



District 9820

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ROTARY CLUB OF FRANKSTON NORTH INC
Chartered 7 May 1973

Web: www.rotaryfrankstonnorth.org/

President: Don MacDonald
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Treasurer: Russell Cock
Sergeant at Arms: Con Demopoulos
Directors:
Bill Fowler Vocational
Eric Neill Membership
Tony Spring Foundation
John Tame Services
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Club Meetings:
Every Wednesday at the International Motel,
389 Nepean Hwy, Frankston - 6.00pm for 6.30pm.

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THE FOUR-WAY TEST

Of all the things we think, say or do . . .

1. Is it the TRUTH?
2. Is it FAIR to all concerned?
3. Will it build GOODWILL & BETTER FRIENDSHIPS?
4. Will it be BENEFICIAL to all concerned?

FROM PRESIDENT DON



Last week we visited the Walter and Eliza Hall Institute a research establishment connected with the University of Melbourne. The hospitality we received was excellent and we were provided with a presentation on research activities into Malaria, a problem that is known to have caused over 400 million deaths! We were given a wonderfully graphic animation of how the parasite "plasmodium falciparum" is passed into the blood by pregnant female mosquitoes. We were also shown around the research laboratories. Mosquito nets and drugs are used to combat this blight to which children are the most vulnerable. Rotary Against Malaria are the main thrust of our contribution to combating Malaria.

Kananook Primary School will take receipt of five computers from the Technology Transfer Project and I would like to thank Eric Neill and Colin Price who worked with me last week to complete the preparation of the computers. This marks the end of this stage of the project and we are looking to consider if we should continue with it. Well done Eric, and all the other contributors to this very effective project.

THIS WEEK'S PROGRAM

6:00 for 6:30 pm

Club Assembly

Chairman: PE Maureen Gillham

MILESTONES

ROTARY ANNIVERSARY:
Wayne Peterson - 28 May 1998

WEDDING ANNIVERSARY:
Eric & Marina Neill - 31 May 1969

BIRTHDAYS:
Jane Griffiths - 30 May
Judi McKee - 31 May
Fiona Cock - 31 May
Maureen Gillham - 31 May



LAST WEEK'S PROGRAM

Walter and Eliza Hall Institute of Medical Research Visit

Malaria



Sally, Harim and Alicia of WEHI

Eleven Club Members and Russell Cock's brother-in-law Don Stewart visited the Walter and Eliza Hall Institute (WEHI) of Medical Research to be updated on the progress of research into the Malaria disease. We were hosted by Asst. Professor Harim Karunajeewa and scientists Sally Cane and Alicia Arnott. The WEHI has 750 researchers in Health, 100 PhD students, undergraduate programs for University of Melbourne and school students. They also have a close relationship with Rotary through Rotarians against Malaria and will have a stand at the Rotary Convention in Sydney.

The WEHI will celebrate its centenary as a centre for medical research in 2015 and has made amazing discoveries in the area of snake bite anti-venom, the

capacity to grow influenza strains that lead to vaccines being developed each year and breakthroughs in studying how the blood cell system works. The three main area of medical research the Institute focuses on are cancer, auto immune diseases such as diabetes, and infectious diseases, such as Malaria.

Malaria is a mosquito-borne disease caused by the parasite *Plasmodium*. Several hundred million people, predominately in tropical, and subtropical regions, are infected with malaria every year, leading to over 700,000 deaths, particularly in children.

The malaria parasite has a complex lifecycle with stages in the mosquito and humans (or other mammals). The *Plasmodium* parasite is transmitted into humans by the saliva of an infected mosquito, when the mosquito feeds on the blood of the human (or other mammal).

The parasite migrates to the liver, where it undergoes a 'silent' development stage, multiplying in the liver cells but not causing illness.

SERGEANT CON'S Fact of the Week: Facts About The Earth

The Earth's rotation is gradually slowing: This deceleration is happening almost imperceptibly, at approximately 17 milliseconds per hundred years, although the rate at which it occurs is not perfectly uniform. This has the effect of lengthening our days, but it happens so slowly that it could be as much as 140 million years before the length of a day will have increased to 25 hours.

Earth has a powerful magnetic field: This phenomenon is caused by the nickel-iron core of the planet, coupled with its rapid rotation. This field protects the Earth from the effects of solar wind.

Of all the planets in our solar system, the Earth has the greatest density: This varies according to the part of the planet; for example, the metallic core is denser than the crust. The average density of the Earth is approximately 5.52 grams per cubic centimetre.

Earth is the only planet in the Solar System with plate tectonics. The outer crust of the Earth is broken up into regions known as tectonic plates. These are floating on top of the magma interior of the Earth and can move against one another. When two plates collide, one plate can go underneath another. This process is very important. When microscopic plants in the ocean die, they fall to the bottom of the ocean. Over long periods of time, the remnants of this life, rich in carbon, are carried back into the interior of the Earth and recycled. This pulls carbon out of the atmosphere, which makes sure we don't get a runaway greenhouse effect, like what happened on Venus. Without the plate tectonics, there'd be no way to recycle this carbon, and the Earth would overheat.

The parasites migrate into the blood, where they infect red blood cells. It is the infection and reproduction of *Plasmodium* in red blood cells that causes symptoms of malaria, including fever and blockage of blood vessels in critical organs such as the brain.



A small section of the laboratory dedicated to re-searching the malaria parasite.

Mosquitoes feeding on malaria-infected blood acquire *Plasmodium* parasites, which migrate to the insect's salivary glands and reproduce within the mosquito, becoming ready to infect the next victim bitten by that mosquito.

Although malaria is not endemic in Australia, it is a major cause of death and loss of productivity in many neighboring countries in South East Asia and the Pacific, as well as many other developing countries world wide.

Many antimalarial drugs have been developed, but drug-resistant *Plasmodium* variants are emerging in many parts of the world. Furthermore, the ability of malaria to evade immune detection has hindered the development of vaccines.

There is an urgent need for new antimalarial medicines, and ideally a vaccine to prevent malaria in affected populations. Of all the diseases that have caused human deaths in human history, malaria (400 million) comes in third behind tuberculosis (1 billion) and smallpox(500 million). Smallpox has been wiped out so malaria may move up to second place if we they find and administer a vaccine to eliminate it. That is the challenge. Until this momentous discovery is made, the incidence of malaria infected mosquito bites has been reduced by the widespread distribution of mosquito nets



David Hanlon doing his bit to study the malaria bug

in endemic areas. This has been funded by the Global Funds for fighting AIDS, TB and Malaria (GFATM) organisation, initiated by the Gates Foundation. This is the principal source of funds to purchase and distribute bed nets in Papua New Guinea (PNG).

Between 2006 and 2010, biting rates of malaria infected mosquitoes in the PNG Highlands has almost disappeared and has been greatly reduced on other areas. Since then there has been a slow down in the reduction in bites, perhaps due to lack of use of nets or biting habits of mosquitoes. Also worrying is the GFATM funding running out in 2015. There are still remains lot of issues to be solved before malaria can controlled.

NEXT WEEK

6:00 for 6:30pm
Raffle Draw
Rotary Junior Community Awards
 Chairman: Colin Price

KEY DATES

- 11 June - **Community Engagement Evening**
- 25 June - **President's Night**
- 28 June - **Club changeover**
- 29 June - **District Changeover**

Australians all let us rejoice
 For we are young and free
 We've golden soil and wealth for toil,
 Our home is girt by sea:
 Our land abounds in nature's gifts
 Of beauty rich and rare,
 In history's page let every stage
 Advance Australia fair,
 In joyful strains then let us sing
 Advance Australia fair.

THE INVOCATION
 "For good food, good fellowship and the opportunity to serve through Rotary, we give thanks"
THE LOYAL TOAST
 "To The Queen, and the People of Australia"

MAY IS AUSTRALIAN ROTARY HEALTH MONTH