengers from schools to communities for malaria control in Lao PDR.

**Forecasting Non-Stationary Diarrhea, Acute Respiratory Infection, and Malaria Time-Series in Niono, Mali** (Open access)

Daniel C. Medina, Sally E. Findley, Boubacar Guindo, Seydou Doumbia

*PLoS ONE* 2(11): e1181

Therefore, these forecasts could improve infectious diseases management in the district of Niono, Mali, and elsewhere in the Sahel.

**Book Review: Malaria control in complex emergencies, World Health Organisation, 2005** (Subscription)

Nigel Hill

*Public Health*, Volume 121, Issue 12, December 2007, Page 962

No abstract available

**Affinity and diversity indices for anopheline immature forms** (Open access)

Nagm, Lucy; Luitgards-Moura, José Francisco; Neucamp, César de Souza; Monteiro-de-Barros, Fábio Saito; Honório, Nildimar Alves; Tsouris, Pantelis; Rosa-Freitas, Maria Goreti  
*Rev. Inst. Med. trop. S. Paulo*, Sept./Oct. 2007, vol.49, no.5, p.309-316

As for the entire Amazon Region, malaria continues to be a major health public problem in Roraima that presented an Annual Parasitic Index of 85.4 in 2005, the highest in Brazil. Information on anopheline breeding sites is an essential component in malaria control strategies.

**First record of *Anopheles (Anopheles) costai* Fonseca & Ramos, 1939 in Espírito Santo State, Brazil** (Open access)

Natal, Delsio; Urbinatti, Paulo Roberto; Malafronte, Rosely dos Santos; Rezende, Helder Ricas; Cerutti Jr., Crispim; Sallum, Maria Anice Mureb

*Rev. Inst. Med. trop. S. Paulo*, Sept./Oct. 2007, vol.49, no.5, p.323-326

The register of specimens of *An. costai* in the field collections is relevant, increasing the geographical distribution of the species and representing better knowledge of the Series Arribalzagia of the subgenus *Anopheles*.

... Report ...

**Assessment of the safety of artemisinin compounds in pregnancy, Report of two informal consultations convened by WHO in 2006, (Global Malaria Programme and TDR)**

WHO/GMP/TDR, In print

Various artemisinin compounds have been used as treatment for different forms of malaria since the early 1980s, initially in China, where they were first developed, and subsequently in many other countries. The literature on their use in pregnancy has been limited and animal studies have suggested that their use in pregnancy be restricted. With

the increasing amount of interest in artemisinin combinations and artemisinin compounds in general, more studies - preclinical and clinical - have been undertaken.

### ... Research opportunities ...

#### **Call for Letters of Interest: Lead Discovery for Infectious Tropical Diseases: New Medicinal Chemistry Centers to join Drug Discovery Networks**

Applications deadline: 25 January 2008

The significant progress made within the past 2 years through the various networks (compound evaluation, medicinal chemistry, DMPK and the drug target networks), has necessitated the expansion of the Medicinal Chemistry Network. In addition to ongoing lead identification and optimization activities, TDR has now identified over 10 new potential lead series with specific activity against the various TDR disease pathogens. In some cases, these compounds have shown activity in appropriate rodent disease models.

**More information**

### ... Jobs ...

**Postdoctoral Fellow Position Available 2008**, The School of Integrative Biology, The University of Queensland, Laboratories of Professor Scott O'Neill and Dr Elizabeth McGraw

We have been funded by the NH&MRC to develop new methodologies for the management of emerging vector-borne disease threats. The project involves infection of mosquito vectors with an endosymbiotic bacterium, *Wolbachia pipientis*, that is capable of reducing insect lifespan. The project will include artificial transinfection of mosquito species and study of *Wolbachia* induced pathogenesis. The laboratory is well funded and has excellent facilities. We are seeking individuals with experience in any of the following fields; molecular biology, genetics, entomology, and microbiology.

For further information please contact Scott O'Neill ([scott.oneill@uq.edu.au](mailto:scott.oneill@uq.edu.au)).

#### **Senior Immunologist, Vaccine Trials, Nuffield Department Of Clinical Medicine, Jenner Institute, University of Oxford**

Closing date for applications: Friday 14 December 2007

We are seeking a senior scientist to join Professor Adrian Hill's malaria vaccine development group at the Jenner Institute, University of Oxford. The research programme focuses on pre-clinical and clinical testing of novel vectored malaria vaccines.

**More information**

### ... News ...

23 November 2007, The Herald

#### **Southern Africa: President to Launch SADC Malaria Week Today**

President Mugabe will today officially launch the SADC Malaria Week at Chinotimba Stadium in the resort town of Victoria Falls.

23 November 2007, AFP

#### **N'Dour says 'war on malaria' is the one US should wage**

"If the United States wants to win a war, it ought to be the war on malaria," quips Africa's best-known singing star Youssou N'Dour.

22 November 2007, Medical News Today (Press Release)

#### **Malaria Consortium Supports Launch Of Affordable Medicines Facility For Malaria In New Report**

Today the All Party Parliamentary Malaria Group publishes a report on a new mechanism aimed at making malaria treatment affordable in the developing world. This new mechanism aims to increase access to life saving artemisinin-based combination therapies (ACTs) by reducing the cost of the drugs to patients in poor countries who need them.

22 November 2007, Market Wire (Press Release)

**BUY-A-NET: Senator Mobina Jaffer Saves Lives From Malaria in Uganda**

Debra Lefebvre, Founder, BUY-A-NET Malaria Prevention Group (BAN) today announced Senator Mobina Jaffer will participate in a net distribution event at Mulago Hospital, Kampala, Uganda, on Friday, November 23, 2007.

22 November 2007, Afrol News

**Malaria cripples Ghana's health budget**

The cost of malaria treatment is crippling Ghana's health budget, Ghana's Health Minister, Major (retired) Courage Quashigah, told an annual health summit in the capital Accra on Tuesday.

21 November 2007, England's Northwest

**Liverpool scientists to develop malaria drugs**

The Liverpool School of Tropical Medicine (LSTM) is to develop more effective treatments for malaria as part of new research programme.

21 November 2007, Reuters

**In the malaria fight, it's people or the environment**

When you're faced with a disease like malaria, which still kills at least a million people a year, what do you prioritise - the environment or people's lives?

21 November 2007, Arizona Daily Wildcat

**ASA fights malaria epidemic**

UA students' group working to raise funds for affected Africans

20 November 2007, New Vision

**Uganda: HIV And Malaria Linked**

Unexpectedly high levels of HIV infection are being found in adults seeking treatment for malaria in Uganda.

20 November 2007, The East African

**Tanzania: Winning the War**

The launch in 2003 of Artemisinin-based Combination Therapy (ACT) in Zanzibar has dramatically reduced the incidence of malaria, a study has revealed.

19 November 2007, The Herald

**Zimbabwe: Malaria Cases Plummet**

This week Zimbabwe commemorates SADC Malaria Week. And with good reason -- the country has made commendable progress towards meeting global targets for the reduction of the disease.

19 November 2007, BuaNews

**South Africa: Feature - Malaria is Still Number one Killer**

Malaria kills over one million people annually around the world with over 300 million clinical cases reported yearly, five times as many as combined cases of TB, AIDS, measles and leprosy, writes Siboniso Ntuli.

19 November 2007, IPP Media

**Govt launches subsidized anti-malaria therapy**

The government has announced that from now onwards, the subsidized artemether-lumefantrine will be available in all accredited drug dispensing outlets and sold at 500/- per dosage for children and 1,500/- per dosage for adults.

19 November 2007, Sowetan

**Community united against malaria battle**

The Mpumalanga health department celebrated malaria day in Bushbuckridge, Mpumalanga, at the weekend, with the theme "Vector control at scale."

18 November 2007, Florida Today

**U.S. catches malaria dance fever**

Dancing feet are the weapon of choice against malaria in Stayin' Alive, a high school initiative to eradicate the killer of 1 million children each year.

17 November 2007, SABC News

**SADC countries winning the fight against malaria**

Governments in Southern Africa are winning the fight against malaria. Cases of this disease have declined by 62% in South Africa, Mozambique and Swaziland in the last seven years.

13 November 2007, Times of Zambia

**Zambia: 'Malaria Fight Winnable'**

Zambia has made remarkable achievements towards the eradication of malaria following the implementation of multifaceted intervention programme, ministry of Health spokesperson, Canisius Banda, has said.

K&S Consulting, an independent consultancy firm concerned with medical information provision and training activities, provides this free service.