



CANCER RESEARCH: ADVANCING THERAPEUTIC DRUGS

by Jennifer Nickel

The primary mission of the Auckland Cancer Society Research Centre (ACSRC) is the development of new drugs for cancer therapy. When the ACSRC was set up in 1956 there were relatively few cancer drugs available for use. Now there are many more, but as we learn more about the disease and its variability (the large number of different types, the varying responses different people have due to their individual genetic makeup, and the way an individual patient's cancer changes its nature over time) the need for new and more specific drugs remains high.

Drug development requires the close collaboration of people with many different skills; in biology, computer modelling, chemistry, pharmacology and oncology. It can also take many years to bring a new drug to the point of selection for clinical trials in patients, as this also requires setting up collaborations with commercial partners who can take on the considerable expense, and build on the basic research funded by the Cancer Society. ACSRC Director Prof Bill Denny commented "It is therefore very pleasing to report that, due to the coincidental completion of several projects, the ACSRC currently has three new cancer drugs selected for patient trials: SN30000, SN32807 and SN33597".

SN30000 is a bioreductive drug that is activated into a cell toxin in regions of tumours that are low in oxygen, such as when tumour growth outpaces blood vessel formation. Its structure is based on an earlier drug of the class (Tirapazamine), but with better distribution properties and improved potency. SN30000 was recently renamed CEN-209 and taken up by the startup company Centella for formal preclinical development. The aim is to commence Phase I clinical trials in 2012.

Did you know...

- The ACSRC was the first laboratory in the Southern Hemisphere to discover, trial and bring an anti-cancer drug into clinical use.
- Since its inception in 1956, the ACSRC has published nearly 1,300 papers in international scientific and medical journals and filed more than 120 patent applications for new anti-cancer drugs.
- In 1968, the annual budget for the ACSRC was \$28,500.
- The ACSRC celebrated 50 years of cancer research in 2006.
- The Centre has grown to include over 80 staff under the direction of world-respected authorities, Professors Bill Denny, Bruce Baguley and Mark McKeage.



New drug candidates being assayed for purity in the ACSRC

SN32807 is a novel hypoxia selective prodrug that releases a kinase inhibitor. This lead compound is the first of a new class, and has recently been renamed PR-509 as Proacta Inc has taken it forward into a collaborative agreement with Yakult Honsha Co Ltd for further research, development and commercialisation.

SN33597 is a PI3K (enzyme) inhibitor which has been renamed PWT33597 by the drug development company Pathway Therapeutics Ltd. It was formally selected for clinical development and the company has achieved funding to progress the drug into the clinic this year. In many cancers, PI3 kinases are present at much higher levels than normal and/or are mutated, making them a great potential cancer and inflammation therapeutic target.

In rare cases where our expertise can be applied to other disease areas of need we will do so. Thus, when the Global Alliance for Tuberculosis Drug Development approached the ACSRC to develop an improved version of one of their new drugs, over 1,000 analogues were made and one (SN31354) has also recently been selected by them as a clinical candidate. The Drugs for Neglected Diseases Initiative has also recently become very interested in this class of compounds, and has selected SN34155 to trial against the hard-to-treat tropical parasitic disease leishmaniasis.

INSIDE THIS ISSUE

- HEALTH PROMOTION TEAM'S SUCCESSFUL YEAR
- THE 'RELAX' CD
- RELAY FOR LIFE CELEBRATIONS

From the CEO



I'm sure none of us need reminding of the terrible events that have occurred recently in both Christchurch and Japan. The earthquake rebuild will dominate much of our country's agenda for a long time to come. Within the Cancer Society family we have been affected. While treatment for cancer patients in Christchurch has been able to continue largely unabated, the services provided

by the Cancer Society have been severely hampered. In the immediate aftermath of the earthquake, the other regions of the Cancer Society across New Zealand pledged their support, both for their colleagues and for those with cancer who had been dealt a double blow. As a result I am pleased to report that our organisation in Christchurch is now recovering slowly.

In the Auckland and Northland regions we continue to work tirelessly to reduce both the incidence and impact of cancer. A recent highlight has been in the cancer prevention area of tobacco control. Many organisations, including the Cancer Society, made submissions in 2010 to two key Government processes focusing on tobacco and the harm it causes. A number of you provided submissions for this process as well and they have helped to deliver an outstanding outcome. Shortly we will see legislation that will remove the ubiquitous marketing displays of tobacco products in dairies and other retail outlets. In addition we welcomed the Government's announcement that it has set a goal of New Zealand becoming Smokefree by 2025. Our focus now turns to ensuring this objective becomes a reality within this timeframe.

Regards, John Phone: 09 308 0173 email: jloof@akcansoc.org.nz

Celebrating our 2010 Health Promotion achievements

People often think Health Promotion is letting you know about things that increase cancer risk – such as lying in the sun, smoking, unhealthy eating and not exercising. The reality is that despite knowing these things are unhealthy, some people still do them. Health Promotion goes beyond awareness to create changes that impacts many communities.

The Health Promotion team at the Cancer Society works together with policy makers such as the Auckland Council and MP's, to respond to cancer prevention areas e.g. tobacco, skin cancer, physical activity and nutrition. We work with them to make decisions that can improve the health and well-being of our communities across Auckland.

A number of our successes from the past year have been a result of working effectively in partnership with key organisations that have venues or facilities where families go. Research tells us that by making these places Smokefree, it helps children to see less smoking which makes them less likely to start. We also know that once children start at the average age of 14 years old, it is very difficult to quit.

These are some of the changes you may have seen in your community as a result of the work our team have done this year:



Auckland Zoo is completely Smokefree

If you have visited the Zoo recently, or been to a Zoo music concert you will have noticed it is Smokefree. The Health Promotion team worked with the Zoo on this policy which means that 650,000 visitors each year will have a Smokefree experience.



Auckland Regional Parks go Smokefree

The Auckland Council is currently working on the implementation of this new policy and it is a significant one for the region. It means that 27 regional parks, 40,000 hectares and

five million visits to regional parks every year are now Smokefree.

Mt Smart Stadium is completely Smokefree

The public support for this move has been overwhelming and is now in place for all users of the stadium. When you attend your next concert or Vodafone Warriors game you will not have people smoking around you or your children. The U2 concert held weeks after the decision was made meant that tickets were printed informing concert goers of the change, positively impacting on the concert experience for the 40,000 attendees.



Cigarettes will be moved out of sight in retail stores

Our submission was one of many that supported this move; the only opposition came from the tobacco industry and those linked to it. Our Northland Health Promoter worked with Northland retailers who have already moved tobacco out of sight with no impact on sales. Thanks to all who submitted – with your help and our template submission, 698 submissions from our supporters showed the high level of support for helping to achieve a reduction in our children starting to smoke. Our efforts also increased support for the legislation from 56% to 85%.

The Government has stated that NZ will be Smokefree by 2025

It is fantastic that the Government has now announced their intention to move towards a Smokefree New Zealand. This is something that our Health Promotion team and many other people in our communities have been recommending to MPs and made submissions on. While the Government has supported the overall goal of Smokefree by 2025, the roadmap of how to get there is missing from their response and is a critical part of achieving this goal effectively.

2011 will be another year with continued successes in reducing the incidence of cancer for Auckland and Northland – keep an eye out for the Health Promotion work we are doing in future NEWSscan issues.

Ki A Ora Ngatiwhai Living Well pilot

The pilot that was outlined in the last issue of NEWSscan unfortunately did not proceed due to the lack of registrations. The Ki A Ora Ngatiwhai team will be attending a debrief meeting at the Cancer Society National Office with the sponsors of this pilot and two providers who also took part, to discuss what enabled them to recruit and to establish if this could be tried again in Northland.

Carers also need a helping hand

Recent research has shown that a person caring for someone who is terminally ill may experience the same pattern of well-being and distress that the patient is going through. A Scottish study of lung-cancer patients and the people looking



after them found that their carers often felt they were sharing the illness. "Carers, like patients, often felt they were on an emotional roller coaster, experiencing peaks and troughs at key times of stress and uncertainty," writes Professor Scott

Murray on bmj.com. He says there should be more practical and psychological support for carers, especially at four main times: at diagnosis, at home after initial treatment, at recurrence and during the final stages of illness.

The Cancer Society's Supportive Care services understand this need which is why we place a large emphasis on providing support not only for patients but for their supporters too. Supporting someone with cancer can be both a rewarding and difficult time. Support people need to find a balance between caring for their loved ones and for themselves.

Our Counselling and Psychology service hosts a group programme, 'Support for Supporters,' that acknowledges the valuable and complex role of caring for someone with cancer. In the group, supporters are invited to share their experiences with others and reflect on their own self care while learning new strategies. For more information about this group programme, call the Cancer Society Supportive Care office on 09 308 0168 or email support@akcansoc.org.nz

Source: BMJ 2010; 304: c2581 doi: 10.1136/bmj.c2581.

COOK'S LOOKOUT ANOTHER SMOKEFREE FIRST FOR NORTHLAND

On a ridge-top in Paihia in the Bay of Islands is the only completely Smokefree motel in Northland and the North Island.

Many motels promote themselves as 100% Smokefree, meaning that all their rooms are Smokefree. Some motels may include room balconies as part of their Smokefree area but most motels will still allow smoking in outdoor areas. Cook's Lookout Motel is completely Smokefree indoors and outdoors.



Norm and Shelagh Castle stand firm on Smokefree

Norm & Shelagh Castle purchased Cook's Lookout Motel eight years ago and did not permit smoking in their units. They found many non-smoking guests complained about the smell of smoke from smoking guests so completely Smokefree was the way to go.

The motel has a number of large signs on site stipulating 'No smoking anywhere on this property' and it is advertised on their website, their brochures and guests are advised on arrival too.

The Cancer Society Northland has acknowledged Norm and Shelagh's commitment to showing leadership and creating an effective Smokefree policy with the presentation of a framed letter of recognition.

Revamp of our Counselling and Psychology group programmes

At the Cancer Society Auckland, we understand how important support is during a person's cancer experience. In order to meet the increasing demand for support we have reorganised our Counselling and Psychology group programmes to enable people with cancer, their family and supporters easy entry to the free talks and groups described below.

Coping with cancer: group programmes

Many people find it helpful to explore experiences with others in a similar situation. Our psychologists lead a range of groups focusing on issues such as stress management, support for supporters and moving on with life after treatment.



Coping with cancer: tips and tools

Many people have told us they wish they had known earlier about our series of free talks on riding the emotional rollercoaster, managing stress, sleeping easy and super-sizing your support. These tips and tools programmes are available for people with cancer and their supporters.

For more information on these talks, or the range of group and individual support offered by the Counselling and Psychology service, please call 09 308 0168 or 0800 CANCER (226 237) or email support@akcansoc.org.nz

The Relax CD

Psychologists at the Cancer Society Auckland have produced a CD featuring a series of relaxation and mindfulness exercises designed to encourage physical relaxation, deep breathing and a sense of peacefulness and calm.



Practised regularly, these exercises can enhance emotional and physical well-being and help people through their cancer experience.

The Relax CD is available to patients through their Liaison Nurses and copies are also held in the Cancer Society Auckland library. The CD will be a great help in our efforts to provide timely assistance in different ways and to respond to the increasing number of people seeking help. The CD is kindly supported by the Sir John Logan Campbell Residuary Estate.

For cancer information and support phone the
CANCER INFORMATION HELPLINE
0800 CANCER (226 237)

AUCKLAND CANCER SOCIETY RESEARCH CENTRE Part of the toolkit: Molecular modelling

One of the various tools that medicinal chemists and biologists at the Auckland Cancer Society Research Centre (ACSRC) can utilise in their efforts towards the discovery and development of new candidate drugs for clinical trial is 'molecular modelling'.

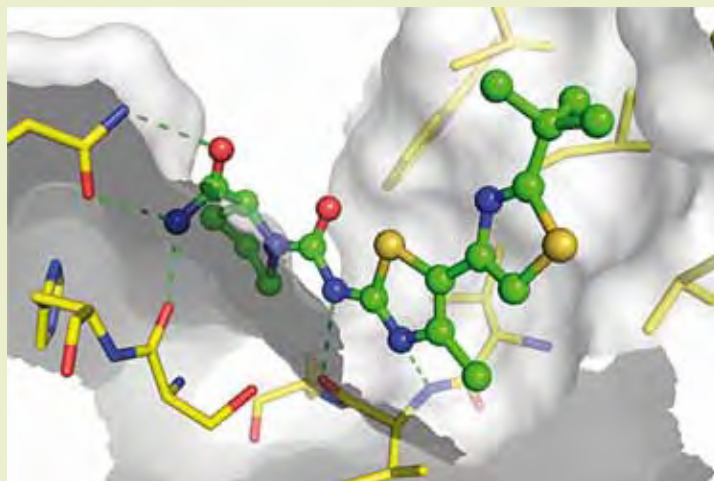
Molecular modelling is a computational technique used to describe molecular structures and infer about their behaviour based on physical and chemical properties. Dr. Jack Flanagan, head of the Molecular Modelling Group at the ACSRC, states "We use a wide range of three-dimensional computer modelling techniques across many projects to show how drugs might interact with their target molecules. It allows us to visualise what the potential structures of drugs and target compounds look like and how to modify them".

Often, cancer cells rely on the expression of certain enzymes. Scientists at the ACSRC are working on identifying these enzymes and designing specific drugs to inhibit them. One example of this approach is the work on phosphoinositide-3-kinases (PI3 kinase) enzymes, which are often mutated or over-expressed in cancers. Developing very specific inhibitors, which do not affect other processes in the body, is a complicated challenge.

Molecular modelling turned out to be a very useful technique in this project. In this case other active drug structures were known and therefore allowed for the target enzyme structure to be deduced, which could then be used to virtually screen many chemical arrangements of possible novel drug structures.

The science (or art) of molecular modelling, when utilised together with information from the literature and practical laboratory research, can save researchers much time and resources in the quest for identifying novel drugs.

by Jennifer Nickel



The PI3 kinase inhibitor A66 (white) bound in the enzyme site.

The Auckland Cancer Society Research Centre (ACSRC) was founded by the Cancer Society in 1956. It has over 80 staff and an international reputation as a leading anti-cancer drug development laboratory. To date the centre has brought eight new drugs to clinical trial and has had work published in over 1,300 scientific papers.

Your donations and support help the Cancer Society Auckland contribute around \$2.5 million to the ACSRC each year to ensure they are able to continue this important work.



Shaylee Wichman

In memory of Shaylee Wichman

A very generous gift of \$8,000 was presented to the Society for cancer research by Suzanne Wichman in memory of her daughter Shaylee who sadly lost her battle with cancer. The Cancer Society Auckland would like to thank the Wichman family for such a special donation in Shaylee's memory.



Cancer Society's CEO and staff member Carole Spargo with Suzanne Wichman and Alison Crabbe

If you would like to support the Cancer Society please complete this section, detach and return to the Cancer Society
Yes! I want to support the Cancer Society Auckland

Cancer Society of New Zealand Auckland Division Inc.
PO Box 1724, Shortland Street, Auckland 1140

Name:

Address:

Postcode:

Email:

\$35 \$50 \$100 \$250 \$500 Other

Cheques made payable to Cancer Society Auckland Division Inc. (or)

Please debit my: Visa MasterCard Amex

Name on card: (please print):

Signature: Expiry /

Please send me information on leaving a bequest in my will to the Cancer Society Auckland

The Cancer Society is entirely reliant on donations and bequests to fund a wide range of free services to help people affected by cancer and work towards a future with less cancer. We value the time and thought given by generous individuals and groups to raise funds to help support our work. Here we acknowledge just some of the many inspiring supporters.

The Lion Foundation grant helps reduce the impact of cancer

The Divisional Board, management and staff of the Cancer Society Auckland are tremendously grateful that The Lion Foundation has awarded the Society a grant of \$400,000 to assist with salaries for the Society's 13 Community Liaison Nursing Service nurses in Auckland and Northland for the coming twelve month period.

The Community Liaison Nursing Service is provided free of charge to people who have a recent diagnosis or relapse of cancer to support them through their cancer treatment. During the past year it had been necessary for the Society to employ a new Community Liaison Nurse to help meet the 28% increase in patient referrals for the period ending 31 December 2010. During this period the service received 2,187 referrals and the nurses carried out 5,623 patient visits.

From left: John Loof, CEO of the Cancer Society Auckland, Don Judkins, Community Ambassador for The Lion Foundation, Jonny Gritt, General Manager Grants & Communications and Philip Hope, Manager Fundraising.



Wedding bells

Viv and Brian Hodgson recently celebrated their marriage. As both Viv and Brian have been touched by cancer, they asked their guests to donate to the Cancer Society in lieu of wedding gifts. This selfless and generous gesture raised \$535.00 for the Cancer Society.

Celebrating 60

Sharlene Penman is a remarkable woman; she turned 60 last year and chose to celebrate this milestone by organising a series of fundraising events. Sharlene is an accomplished musician and piano teacher and as such, she decided on a music theme for all three events. The first event, a multiple piano recital was held in August. A family music and dance evening was celebrated in November and a jazz concert featuring Sharlene's son Matt was performed at the Auckland Town Hall in December. Sharlene's fabulous effort has raised an amazing \$4,070.29 for the Cancer Society.



Sharlene Penman and Cancer Society's Carole Spargo

Clip-off

On 1 November 2010, five generous individuals, including hospital staff and a member of the public, participated in a 'Clip For Cancer' fundraiser for the Cancer Society. Around 100 people gathered in the Middlemore Hospital foyer for the event which included a Karakia performed by the Kaumatua.

Jenny Hunt, Acute Pain Nurse Specialist for Anaesthetics, organised the event and was one of the five who made the decision to shave their heads for charity. Jenny says the experience was definitely an emotional one, but she received great support from family, friends and colleagues. The 'Clip For Cancer' crew received a great response, raising just over \$3,000 from all over New Zealand.

Triumph Motor Cycle Club fundraiser

The Triumph Motor Cycle Club Auckland Area held its 14th annual poker run in November. Funds were raised by motorcyclists paying an entry fee to take part in the poker run where they later came together for socialising and prizes. Glenn Mills did a great job organising the event and raised \$1,340 for the Cancer Society.



Glenn Mills

Making music for the Cancer Society

John Croft and Joanne Clayton are a musical duo called J-J Rhythm who perform musical gigs at private parties or club functions. Their songs are from the 1960's through to modern day. John and Joanne have performed free of charge at various RSA clubs to raise funds for the Cancer Society by way of patron donation. If you are interested to find out more about J-J Rhythm, contact John on 027 601 3555.

Swimming for fun

Ben Viall completed a harbour crossing swim of 2.8 kilometres from Bayswater on Auckland's North Shore to the Viaduct in downtown Auckland. He received sponsorship from family, friends and work colleagues and raised an amazing \$1,421.



Ben Viall

Read about more fabulous fundraisers on our website – www.cancernz.org.nz/divisions/auckland/help/our-supporters

Grants *The Cancer Society acknowledges the following organisations for their generous support*

- **BP vouchers for Volunteers** donated \$500 in petrol vouchers towards Volunteer Services.
- **A H Watson Charitable Trust** (administered by the Guardian Trust) granted \$5,000 towards Volunteer Services.
- **Barbara Florence Gillies Charitable Trust** donated \$2,466 towards Support Services.
- **John Ilott Charitable Trust** granted \$1,500 towards specialised counselling for children of a parent facing a cancer diagnosis.
- **J.R Lewis Charitable Trust** (administered by the Guardian Trust) donated \$2,500 towards patient information packs.
- **The Oxford Sports Trust** granted \$6,000 towards the Northland 2011 Relay For Life event.
- **NZCT** (New Zealand Community Trust) granted \$2,000 towards the Northland 2011 Relay For Life event and \$5,000 towards the North Shore Relay For Life event.
- **L W Nelson Charitable Trust** granted \$5,000 towards accommodation for people from Northland staying at Domain Lodge during their treatment.

RELAY FOR LIFE 2011

Did you know at Relay For Life 2011, there were over ...



210 Teams
3,800 Registered participants
500 Survivors and supporters
100 Staff and volunteers
\$480,000 raised

Auckland celebrated Relay For Life at Millennium Stadium on the North Shore and A&P Stadium in Pukekohe and in Whangarei at the Otaika Sports Park. The North Shore event had to be cut short by three hours on the last day, but despite the wind and rain, the participants remained positive and energetic to celebrate, remember and fight back.



The Relay For Life events raise much needed funds that help sustain the Cancer Society's wide range of free patient services. We would like to say a big THANK YOU to everyone who united in spirit to help reduce the incidence and impact of cancer.



The 2012 dates have already been set and planning is underway.

2012 Relay For Life dates

Mt Smart Stadium	18 – 19 February
North Shore	3 – 4 March
Northland	17 – 18 March
Kumeu	24 – 25 March

Next year will be even bigger as we have added to our Auckland locations where we will celebrate the inaugural Kumeu Relay For Life.

For more information or to register your interest, please email us at events@akcansoc.org.nz or call Maureen Miller on 09 308 0240.

Inaugural Domain Lodge Garden Party on World Cancer Day

Friday 4 February saw the inaugural Domain Lodge Garden Party event in aid of World Cancer Day. The event was just one of 241 across the world that took place to raise awareness for cancer.



Cancer Society's John Loof, Beth Jenkinson, Murray McCormick and Hon Rodney Hide

Guests included funding organisations, sponsors, major donors and lifetime partners who came together to hear a heartfelt speech from cancer survivor Julia Stiles. Our grateful thanks go to Julia for sharing her experience of her cancer journey with us all.

Guest speaker Hon Rodney Hide spoke about how the Cancer Society had convinced him to make a u-turn in his opinion on tobacco sales displays and fight for government legislation requiring retailers to put cigarettes out of sight.

NZ House and Garden Tours 2011



The success of last month's NZ House & Garden Tours shows that the spirit of giving is very much alive and well, with thousands of people buying tickets to the nationwide event. \$200,000 was raised for Look Good Feel Better and the Cancer Society.

More than 5,000 people from across the country got a sneak peek inside a selection of the most spectacular homes in Auckland, Tauranga and Wairarapa during the month of March. Sadly the Christchurch leg of the tour had to be cancelled due to the Canterbury earthquake. In support, the Cancer Society and Look Good Feel Better are donating a share of the ticket proceeds to the Canterbury/West Coast division.

CALLING ALL GOLFERS



The Cancer Society Auckland Charity Golf Open will be held on Friday 18 November at the Grange Golf Club Papatoetoe. To register, phone 09 308 0494 or email events@akcansoc.org.nz

The Hikurangi Golf Tournament will be held on Daffodil Day Friday 26 August in Northland. All proceeds will go to the Cancer Society Northland. To register, call Hugh on 09 433 8055.

Volunteers needed for Daffodil Day

This year Daffodil Day will be held on Friday 26 August and we need volunteers to assist with the delivery of our street appeal.

Please help the Cancer Society to reduce the impact of cancer and volunteer your time on Daffodil Day.

To volunteer, call our Special Events team on 09 308 0240 or email mmiller@akcansoc.org.nz (Auckland) or pscrooby@akcansoc.org.nz (Northland) or register online at www.daffodilday.org.nz

HELP THE CANCER SOCIETY BY:

Making a donation / becoming a volunteer / making a gift in your will

Contact us today to find out how you can help make a difference in the lives of people affected by cancer

PLEASE NOTE THE CANCER SOCIETY DOES NOT COLLECT DOOR TO DOOR

Cancer Society of New Zealand Auckland Division Inc.

Auckland
Domain Lodge
1 Boyle Cres, Grafton, PO Box 1724,
Shortland St, Auckland 1140
Phone. 09 308 0160
Fax. 09 308 0175
Email. info@akcansoc.org.nz

Northland
Daffodil House
73 Kamo Rd, PO Box 8100,
Kensington, Whangarei 0145
Phone. 09 437 5593 Fax. 09 437 5602
Tollfree. 0800 366 066
Email. northland@akcansoc.org.nz

OUR GRATEFUL THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR GENEROUS CONTRIBUTIONS



The National Bank