



The Hawkesbury Canoe Classic raises \$200,000 for Arrow!

The 2011 Hawkesbury Canoe Classic (HCC) event raised a huge \$200,000 for Arrow, bringing the total contributed since 1994 to over \$2.9 million!

The donation will be used to provide funding for:

- Catalina Palma, a research scientist within the Blood Stem Cell and Cancer Research Unit at St Vincent's Hospital, Sydney; and her study of the genetic regulation of leukaemia.
- PhD students: Adele Baker; Alireza Ardjmand; Bradley Hoad and Sewa Rijal (refer to insert for project details);

- Medical research equipment; and
- A new medical research project being undertaken by Professor David Ma and his team at the Blood Stem Cell and Cancer Research Unit at St Vincent's Hospital, Sydney (refer to page 3 for project description).

We sincerely thank the paddlers, volunteers and the HCC Committee for making this extraordinary event possible.

Light the Night research grant raises \$30,000 in support of 'Gene Control in Acute Leukaemia' research



L to R: Monica Smith, David Nomchong, Greg Smith

Arrow provides disadvantaged patients with emergency assistance

While medical researchers work towards finding better treatments and a cure for leukaemia and rare non-malignant diseases treatable by bone marrow or stem cell therapy, Arrow assists patients and their carers through a range of services including: the Tracey Scone Wig Library; travel & accommodation assistance; transplant information and by providing emergency funding to patients struggling to pay for their most basic needs due to ongoing medical costs and their inability to work whilst being treated.

Arrow works closely with social workers from hospitals across Sydney to provide patients or their carers with: grocery cards; medical equipment and assistance with the payment of utility bills. The amount granted is based on individual circumstances to ensure that we are able to support those most in need of assistance.

Matthew Rennie's brave battle against leukaemia inspired Light the Night, an extraordinary charity benefit concert aimed at raising funds for a cure. Monica and Greg Smith and Shaun and Adam Rennie, along with a raft of talented Australian artists, family and friends are responsible for producing this enchanting annual event that has raised almost \$250,000 towards vital medical research into a cure for leukaemia since the first show eight years ago. The \$30,000 raised at the 2011 event will support the 'Gene Control in Acute Leukaemia' project as outlined by Professor David Ma on page 3.



donations in memoriam

We gratefully acknowledge donations received in memory of:

- Katherine Robertson
- Sandra Mason
- Steve Blau
- Jim Tancred
- Jan Sparks

2012 events

Arrow's 25th Anniversary Silver Gala Dinner

UNSW Roundhouse, University of NSW, Kensington. Saturday 28th July, 7pm.
For more information visit:
www.arrow.org.au

Hawkesbury Canoe Classic.

27th October, 2012.
www.canoeclassic.asn.au

Light the Night charity benefit concert.

Monday, 29th October 2012.
www.lightthenight.com.au

Arrow AGM.

Friday, 16th November, 2012.

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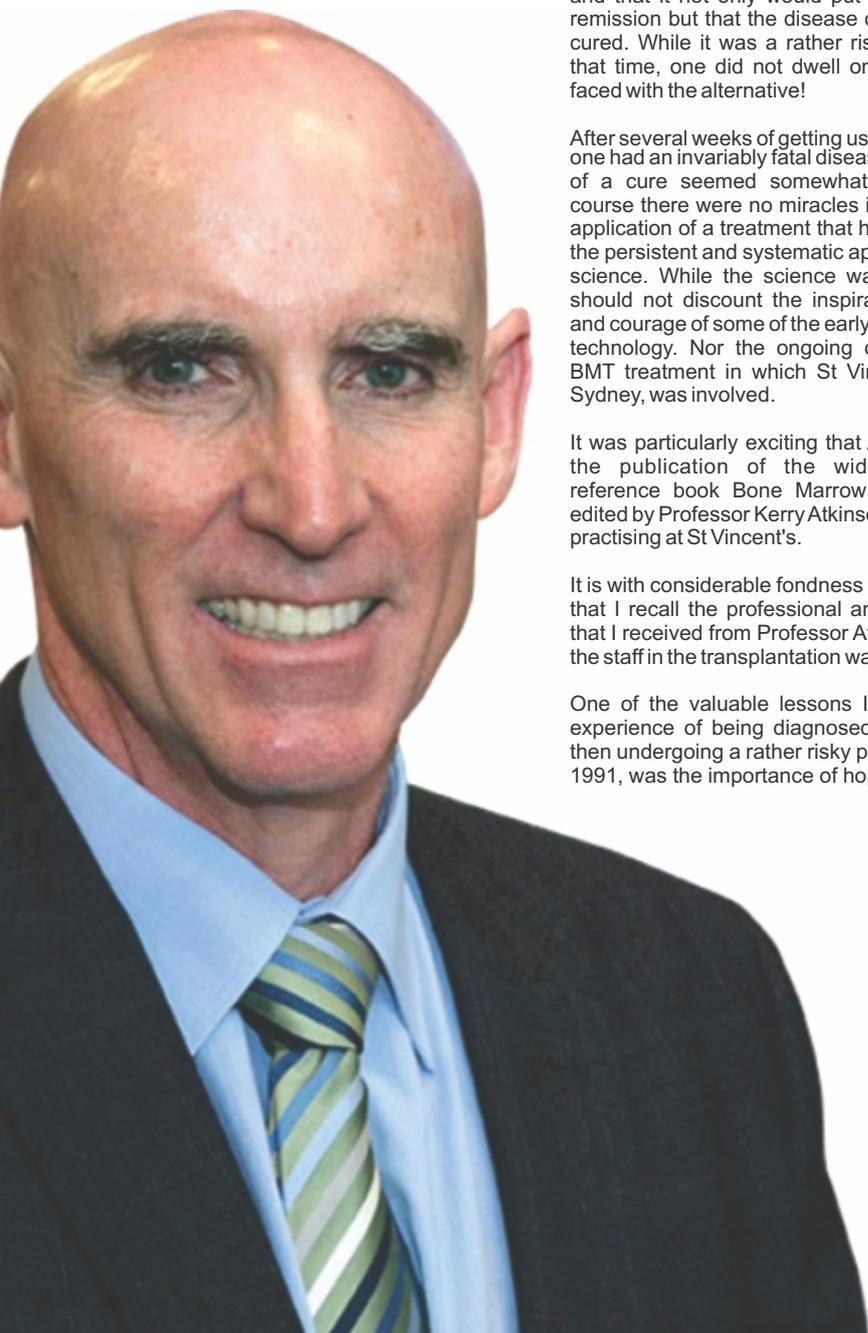
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- Scholarships for our nurses.
- Donations target a cure.
- Your gift for a brighter future.
- Arrow meditation CDs now available on iTunes.

Story ideas & photos are welcome.
Please contact Gloria Vincent:
gvincent@arrow.org.au
or phone (02) 8382 2696.

Mike Quigley's Story



By Mike Quigley, past BMT patient, former President of Arrow and current Chief Executive of NBN Co.

It is a privilege for me to have been asked to write a few words for the Arrow Bone Marrow Transplant (Arrow) newsletter, for two reasons.

First, I owe a very great debt to the people who over many years supported research into Bone Marrow Transplantation technology. Without the advances that resulted from that research I would not be here to write these words.

Second, I had the good fortune to be able to take on the role of the President of Arrow for a brief period before I had to leave, with my family, for an overseas work assignment. It was great to see, even from afar, that the Foundation continued to support the important work in haematological research and patient welfare.

It is now nearly 32 years since I was diagnosed with Chronic Myeloid Leukaemia (CML). At that time things looked somewhat grim when confronted with such a diagnosis. But I still remember quite vividly the day I was told that a Bone Marrow Transplant (BMT) was a possibility and that it not only would put the disease into remission but that the disease could actually be cured. While it was a rather risky procedure at that time, one did not dwell on the risks when faced with the alternative!

After several weeks of getting used to the fact that one had an invariably fatal disease, the possibility of a cure seemed somewhat miraculous. Of course there were no miracles involved, just the application of a treatment that had resulted from the persistent and systematic application of good science. While the science was essential one should not discount the inspiration, judgement and courage of some of the early pioneers in BMT technology. Nor the ongoing developments in BMT treatment in which St Vincent's Hospital, Sydney, was involved.

It was particularly exciting that Arrow supported the publication of the widely recognised reference book Bone Marrow Transplantation edited by Professor Kerry Atkinson, who was then practising at St Vincent's.

It is with considerable fondness and appreciation that I recall the professional and attentive care that I received from Professor Atkinson and all of the staff in the transplantation ward.

One of the valuable lessons I learnt from the experience of being diagnosed with CML, and then undergoing a rather risky procedure in early 1991, was the importance of hope. But hope, if it

is to be realised, must be based on more than blind faith or wishful thinking. Our best hope for successful treatments of haematological diseases or the many other diseases that still afflict humankind is the ongoing development of medical technology based on a sound scientific footing.

After spending some five weeks on the BMT ward and then a couple of months recuperating I returned to full time work and continued my career in telecommunications. This included almost a decade spent in the US and Europe with my last position being as President and Chief Operating Officer of the large telecoms equipment supplier where I had started my working life some 36 years earlier.

During my BMT procedure I had resolved to retire early which I did in 2007 and returned with my wife to Australia to look forward to taking it a little easier.

However this did not last too long as in 2009 I was asked by the Federal Government to become the CEO of a new company charged with building a broadband optical fibre network across this great nation of ours. For a telecoms engineer this was a request that was impossible to refuse.

It was not just the technical and engineering challenges in building such a network that was so compelling but also because I was convinced that this broadband fibre network would bring significant societal and economic benefits to Australia. A similar project was undertaken just after the second world war by the then Government when they built what is today's ageing copper network. This copper network has served us well for some sixty years but it will now be replaced by a fibre network, once again built by the Government, and it will last at least as long as the copper network.

This nation-building project is particularly important for supporting the transfer of massive amounts of data which will be needed in future years when high definition remote video-conferencing or the transfer of high definition medical images is needed for future medical applications.

So instead of retiring I now find myself involved in running what is a fascinating and vitally important project, albeit one that has generated a good deal of political debate. In addition I have gotten involved in education as an Honorary Professorial Fellow at the University of Wollongong and have continued with an association with medical research as a Director of Neuroscience Research Australia.

Whether it is telecommunications or medical science or any other technology that has provided modern societies with enormous benefits, the dependence on fundamental research in basic science is always present.

This is especially important when it comes to medical research so we all have a responsibility to keep lobbying our Government to continue funding that vital research. As well as Government funded research it is increasingly important that we all do what we can to support such research.

That is why organisations such as Arrow are so important. So that they can continue to support the vital work on which we and our children may one day depend.

Mike Quigley

Arrow to fund new childhood cancer research project

Of the \$200,000 raised at last year's Hawkesbury Canoe Classic (HCC), \$40,000 will be used to fund the 'Defining defective genes in leukaemia in children with trisomy 21 using induced pluripotent stem cells' medical research project being undertaken by Professor David Ma and his team at St Vincent's Hospital, Sydney.

Project overview by Professor David Ma

Acute leukaemia affects people of all ages and is the most common cancer in children. Children with Down Syndrome (DS, trisomy 21) can present with abnormal blood cells, and one in five of them develops acute leukaemia by the age of five. Although the extra copy of chromosome 21 in Down Syndrome is believed to be linked with the increased risk of getting leukaemia, evidence

suggests that genetic defects on other chromosomes are required for the development of leukaemia.

Our goal is to identify these genetic defects using a novel approach to recreate the evolution of leukaemia from Down Syndrome stem cells in the laboratory. We are using cutting edge molecular genetics methods to convert Down Syndrome skin cells into a renewable source of embryonic-like stem cells known as induced pluripotent stem cells (iPSCs). Another advantage of iPSCs is that it overcomes the ethical issues associated with human embryonic stem cells. This research is expected to lead to the development of new tests and tailored drugs for leukaemia. Importantly, the results may be applied to the study of other cancers.

Gene Control in Acute Leukaemia

Report by Professor David Ma, The Blood Stem Cell and Cancer Research Unit, St Vincent's Hospital, Sydney.

2011 was a productive year for our team which is currently researching the control of gene function in acute leukaemia using small regulatory molecules called microRNAs. Using research funds including the Light the Night (LTN) resource grant, we have identified several microRNAs that control different important cell functions in leukaemic cells in the laboratory. One group of these microRNAs regulates cell survival and the other influences how cells mature. Results of our work were presented at national and international conferences with Catalina Palma giving two talks at the recent Haematology Society of Australia conference in Sydney, as well as two poster presentations at the annual meeting of the American Society of Haematology in San Diego. We have two papers accepted for publication this year. One is a review paper on the clinical significance of microRNAs in AML and the other one is by Mark Lutherborrow with collaborators at University of Sydney. We currently have another research paper under consideration detailing the

work of our team and that of our PhD student, Adam Bryant.

Our higher degree students, Adam Bryant and David Agapiou, completed the lab work required for the award of their degrees and are currently preparing their thesis for submission. In 2011, we were awarded the highest level of funding awarded by the St Vincent's Clinic Foundation for an extension study looking at the role of microRNAs in a clinical setting, as well as a second grant funding studies of the role of microRNAs in normal blood development. We hope to translate some of the exciting results of our previous work into testing whether microRNAs can predict treatment success in patients with AML.

2012 is an exciting year for our group which will see us expand on our recent results and investigate the role microRNAs are playing in normal and malignant bone marrow stem cell biology. Using funding from the LTN grant we will also begin a new project aimed at increasing the knowledge of molecular mechanisms leading to the recurrence of acute leukaemia in patients.

Arrow-HCC Research Scientist – Catalina Palma



Catalina joined Professor David Ma's team in September 2009 to work along with Mark Lutherborrow (former Arrow-HCC Research Scientist), Adam Bryant (former Arrow-HCC PhD scholar) in the study of the genetic regulation of leukaemia. Catalina has focused her research on the role of small regulatory genes (microRNAs) in Acute Myeloid Leukaemia. Using genetic manipulation technology, Catalina has found evidence showing how these genes contribute to the uncontrolled growth and inability of leukaemic cells to mature and die. The aim of the team is to pinpoint the exact action of these genes resulting in leukaemia and the knowledge gain will advance the diagnosis and treatment of the disease.

Over the last year the team has had their research accepted for publication in the Molecular Cancer journal and they also published a review article detailing the role of microRNAs in the development of blood cells and their transformation into cancer. In 2011, Catalina, on behalf of the team, presented four papers at two prestigious conferences: the Combined HAA meeting in Sydney and the American Society of Hematology Meeting in San Diego, USA.

Catalina Palma



