



... From K&S ...

MalariaWorld will not be distributed in August. The next issue will appear early September.

... PUBLICATIONS ...

Population Pharmacokinetics of Tafenoquine during Malaria Prophylaxis in Healthy Subjects (Subscription required)

Bruce G. Charles, Ann K. Miller, Peter E. Nasveld, Mark G. Reid, Ivor E. Harris, and Michael D. Edstein

Antimicrob. Agents Chemother. 2007;51 2709-2715

This validated population pharmacokinetic model satisfactorily describes the disposition and variability of tafenoquine used for long-term malaria prophylaxis in a large cohort of soldiers on military deployment.

2-tert-Butyl-8-Quinolinamines Exhibit Potent Blood Schizontocidal Antimalarial Activity via Inhibition of Heme Crystallization

(Subscription required)

Nguyen Tien Huy, Keisuke Mizunuma, Kirandeep Kaur, Nguyen Thanh Thuy Nhien, Meenakshi Jain, Dinh Thanh Uyen, Shigeharu Harada, Rahul Jain, and Kaeko Kamei

Antimicrob. Agents Chemother. 2007;51 2842-2847

The results described herein indicate that a major improvement in the blood-schizontocidal antimalarial activity of 2-tert-butylprimaquine might be due to a disturbance of heme catabolism pathway in the malarial parasite.

Resistance-Mediating *Plasmodium falciparum* *pfcr*t and *pfmdr*1 Alleles after Treatment with Artesunate-Amodiaquine in Uganda

(Subscription required)

Samuel L. Nsohya, Christian Dokomajilar, Moses Joloba, Grant Dorsey, and Philip J. Rosenthal

Antimicrob. Agents Chemother. 2007;51 3023-3025

Key parasite polymorphisms were assessed in subjects treated for malaria with artesunate-amodiaquine in Tororo, Uganda. For *pfcr*t, all of the isolates tested had the CVIET haplotype. For *pfmdr*1, 86Y and 1246Y were common at baseline and their prevalences were significantly higher in new isolates after therapy, indicating that treatment selected for mutations associated with a decreased response to amodiaquine.

Comparative Antimalarial Activities of Six Pairs of 1,2,4,5-Tetraoxanes (Peroxide Dimers) and 1,2,4,5,7,8-Hexaoxonanes (Peroxide Trimers) (Subscription required)

Yuxiang Dong, Darren Creek, Jacques Chollet, Hugues Matile, Susan A. Charman, Sergio Wittlin, James K. Wood, and Jonathan L. Vennerstrom

Antimicrob. Agents Chemother. 2007;51 3033-3035

Six tetraoxanes had 50% inhibitory concentrations in the range of 10 to 100 ng/ml against *Plasmodium falciparum*, whereas the corresponding hexaoxonanes had minimal antimalarial activity. The lack of iron-mediated reactivity of the hexaoxonanes may explain their low activity compared to the tetraoxanes, the latter of which are able to undergo iron(II)-mediated activation.

The ring-infected erythrocyte surface antigen (RESA) of *Plasmodium falciparum* stabilizes spectrin tetramers and suppresses further invasion (Subscription required)

Xinhong Pei, Xinhua Guo, Ross Coppel, Souvik Bhattacharjee, Kasturi Haldar, Walter Gratzer, Narla Mohandas, and Xiuli An
Blood 2007;110 1036-1042

We infer that the evolutionary advantage of RESA to the parasite lies in its ability to prevent invasion of cells that are already host to a developing parasite, as well as possibly to guard the cell against thermal damage at the elevated body temperatures prevailing in febrile crises.

News: Bed nets protect whole communities from malaria if enough people use them (Open access)

BMJ 2007;335:68 (14 July)

These estimates support the growing consensus that wider distribution of nets might help control malaria better than the current strategy of targeting pregnant women and young children. At the least, this more equitable option should be explored further while targeted net distribution continues, say the researchers.

Amodiaquine Metabolism is Impaired by Common Polymorphisms in CYP2C8: Implications for Malaria Treatment in Africa (Subscription required)

S Parikh, J-B Ouedraogo, J A Goldstein, P J Rosenthal & D L Kroetz

Clin Pharmacol Ther 2007 82: 197-203; advance online publication, March 14, 2007

Considering drugs likely to be coadministered with AQ, the antiretroviral drugs efavirenz, saquinavir, lopinavir, and tipranavir were potent CYP2C8 inhibitors at clinically relevant concentrations. Variable CYP2C8 activity owing to genetic variation and drug interactions may have important clinical implications for the efficacy and toxicity of AQ.

Laboratory colonization of *Anopheles pseudopunctipennis* (Diptera: Culicidae) without forced mating (Subscription required)

Frédéric Lardeux, Vicente Quispe, Rosenka Tejerina, Roberto Rodríguez, Libia Torrez, Bernard Bouchité and Tamara Chávez

Comptes Rendus Biologies, Volume 330, Issue 8, August 2007, Pages 571-575

This study presents a technique based on exposure of adult mosquitoes to a blue stroboscopic light for 20 min during several nights, which encourages them to copulate naturally under laboratory conditions. After some generations, a self-free-mating strain was obtained. The technique is simple, inexpensive and is probably effective whatever the *An. pseudopunctipennis* strain considered.

***Plasmodium yoelii* Sporozoites with Simultaneous Deletion of P52 and P36 Are Completely Attenuated and Confer Sterile Immunity against Infection** (Subscription required)

Mehdi Labaied, Anke Harupa, Ronald F. Dumpit, Isabelle Coppens, Sebastian A. Mikolajczak, and Stefan H. I. Kappe

Infect. Immun. 2007;75 3758-3768

Our results demonstrate for the first time the generation of two-locus gene deletion-attenuated parasites that infect the liver but do not progress to blood-stage infection. The study will critically guide the design of *Plasmodium falciparum* live attenuated malaria vaccines.

Enhanced Immunity to Plasmodium falciparum Circumsporozoite Protein (PfCSP) by Using Salmonella enterica Serovar Typhi Expressing PfCSP and a PfCSP-Encoding DNA Vaccine in a Heterologous Prime-Boost Strategy (Subscription required)

Magaly Chinchilla, Marcela F. Pasetti, Sandra Medina-Moreno, Jin Yuan Wang, Oscar G. Gomez-Duarte, Rick Stout, Myron M. Levine, and James E. Galen
Infect. Immun. 2007;75 3769-3779

A prime-boost regimen consisting of mucosal delivery of PfCSP exported from a *Salmonella*-based live-vector vaccine followed by a parenteral PfCSP DNA boosting is a promising strategy for the development of a live-vector-based malaria vaccine.

Induction of Nitric Oxide Synthase and Activation of Signaling Proteins in Anopheles Mosquitoes by the Malaria Pigment, Hemozoin (Subscription required)

Leyla Akman-Anderson, Martin Olivier, and Shirley Luckhart
Infect. Immun. 2007;75 4012-4019

Our results show that Hz is a prominent parasite-derived signal for *Anopheles* and that signaling pathways activated by PfGPIs and Hz have both unique and shared components. Together with our previous findings, our data indicate that parasite signaling of innate immunity is conserved in mosquito and mammalian cells.

The Melanization Reaction Is Not Required for Survival of Anopheles gambiae Mosquitoes after Bacterial Infections

(Subscription required)

Anna K. D. Schnitger, Fotis C. Kafatos, and Mike A. Osta
J. Biol. Chem. 2007;282 21884-21888

Here we show that the *Anopheles gambiae* noncatalytic serine protease CLIPA8, an essential factor for *Plasmodium* ookinete melanization, is also required for melanization of bacteria in adult mosquitoes. *CLIPA8* silencing by RNA interference inhibits pro-phenoloxidase activation and melanization of bacteria in the hemolymph following microbial challenge. However, *CLIPA8* is not required for wound melanization nor for melanotic pseudotumor formation in *serpin2* knockdown mosquitoes, suggesting a specific role for pathogen melanization. Surprisingly, *CLIPA8* knockdown mosquitoes are as resistant to bacterial challenge as controls, indicating that melanization is not essential for defense against bacteria and questions its precise role in mosquito immunity.

Editorial commentary: The Effects of Maternal Malaria and HIV-1 Infection on the Effort to Eliminate Neonatal Tetanus (Open access)

William J. Moss and Neal A. Halsey
The Journal of Infectious Diseases 2007;196:502-504

The global public health community should not lose sight of such an important goal as elimination of maternal and neonatal tetanus as a public health problem, and global efforts to alleviate the burden of malaria and HIV-1 infection can be part of this strategy.

Maternal HIV Infection and Placental Malaria Reduce Transplacental Antibody Transfer and Tetanus Antibody Levels in Newborns in Kenya (Open access)

Phillippa Cumberland, Caroline E. Shulman, P. A. Chris Maple, Judith N. Bulmer, Edgar K. Dorman, Ken Kawuondo, Kevin Marsh, and Felicity T. Cutts
The Journal of Infectious Diseases 2007;196:550-557

Malarial and HIV infections may hinder efforts to eliminate maternal and neonatal tetanus, making implementation of the current policy for mass vaccination of women of childbearing age an urgent priority.

Genetically Attenuated *Plasmodium berghei* Liver Stages Induce Sterile Protracted Protection That Is Mediated by Major Histocompatibility Complex Class I-Dependent Interferon- γ -Producing CD8⁺ T Cells (Subscription required)

Ousman Jobe, Joanne Lumsden, Ann-Kristin Mueller, Jackie Williams, Hilda Silva-Rivera, Stefan H. I. Kappe, Robert J. Schwenk, Kai Matuschewski, and Urszula Krzych
The Journal of Infectious Diseases 2007;196:599-607

On the basis of these observations, we propose that the development of genetically attenuated *P. falciparum* parasites is warranted for tests in clinical trials as a pre-erythrocytic stage vaccine candidate.

Protracted Sterile Protection with *Plasmodium yoelii* Pre-erythrocytic Genetically Attenuated Parasite Malaria Vaccines Is Independent of Significant Liver-Stage Persistence and Is Mediated by CD8⁺ T Cells (Subscription required)

Alice S. Tarun, Ronald F. Dumpit, Nelly Camargo, Mehdi Labaied, Pu Liu, Akihide Takagi, Ruobing Wang, and Stefan H. I. Kappe
The Journal of Infectious Diseases 2007;196:608-16

Our results show that genetically distinct GAPs confer different degrees of protective efficacy and that live vaccine persistence in the liver is not necessary to sustain long-lasting protection. These findings have important implications for the development of a *P. falciparum* GAP malaria vaccine.

Members of the Low-Molecular-Mass Rhoptry Protein Complex of *Plasmodium falciparum* Bind to the Surface of Normal Erythrocytes

(Subscription required)

Y. Sterkers, C. Scheidig, M. da Rocha, C. Lepolard, J. Gysin, and A. Scherf
The Journal of Infectious Diseases 2007;196:617-621

This work opens new doors into the investigation of the molecular mechanism of anemia in patients with malaria.

Thrombocytopenia and Release of Activated von Willebrand Factor during Early *Plasmodium falciparum* Malaria (Subscription required)

Quirijn de Mast, Evelyn Groot, Peter J. Lenting, Philip G. de Groot, Matthew McCall, Robert W. Sauerwein, Rob Fijnheer, and Andre van der Ven
The Journal of Infectious Diseases 2007;196:622-628

P. falciparum induces systemic acute endothelial cell activation and release of activated vWF immediately after the onset of blood-stage infection. The resulting platelet agglutination may result in early thrombocytopenia and may play a role in the pathogenesis of malaria.

Correspondence: Tumor Necrosis Factor and Increase in Alveolar Capillary Barrier in Malaria (Subscription required)

Michael Eisenhut

The Journal of Infectious Diseases 2007;196:647

No abstract available

Environmental Factors Associated with Spatial and Temporal Distribution of Anopheles (Diptera: Culicidae) Larvae in Sukabumi, West Java, Indonesia (Subscription required)

Craig A. Stoops; Yoyo R. Gionar; Shinta; Priyanto Sismadi; Iqbal R. F. Elyazar; Michael J. Bangs; Supratman Sukowati

Journal of Medical Entomology, Vol. 44, No. 4, July 2007 pp.543-553

Overall, the distribution of Anopheles species in Sukabumi was found to be nonrandom and predictable on the basis of habitat characteristics.

Population Structure and Gene Flow of Anopheles farauti s.s. (Diptera: Culicidae) Among Ten Sites on Five Islands of Vanuatu: Implications for Malaria Control (Subscription required)

D. M. Reiff; A. Kaneko; G. Taleo; M. Amos; J. K. Lum

Journal of Medical Entomology, Vol. 44, No. 4, July 2007 pp.601-607

Minimal risk of active dispersal among these islands indicates that vector control can be effectively initiated at the island level within the archipelago of Vanuatu.

Field Evaluation of Traditionally Used Plant-Based Insect Repellents and Fumigants Against the Malaria Vector Anopheles darlingi in Riberalta, Bolivian Amazon (Subscription required)

Sarah J. Moore; Nigel Hill; Carmen Ruiz; Mary M. Cameron

Journal of Medical Entomology, Vol. 44, No. 4, July 2007 pp.624-630

All three plant-based repellents provided significant protection compared with controls. Plant-based repellents, although less effective than synthetic alternatives, were shown by focus groups to be more culturally acceptable in this setting, in particular para-menthane-3, 8, idol derived from lemon eucalyptus, *Corymbia citriodora* (Hook). Plant-based repellents have the potential to be produced locally and therefore sold more cheaply than synthetic commercial repellents. Importantly, their low cost may encourage user compliance among indigenous and marginalized populations.

Preliminary Field Testing of a Long-Lasting Insecticide-Treated Hammock Against Anopheles gambiae and Mansonia spp. (Diptera: Culicidae) in West Africa (Subscription required)

J.-M. Hougard; T. Martin; P. F. Guillet; M. Coosemans; T. Itoh; M. Akogbéto; F. Chandre

Journal of Medical Entomology, Vol. 44, No. 4, July 2007 pp.651-655

The LLIH is more cost-effective and user-friendly than mosquito coils, which need to be replaced nightly to protect people sleeping indoors from mosquito bites. The effects of LLIH on exophagic vectors also need to be investigated because most people that sleep in hammocks are outdoors.

IN MEMORIAM: Andrew (Andy) Spielman (Open access)

Uriel Kitron

Journal of Vector Ecology 32 (1): 1-2. 2007

Andy Spielman, a leader in research, training, and applications in the fields of public health entomology (Andy never liked the term "medical entomology") and vector borne diseases, passed away on December 20, 2006. Andy, with his important insights into mosquitoes, ticks, and vectorborne diseases in general will be remembered as one of the leaders in the field.

Impact of environmental manipulation for *Anopheles pseudopunctipennis* Theobald control on aquatic insect communities in southern Mexico (Open access)

J. G. Bond, H. Quiroz-Martínez, J. C. Rojas, J. Valle, A. Ulloa, and T. Williams
Journal of Vector Ecology 32 (1): 41-53. 2007

We conclude that habitat manipulation represents an effective and environmentally benign strategy for control of *An. pseudopunctipennis*. Variation in precipitation and river discharge between years was much more important in determining aquatic insect community composition than variation generated by the filamentous algal extraction treatment.

Parity and age composition for *Anopheles darlingi* Root (Diptera: Culicidae) and *Anopheles albitarsis* Lynch-Arribálzaga (Diptera: Culicidae) of the northern Amazon Basin, Brazil (Open access)

Fábio Saito Monteiro de Barros, Mércia Eliane Arruda, Simão D. Vasconcelos, José Francisco Luitgards-Moura, Ulisses Confalonieri, Maria Goreti Rosa-Freitas, Pantelis Tsouris, Tamara Nunes Lima-Camara, and Nildimar Alves Honório
Journal of Vector Ecology 32 (1): 54-68. 2007

Further investigation on longitudinal spatiotemporal change in longevity and survival rates would help us to clarify differences in vector competence for *An. Darlingi* and *An. albitarsis* and add to the understanding of differences regarding prevailing landscapes in malaria epidemiology in the northern Amazon Basin.

Interspecific variation in diving activity among *Anopheles gambiae* Giles, *An. arabiensis* Patton, and *An. funestus* Giles (Diptera: Culicidae) larvae (Open access)

Nobuko Tuno, Andrew Githeko, Guiyun Yan, and Masahiro Takagi
Journal of Vector Ecology 32 (1): 112-117. 2007

The difference in diving behavior between *An. funestus* and the two species in the *An. gambiae* complex may be an adaptation to their contrasting breeding sites, because the former species must spend considerable energy to surface in its typical breeding sites. Both *An. gambiae* and *An. arabiensis* reached the bottom and crawled along the substrate, but *An. gambiae* voluntarily crawled more often than *An. arabiensis*. The possible importance of asymmetric bottom-feeding between these two sympatric species is discussed.

Spectrum of metabolic-based resistance to DDT and pyrethroids in *Anopheles gambiae* S.L. populations from Cameroon (Open access)

Josiane Etang, Lucien Manga, Jean-Claude Toto, Pierre Guillet, Etienne Fondjo, and Fabrice Chandre
Journal of Vector Ecology 32 (1): 123-133. 2007

These results suggest metabolic detoxification is a major DDT or pyrethroid resistance mechanism and emphasize the need for further investigations on *An. gambiae* s.l. resistance mechanisms in Cameroon.

Cardiotoxicity of antimalarial drugs (Subscription required)

Nicholas J White

The Lancet Infectious Diseases, Volume 7, Issue 8, August 2007, Pages 549-558

There are consistent differences in cardiovascular state between acute illness in malaria and recovery that prolong the electrocardiographic QT interval and have been misinterpreted as resulting from antimalarial cardiotoxicity. Of the different classes of antimalarial drugs, only the quinolines, and structurally related antimalarial drugs, have clinically significant cardiovascular effects. At currently recommended doses, other

antimalarial drugs do not have clinically significant cardiac effects. More information on amodiaquine, primaquine, and the newer structurally related compounds is needed.

Sulfadoxine-pyrimethamine still confers benefit (Subscription required)

Cathel Kerr

The Lancet Infectious Diseases, Volume 7, Issue 8, August 2007, Pages 510

No abstract available

Community coverage of an antimalarial combination of artesunate and amodiaquine in Makamba Province, Burundi, nine months after its introduction (Open access)

Sibylle Gerstl, Sandra Cohuet, Kodjo Edoh, Christopher Brasher, Alexandre Lesage, Jean-Paul Guthmann, Francesco Checchi

Malaria Journal 2007, 6:94 (18 July 2007)

This ACT was introduced as a first-line treatment in 2003: nine months after its implementation a study was carried out to assess whether children below five years of age were actually receiving this ACT. Overall, coverage was low due to low health centre utilization and inappropriate prescribing. In addition, the drug was given to patients at a price ten times higher than the subsidized price

Vector control in a malaria epidemic occurring within a complex emergency situation in Burundi: A case study (Open access)

Natacha Protopopoff, Michel Van Herp, Peter Maes, Tony Reid, Dismas Baza, Umberto D'Alessandro, Wim Van Bortel, Marc Coosemans

Malaria Journal 2007, 6:93 (16 July 2007)

Despite emergency context, vector control measures can be implemented and are effective. In the described case, the intervention occurred far too late to get a significant epidemiological impact.

A comparative study on the efficacy of artesunate plus sulphadoxine/pyrimethamine versus artemether-lumefantrine in eastern Sudan (Open access)

Ebtihal A Mukhtar, Nahla B Gadalla, Salah-Eldin G El-Zaki, Izdihar Mukhtar, Fathi A Mansour, Ahmed Babiker, Badria B El-Sayed

Malaria Journal 2007, 6:92 (15 July 2007)

A paper reporting on the efficacy of ACTs in Sudan including PCR-corrected results (93.5% in the AS/SP group and 91.3% for AL). Slightly better results are interpreted as being related to better patient compliance to one drug compared to the other.

The role of DNA mismatch repair in generating genetic diversity and drug resistance in malaria parasites (Subscription required)

Lara Bethke, Susan Thomas, Kerone Walker, Ronak Lakhia, Radha Rangarajan and Dyann Wirth

Molecular and Biochemical Parasitology, Volume 155, Issue 1, September 2007, Pages 18-25

Our studies suggest that *Plasmodium* species may have evolved a unique variation on the highly conserved system of DNA repair compared to the mismatch repair systems in other eukaryotes.

BDA-410: A novel synthetic calpain inhibitor active against blood stage malaria (Subscription required)

Xuerong Li, Huiqing Chen, Jong-Jin Jeong and Athar H. Chishti

Molecular and Biochemical Parasitology, Volume 155, Issue 1, September 2007, Pages 26-32

The characterization of BDA-410 as a potent inhibitor of *P. falciparum* cysteine proteases, and the demonstration of its efficacy in blocking parasite growth both *in vitro* and *in vivo* assays identifies BDA-410 as an important lead compound for the development of novel anti-malarial drugs.

Genome wide gene amplifications and deletions in Plasmodium falciparum (Subscription required)

Ulf Ribacke, Bobo W. Mok, Valtteri Wirta, Johan Normark, Joakim Lundeberg, Fred Kironde, Thomas G. Egwang, Peter Nilsson and Mats Wahlgren
Molecular and Biochemical Parasitology, Volume 155, Issue 1, September 2007, Pages 33-44

These together with previous findings, suggest that the malaria parasite employs gene duplications and deletions as general strategies to enhance its survival and spread. Further analysis of the impact of discovered genetic differences and the underlying mechanisms is likely to generate a better understanding of the biology and the virulence of the malaria parasite.

The distinct proteome of placental malaria parasites (Subscription required)

Michal Fried, Kim K. Hixson, Lori Anderson, Yuko Ogata, Theonest K. Mutabingwa and Patrick E. Duffy
Molecular and Biochemical Parasitology, Volume 155, Issue 1, September 2007, Pages 57-65

We identified six conserved hypothetical proteins with putative TM or signal peptides that were exclusively expressed by the placental IE, and 11 such proteins that were significantly more abundant in placental IE. One of these hypothetical proteins, PFI1785w, is a 42 kDa molecule detected by Western blot in parasites infecting pregnant women but not those infecting children.

Invasion of host cells by malaria parasites: a tale of two protein families (Open access)

Jayasree Iyer, Anne Charlotte Grüner, Laurent Rénia, Georges Snounou and Peter R. Preiser
Molecular Microbiology, Volume 65 Issue 2 Page 231-249, July 2007

In this article we review data from classical studies and gene disruption experiments that are helping to illuminate the role of these proteins in the selection-invasion processes. The manner in which subsets of proteins from each of the families act in concert suggests a model to explain the ability of the parasites to use alternate pathways of invasion. Future perspectives and implications are discussed.

Cross sectional study reveals a high percentage of asymptomatic Plasmodium vivax infection in the Amazon Rio Negro area, Brazil (Open access)

Suárez-Mutis, Martha C.; Cuervo, Patricia; Leoratti, Fabiana M.S.; Moraes-Avila, Sandra L.; Ferreira, Antonio Walter; Fernandes, Octavio; Coura, José Rodrigues
Rev. Inst. Med. trop. S. Paulo, May/June 2007, vol.49, no.3, p.159-164
This is the first description of asymptomatic *Plasmodium* infection in this area studied.

Predicting memory: a prospective readout for malaria vaccines? (Subscription required)

Gabriela Minigo, Karen Scalzo, Katie L. Flanagan and Magdalena Plebanski
Trends in Parasitology, Volume 23, Issue 8, August 2007, Pages 341-343
Bejon and colleagues propose that levels of rapidly induced (effector memory) interleukin-2 and interferon gamma producing T-cells after vaccination with leading pre-erythrocytic stage vaccines predict the induction of resting memory responses (central

memory). Herein we discuss Bejon's findings in the context of current thinking on the generation and maintenance of T cell memory, with particular emphasis on the role of cytokines.

Molecules targeting the purine salvage pathway in Apicomplexan parasites (Subscription required)

Arnaud Ghérardi and Marie-Elisabeth Sarciron

Trends in Parasitology, Volume 23, Issue 8, August 2007, Pages 384-389

Many studies over the past ten years have yielded contradictory results, but this review tries to clarify these findings by exposing the latest data concerning purine transport and the specific activities of the major enzymes of the purine salvage pathway of *Toxoplasma gondii*, *Plasmodium falciparum* and *Cryptosporidium parvum*.

... Reports ...

Operations, Costs and Cost-Effectiveness of Five Insecticide-Treated Net Programs (Eritrea, Malawi, Tanzania, Togo, Senegal) and Two Indoor Residual Spraying Programs (Kwa-Zulu-Natal, Mozambique) (Open access)

Joshua Yukich, Fabrizio Tediosi, Christian Lengeler
Swiss Tropical Institute, Basel, Switzerland

... Events ...

Molecular Approaches to Malaria – 2008

Date: 3 - 7 February 2008

Location: Lorne, Victoria, Australia

Registrations are now open at <http://www.mamconferences.org/>

2 events at the National Institute for Communicable Diseases (NICD) in South Africa:

1. "Infectious Diseases in Africa: Measurement of Immune Responses"

Dates: 10-11th November 2007

Location: Johannesburg, South Africa

The aims of the symposium are: a) bring together leading international scientists in the field of TB, Malaria and HIV with young African investigators to discuss the latest immunology concepts and measurement of cellular immunity to these diseases and b) provide an opportunity for young African investigators to present their research findings to experts in the field and to facilitate collaborative research opportunities.

2. African Flow Cytometry Workshop: Detection of Antigen-Specific T Cells by Intracellular Cytokine Staining (ICS)

Dates: 12-17th November 2007

Location: Johannesburg, South Africa

This workshop will allow twenty (20) scholars to receive an in-depth hands-on training on the most recent techniques in multiparameter flow cytometry assays and to analyze and interpret complex sets of data.

Registration: free and is open to the first 100 applicants. A later registration announcement will be sent with more details.

Registration: is free for both events and is open to the first 100 applicants. A later

registration announcement will be sent with more details.

Selection for Scholarships: only those who submit an abstract will be eligible for selection for a scholarship. A scientific panel will select twelve (12) investigators from the abstracts submitted and those will be provided with a FULL scholarship that will cover the complete package of symposium and workshop.

An additional eight (8) investigators will be selected from abstracts who will be provided with a PARTIAL scholarship to attend the workshop only.

For more info contact: Dr Clive Gray on katei@nicd.ac.za

--- Grants & research opportunities ---

EDCTP call for applications: Clinical trials, capacity development and networking in Malaria vaccines & Senior Fellowships

Please consult the **For Grant Seekers** section on our website, www.edctp.org for detailed information on how to apply.

All calls will be open for applications for a period of at least 4 months. With the exception of the call for support of Senior Fellowships, all calls are based on the main recommendations of the EDCTP stakeholder meetings on these topics that were held earlier this year.

Pfizer Centennial Travel Award in Basic Science Tropical Disease Research

Application deadline: 15 August 2007

Individuals with doctoral-level degrees who seek travel to laboratories in the tropics to pursue studies in molecular, cellular or immunological aspects of tropical infectious diseases may apply for financial support for a short-term research experience.

More information

--- Job opportunities ---

Postdoctoral Research Assistant: Host-parasite responses in falciparum malaria, Nuffield Department Of Clinical Laboratory Sciences

Closing date for applications: 3 August 2007

A postdoctoral research assistant is required to work with a group investigating the host-parasite responses in falciparum malaria. One of the major contributory reasons for severe anaemia in malaria is the failure of the bone marrow to produce new red blood cells. We have identified parasite factors that appear to contribute to this dyserythropoiesis and we are now aiming to understand how these parasite factors inhibit the growth and/or differentiation of erythroid precursors.

The work will define the pattern of gene expression and signalling involved in dyserythropoiesis in malaria. The work may also involve further characterisation of signalling pathways and the parasite component(s) that trigger these responses.

A job description can be obtained via e-mail: recruitment@ndcls.ox.ac.uk

Senior researcher/principal investigator, Malaria control, PSI

Location: Kenya

Closing date: 17th August 2007

PSI Research & Metrics seeks a senior researcher/principal investigator to be seconded to the Malaria Control Department based in Nairobi, Kenya. The position is an extendable 1 year full time consultancy and open immediately. The goal and purpose of the position is to increase the use of population and market evidence in malaria control decision making at field and international levels using quantitative and qualitative research strategies relevant to intervention development, monitoring and evaluation. Ultimately, our aim is to produce an ongoing systematic review of programmatic effectiveness, cost-effectiveness, and equity of malaria control interventions, and the determinants of malaria control behaviors to guide communications development. The job will require extensive travel (about 30% of time) throughout Africa and Asia.

More information

--- News ---

• 19 July 2007, GlobalHealthReporting.org

Russia Pledges \$20M To World Bank's Malaria Program

Russia recently pledged \$20 million to the World Bank's malaria programs in sub-Saharan Africa, Russian Ambassador to Rwanda Shirinskiy Mirgayas said recently at the Kigali Institute of Science and Technology, the New Times/AllAfrica.com reports.

• 19 July 2007, Reuters

Malaria drugs cut cancer risk in lupus patients

Drugs used to treat malaria appear to reduce the risk of malignancy in patients with systemic lupus erythematosus, Spanish researchers report in the Annals of the Rheumatic Diseases.

• 18 July 2007, Science Daily

Malaria: Effective Insecticide-repellent Synergy Against Mosquito Vectors

The mosquitoes responsible for malaria transmission to humans belong to the Anopheles genus. One of the best known and most extensively studied is Anopheles gambiae, Africa's principal malaria vector. The protection recommended by the World Health Organization for people at risk from this devastating disease is the use of mosquito nets impregnated with pyrethroids, of low toxicity for mammals and highly active against mosquitoes.

• 18 July 2007, GlobalHealthReporting.org

Kyrgyzstan Making Progress in Controlling Spread of Malaria

Health officials in Kyrgyzstan this year have recorded a 40% decrease in the number of malaria cases in the country compared with the same time period last year, and they say it is an indication that efforts to control the spread of the disease are showing success, IRIN News reports.

• 17 July 2007, GlobalHealthReporting.org

Zanzibar Starts Third Phase of Indoor Spraying Campaign For Malaria Control

Zanzibar on Monday as part of its malaria control strategy started the third phase of its indoor insecticide spraying campaign, which is intended to cover 100% of the houses on the archipelago, Xinhua News Agency reports. According to Zanzibar's health ministry, the third phase will last 54 days.

• 17 July 2007, Inter Press Service

Africa: Enter Malaria, Another Companion of HIV/Aids

Anita Elena looks frail after months of chronic diarrhoea. "I prefer this illness to malaria because malaria kills you rapidly," says Elena, sitting on a reed mat in front of her makeshift two-roomed stick and mud home, which she shares with her husband and three children. "My older brother died of malaria five years ago. He went rapidly."

• 17 July 2007, Huliq.com

International consortium to fight malaria caused by Plasmodium vivax

The CRESIB has today presented the research programme on malaria by Plasmodium vivax, a parasite causing over 70 million yearly cases of malaria in the world. This new programme will be developed in coordination with the leading international centres and researchers on P.vivax.

• 16 July 2007, Science Daily

New DNA Sequencing Technology Uses Firefly Enzymes To Read Genetic Code

Unique technology that uses the enzymes of fireflies to read the genetic code of DNA has been installed at the University of Liverpool.

Scientists from all over the UK will be able to use the new technology for a variety of different purposes, from cancer research to veterinary science. Researchers at Liverpool, for example are looking at DNA sequencing of the malaria parasite. By studying changes in parasite DNA scientists aim to understand why some species of malaria can infect humans and others can only infect other animals.

• 16 July 2007, Chronicle Newspaper

Malawi: Rescuing Children From Malaria

The country continues to lose many children in the under five period on daily basis due to rising cases of malaria.

• 16 July 2007, the Monitor

Uganda: Mosquito Net Prices Reduce As Usage Rises

Mosquito net prices have dropped by more than half since 2000, a survey conducted by NetMark, a USAID project has said. USAID said in a statement that prices have dropped dramatically to an average of less than \$7 (Sh11, 000) per net, with the smallest selling for under \$5 (Shs8,000) down from \$12-\$18 (Shs25,000) in 2000.

• 16 July 2007, Scidev.net

Field 'schools' help farmers become sustainable

Empowering farmers to reduce mosquito populations and to use less pesticide will reduce malaria and other vector-borne diseases, according to a research paper published in the Bulletin of the World Health Organization (WHO) this month (July).

• 16 July 2007, GlobalHealthReporting.org

USAID Malaria Funding Along Myanmar-Thailand Border 'Step in Right Direction,' Editorial Says

USAID's recent announcement that it plans to increase funding for malaria prevention programs along the border between Myanmar and Thailand is "not so much an increase in aid as an easing of bureaucratic and political restrictions," an Irrawaddy editorial says.

• 14 July 2007, PR.com

India: End Malaria – Blue Ribbon Clubs Initiated by Indian Leader with Educational Goals, Partnerships and Empowering Messages

End Malaria - Blue Ribbon Clubs have been initiated by Dr. Pratibha Singh, Director of the Community Outreach Program, Baptist Christian Hospital in Tezpur, Assam, India.

• 13 July 2007, Telegraph

Log on to make your life a malaria-free zone

Recent outbreaks of malaria in holiday spots should have alerted expats everywhere to the health threat - but they have failed to do so.

• 13 July 2007, the Daily Times

Malawi: 4.5m Malawians suffer from malaria every year

Malawi's health system faces the burden of treating 4.5 million people who suffer from malaria every year, Minister of Health Marjorie Ngaunje has said.

• 13 July 2007, Herald

India: 788 falciparum malaria cases reported in six months

The state's health ministry today expressed worry over the rising cases of falciparum malaria with almost 788 cases reported between January-June 2007 as against last year's figure of 240 cases.

• 13 July 2007, the Times of India

India: 25 die as malaria sweeps Tripura, authorities provide relief

At least 25 people have died of malaria in the last two weeks in Tripura with authorities using helicopters to send medical teams to remote areas, officials said on Friday.

• 12 July 2007, MedicalNews Today

Mouse Model Of Cerebral Malaria - Burroughs Wellcome Fund Selects Einstein's Dr. Mahalia Desruisseaux For A 2007 Career Award For Medical Scientists

Mahalia Desruisseaux, M.D., a research fellow at the Albert Einstein College of Medicine, is the recipient of a five-year Burroughs-Wellcome Fund Career Award for Medical Scientists. The award, which was developed to increase the number of physician-scientists conducting biomedical research, aims to support young investigators in their transition to becoming faculty members and independent investigators.

• 12 July 2007, Awareness Times

SLRCS holds One-Day Symposium On Malaria

The Sierra Leone Red Cross Society (SLRCS) Western Area Branch held a one day symposium on the eradication of malaria in Sierra Leone on Saturday 7th July 2007 at the Grass Root Awareness Building John Street, Freetown.

• 12 July 2007, United Press International

Malaria drug may reduce diabetes risk

A common malaria treatment could help protect rheumatoid arthritis patients from diabetes.

Contributions to MalariaWorld and subscribe/unsubscribe messages should be sent to: inga@aon.at

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