

February 2008

Issue 3

R.A.M. Newsletter

(Australia, Papua New Guinea, Solomon Islands and Timor Leste)



Chairman's Message

My Rotary friends and friends of Rotary.

In recent years we have conducted a RAM Conference in either late May or early June. Each conference seems to build on the success of the previous year's conference, and each year we are able to reflect on the success of the past year in the various areas in which we work, listen to our friends and the work they are carrying out in an effort to reduce the incidence of malaria, and to be advised of progress being made in various fields of research.

Recent conferences have included representatives from the World Health Organization, the Army Malaria Institute, the Queensland Institute of Medical Research, the Bosch Institute, and others. We have learned so much from these people as well as benefiting from the opportunity for each of us to discuss openly, both formally and informally, the keen interest we all share

in reducing and even eliminating the world of this dreadful disease.

Our annual conference is again being held on Saturday 17 May and Sunday 18 May 2008. Due to circumstances beyond our control, a change in venue including accommodation has had to be made. The conference will again be held in the Brisbane area. In recognition of the number of people from out-of-town, including interstate, the cost to each participant is being carefully managed to ensure the dollars involved are not too much of a hindrance for those wishing to attend.

The conference will be held at St Columbans Catholic Secondary College, Caboolture, Qld, and will commence at 11.45 am on the Saturday to cater for airline flights but no later than 12 noon, and conclude by 12 noon on the Sunday. Northern Region Rotary Australia World Community Service (RAWCS) will be holding their quarterly

meeting at the same venue prior to our starting time but in a different room to ensure we do start on time. Some RAWCS attendees will be attending our conference.

For those requiring accommodation, the Colonial Motel, Caboolture, which is about a 5-minute walk to the venue, has been booked at a reduced rate of \$89 per room. Some may care to share the cost of a room.

Professor Dennis Shanks, Director, Australian Army Malaria Institute, has accepted my invitation to be our Guest Speaker at the Saturday evening dinner.

Further details will be provided as soon as all aspects have been finalised.

All enquiries, including accommodation booking, should be directed to me at dethlefs@hotmail.net.au

*Bill Dethlefs
National Chairman*

OUR OBJECTIVE

"The prevention of mortality, and a reduction in morbidity and social and economic loss caused by malaria through a progressive improvement and strengthening of local and national capabilities in malaria control."

Statistics on Malaria

- Malaria is one of the planet's deadliest diseases and one of the leading causes of sickness and death in the developing world. According to the World Health Organization, there are 300 to 500 million clinical cases of malaria each year resulting in 1.5 to 2.7 million deaths.
- Children aged one to four are the most vulnerable to infection and death. Malaria is responsible for as many as half the deaths of African children under the age of five. The disease kills more than one million children - 2,800 per day - each year in Africa alone. In regions of intense transmission, 40% of toddlers may die of acute malaria.
- About 40% of the world's population (approx. two billion people) is at risk in about 90 countries and territories. 80 to 90% of malaria deaths occur in sub-Saharan Africa where 90% of the infected people live.
- Sub-Saharan Africa is the region with the highest malaria infection rate. Here alone, the disease kills at least one million people each year. According to some estimates, 275 million out of a total of 530 million people have malaria parasites in their blood, although they may not develop symptoms.
- Of the four human malaria strains, *Plasmodium falciparum* is the most common and deadly form. It is responsible for about 95% of malaria deaths worldwide and has a mortality rate of 1-3%.
- In the early 1960s, only 10% of the world's population was at risk of contracting malaria. This rose to 40% as mosquitoes developed resistance to pesticides and malaria parasites developed resistance to treatment drugs. Malaria is now spreading to areas previously free of the disease.
- Malaria kills 8,000 Brazilians yearly - more than AIDS and cholera combined.
- There were 483 reported cases of malaria in Canada in 1993, according to Health Canada and approximately 431 in 1994. The Centers for Disease Control and Prevention in the United States received reports of 910 cases of malaria in 1992 and seven of those cases were acquired there. In 1970, reported malaria cases in the U.S. were 4,247 with more than 4,000 of the total being U.S. military personnel.
- According to material from Third World Network Features, in Africa alone, direct and indirect costs of malaria amounted to US\$800 million in 1987 and were expected to reach US\$1.8 billion annually by 1995 (currently estimated at \$12 billion annually).

Sources:

*The Malaria Control Program,
World Health Organization,
Third World Network Features,
Health Canada,
The Centers for Disease Control and Prevention.*

What Causes Malaria?

Following a request from a reader to include an article/s on how malaria is caused, its effects, and so on, we referred to the July 2007 edition of National Geographic, which included a special article titled, "Malaria – Stopping a Global Killer."

The final paragraphs of the article provide a small insight into how easy it is to catch malaria.

"When it comes to malaria, only one thing is guaranteed: Every evening in the rainy season across much of the world, Anopheles mosquitoes will take wing, alert to the odors and warmth of living bodies. A female Anopheles

needs to drink blood every three days. In a single feeding, which lasts as long as ten minutes, she can digest about two and a half times her pre-meal weight – in human terms, the equivalent of downing a bathtub-size milk shake.

If she happens to feed on a person infected with malaria, parasites will accompany the blood. Two weeks later, when the mosquito flies through the open window of a mud hut, seeking her next meal, she'll be loaded.

Inside the hut, a child is sleeping with her sister and parents on a blanket spread

over the floor. The family is aware of the malaria threat. They know of the rainy season's dangers. They've hung a bed net from the ceiling.

But it's a steamy night, and the child has tossed and turned a few times before dropping back to sleep. Her foot is sticking out of the net. The mosquito senses it, and dips down for a silent landing."

Note: The above article is one of two articles in this newsletter that may be helpful in responding to the reader's request.

Malaria Drug Breakthrough

The 9 December 2007 edition of Queensland's *The Courier Mail* included an article on the pioneering research by a Queensland scientist who has paved the way for a vaccine that could eradicate malaria.

Dr. Stephen Whisson, from Toowoomba, has discovered that the parasite that caused the Irish potato famine spreads infection in the same way mosquitoes transmit malaria.

He made the discovery by chance while investigating how to make crops resistant to potato blight. He found proteins used by the potato-blight parasite are similar to those recently identified in the spread of malaria.

The revelation could lead to a vaccine being developed to prevent mosquitoes infecting cells.

Dr. Whisson said: "This gives us a target. If we can block the mechanism, we could stop late potato blight from happening and in the same way we could also stop malaria."

Malaria kills more than one million people every year. Although not endemic in Australia, about 1,000 cases occur every year in travelers returning from overseas.

Dr. Whisson, 37, has been living near Dundee in Scotland for the past eight years, but previously worked at the University of Queensland.

Nets and New Drug Curb Deaths in parts of Africa

In an article published 1 February 2008 in the International Herald Tribune, *journalist Donald G MecNeil Jr.* reports, under the above subject heading, significant progress is being made in the fight against malaria in a number of African Countries. The following paragraphs have been extracted from the article and are included in this newsletter as they provide an excellent example of the improvement being made in other parts of the world particularly through the use of mosquito nets.

Widespread distribution of mosquito nets and a new medicine have sharply reduced malaria deaths in several African countries, World Health Organization researchers reported. The report ... was one of the most hopeful signs in the long battle against a disease that is estimated to kill a million children a year in poor tropical countries.

"We saw a very drastic impact," said Dr. Arata Kochi, chief of malaria for WHO "If this is done everywhere, we can reduce the disease burden

by 80 percent in most African countries within five years."

A World Health Organization team handled the study for the Global Fund, the chief financing agency for combating malaria. It looked at programs in four countries that try to distribute mosquito nets to all families with at least one child under the age of five and provide medicines containing artemisinin in every public clinic.

In Ethiopia, deaths of children from malaria dropped more than 50 percent. In Rwanda, they dropped more than 60 percent in only two months.

Zambia had only about a 33 percent drop in overall deaths because nets ran short and many districts ran out of medicine. But areas without such problems had 50 percent to 60 percent reductions.

Ghana was a bit of a mystery, according to the report. It got little money from the Global Fund ... and so bought few nets and had to charge patients for drugs. Malaria deaths nonetheless fell 34 percent, but deaths among

children for other reasons also dropped 42 percent.

Holding drives to distribute insecticide-impregnated nets is a growing trend, now that the Global Fund, President George W. Bush's Malaria Initiative, UN Agencies, the World Bank and private fund-raisers like AgainstMalaria.org have offered hundreds of millions of dollars. Such drives must be continuous because "permanent" nets wear out after three to five years.

Rwanda, a small country that handed out three million nets in two months in 2006, had 66 percent fewer child malaria deaths in 2007 than in 2005. Ethiopia, much larger, took almost two years to hand out 20 million nets; it cut deaths of children in half.

Until recent infusions of money from international donors and the reorganization of malaria leadership at the WHO, the fight against malaria had been in perilous shape, with nets scarce, spraying programs dormant, diagnoses careless and many countries using outdated or counterfeit medicines.

DID YOU KNOW

One child dies from malaria every 25-30 seconds.

Malaria Vaccine Trials Commence

The Queensland Institute of Medical Research (QIMR) has recently received ethics approval to conduct a Phase 1 clinical trial for a new vaccine against malaria.

Malaria is one of the world's biggest killers, claiming up to four lives every minute – most of these children. In fact, the 300 million to 500 million malaria cases recorded each year result in more than 1 million deaths annually.

Spread by mosquitoes, malaria is an infection of red blood cells caused by parasites, the most dangerous of which is *Plasmodium falciparum*.

Associate Professor James McCarthy, Head of QIMR's *Clinical Tropical Medicine* group, is undertaking a trial with the US-based *PATH Malaria Vaccine Initiative* to test the safety of the

candidate vaccine (MSP2-C1ISA720) aimed at preventing the malaria parasite from getting into the red blood cells.

"Testing the safety of this vaccine is an important step towards discovering if it will be helpful in areas where malaria occurs," says Assoc. Prof. McCarthy.

Many countries desperately need a vaccine that would protect millions of people from malaria infection and potentially save lives. Indeed, an effective vaccine could also benefit the tourists who holiday in these locations. At this time, there is no vaccine to prevent malaria.

"While this is the first time this particular vaccine will be tested on humans, closely related vaccines have been tested in the past without serious side-effects occurring

in the volunteers," Assoc. Prof McCarthy adds.

"Volunteers can also rest assured that they cannot contract malaria from this vaccine."

The trial will be conducted by Q-Pharm, a private clinical trials company.

To learn more about this trial, contact Q-Pharm on 07 3845 3620 or visit www.qpharm.com.au

Source: The above article is included in the No. 67 – Spring 2007 edition of LifeLab, the newsletter of the Queensland Institute of Medical Research (QIMR).

Authorised to be included in this newsletter by kind permission of QIMR Director Professor Michael Good.

BEEN AWAY? FEEL OK?

The Australia Government Department of Health and Ageing as a matter of course includes the following advice to all inwards travellers:

*"After any international travel we urge you to monitor your health. There is a small chance that during your travels you could be exposed to infectious diseases such as influenza, gastroenteritis or **malaria** (editorial emphasis).*

It is very important that if you become unwell in the weeks following your travel that you and your doctor consider your recent destinations as a possible source for your illness."

World Malaria Day

My November 2007 Newsletter message introduced the possibility of a World Malaria Day. The purpose in doing this was to set aside a special day as a major step forward in communicating to the world the effect of this deadliest of diseases and to make known the activity that is taking place to improve the lives of literally hundreds of millions of people who are affected by it.

Feedback received to date has been quite positive and includes the following:

- One district suggesting their Public Relations team would be willing to support a national event to highlight such a day;
- There is the possibility of an official register of officially recognised international days;
- We need a Day / Week where there is little competition And the maximum potential for media coverage.

It was interesting to note that RI President-elect Dong Kurn (D.K.) Lee in introducing his RI Theme for 2008-09 – **Make Dreams Real** – mentions that "...every day some 30,000 children under the age of five die from preventable causes." Malaria is especially mentioned in his comments that followed.

Bill Dethlefs

DATE CLAIMER

NATIONAL RAM CONFERENCE

17 & 18 MAY, 2008

**St Columbans Catholic Secondary College,
Caboolture, Qld**

(on the Northern outskirts of Brisbane)

This newsletter has been produced by PDG Bill Dethlefs, Chairman RAM Committee (Australia), Email: dethlefs@hotmail.net.au in association with PP Leo Smith, Newsletter Editor, Email: orgsys@bigpond.net.au

Contributions and comments are welcome.