

Sovereign Order of St John of  
Jerusalem  
Knights Hospitaller  
ABN 16 004 656 964

Prior  
H.E. Bailiff Edward A Rich JP, GCSJ, MMSJ

Vice Chancellor  
Chevalier Fred Maestrelli KCSJ

Treasurer  
Lt Col the Chevalier Colin Horne KCSJ

Donations are tax deductible, please forward  
to:

**Chevalier Fred Maestrelli KCSJ**  
**PO BOX 192**  
**PENSHURST NSW 2222**

And make cheques payable to:

Sovereign Order of St John of Jerusalem

An official receipt will be forwarded for all  
voluntary donations.

**The Sovereign Order of St John  
of Jerusalem  
Knights Hospitaller**

The origins of the order date to the 11<sup>th</sup>  
century. We recommend a visit to the  
web site [www.osj-nsw.org.au](http://www.osj-nsw.org.au) for complete  
details.

The order has been at the forefront of  
medical science since 1565 when they  
built three hospitals on the Island of  
Malta following the repulse of Suleiman  
in 1565.

The order has been in operation in  
Australia since 1969. The focus of the  
NSW Priory has been Oncology and the  
Westmead Research Hub.

The Millennium 500 project is the  
initiative of our Prior and Chevalier Sir  
Ian McFarlane. Colonel the Chevalier Dr  
James Hull has chaired the project,  
assisted by Chevaliers Lt Col Colin  
Horne, Fred Maestrelli, and Dr Glen  
Tomkins.

The members officially endorsed the  
project on 8 February 2006.



**The ILLUMINA 500  
Project**



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Priory of New South Wales  
[www.osj-nsw.org.au](http://www.osj-nsw.org.au)

## The Illumina 500 Project

The Sovereign Order of St John Of Jerusalem, New South Wales priory has committed resources to assisting the Westmead Research Hub acquire an Illumina® BeadStation 500G Genotyping System.

In essence the BeadStation is a highly sophisticated and rapid means of studying genotypes. These are the areas of medical research that are providing the breakthroughs in diagnosis and insights into the causes and potential cures for diseases.

The Illumina system addresses a number of fundamental issues in medical research, providing the ability to examine the variations within a person's genome at numerous locations within the body, allowing correlation of variations in DNA.

OSJ is committed to assisting in the raising of \$500,000 for the acquisition of this machine and its related technology.

The Westmead Research Hub is one of the largest in Australia and continues to grow as a world leader in medical research with the power to improve the health of all mankind. Its 'bench to bedside' philosophy ensures that research outcomes are rapidly translated into better prevention strategies, treatments and health care for all.

## The Illumina System

### Micro array technology

**Considered a cutting edge tool the Illumina System claims to provide five critical elements:**

**Expression profiling:** The machine provides extensive coverage using what are termed micro arrays. This means simultaneous measurement of 46,000 human genes.

**Genotyping:** being able to evaluate small genetic variations that are known to underlie a growing list of disorders and disease predispositions.

**Analysis:** The facility to evaluate clinical and archival specimens means inclusion of historical data as a valuable contribution to research.

**Sample efficiency:** The system uses limited amounts of genetic material.

**Cost efficiency:** This translates into competitive outputs, allowing huge increases in research outputs

## Influencing Research

**Acquisition of technology that can influence research is far from a new area for the Knights Hospitaller. In this instance the ultimate objective is health improvements: -**

**Disease Management:** predicting the outcome of a range of diseases and response to treatment.

**Accuracy:** the ability to predict clinically the course of treatment.

**Risk evaluation:** identification of individuals most at risk of specific details.

**Genetic mapping:** identifying critical genetic variations underlying disease development.

**Personalised medicine:** precisely characterising individual signatures of disease from patient to patient.

### Disclaimer

We have attempted to describe this project in lay terms that convey the significance and importance of the project. It is not intended to detract from the technology focus, but to highlight what the project means and why we are committing resources.