ANNUAL REVIEW 2016



#### DR LOUIS VERMEULEN The Netherlands

One of a group of experts who agreed that bowel cancer should be classified as four entirely distinct diseases.



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Worldwide Cancer Research is a member of the association of medical research charities (AMRC). AMRC members aim to follow the highest standards of accountability in medical and health research funding, and are required to use independent peer review in the allocation of all grants and awards for research.

## Who we are

Worldwide Cancer Research is a charity with an innovative global strategy specialising in funding the most novel and exciting cancer research projects from around the world.

We fund early-stage and translational research which we believe will have the greatest potential to make a fundamental difference to our understanding of cancer.

Over the last 37 years our committee of eminent scientists – specialists in their respective fields – has helped us award almost £200 million worth of pioneering research at some of the world's best research institutions. As a result we have been instrumental in some significant breakthroughs across a wide range of cancer types. Over more than three decades, we've supported some of the most revolutionary thinking in cancer research. From identifying the role of the most important gene in cancer, p53, through to breakthroughs such as helping to establish the first link between faulty metabolic processes and cancer, leading researchers to identify the anti-cancer potential of the diabetes drug metformin. Worldwide Cancer Research scientists helped sow the seeds to outsmart cancer for people today and future generations to come.

But the reality is that research which recognises great change takes time, commitment, ingenuity and risk. And it takes investment. We need your help to realise the next generation of new, innovative ideas; to support tomorrow's scientists: the pioneers and future Nobel prize winners who hold the keys to unlocking cancer, for the benefit of us all.

# Future proof



Over the last 37 years Worldwide Cancer Research has built a reputation for funding some of the world's most important early-stage research into any type of cancer. Research that is helping more and more people survive cancer today.

I'm therefore pleased to report that Worldwide Cancer Research's charitable activities over the last financial year resulted in a further commitment of £8.3 million to pioneering research across 13 countries. We also funded existing ongoing projects, to the tune of over £9 million paid to grant holders during the year.

And as long as cancer still kills, our sights will remain firmly fixed on continuing to fund the next generation of cutting edge research all around the world. The developments we have seen so far will be built on and surpassed by the innovation, new thinking and exciting novel ideas still to come over the next 25 years. But only if the funding is there. Building a sustainable charity, able to continue investing in a pipeline of world-class research, is therefore paramount. We play a unique role within the cancer research funding landscape. No one else shares our ambition to fund the best early-stage and translational research the world's scientists have to offer – in their own countries, in their own state-of-the-art labs.

#### £8.3M committed to pioneering research

#### countries received funding

**£9**M paid to ongoing projects

# ng our charity

However, it is fair to say that the charity has undergone unprecedented levels of change over the last year, and with change inevitably comes new risks and uncertainty. It is disappointing therefore to record a further fall in fundraising income as we continue to rely on declining income streams whilst new programmes gain traction.

The difficult decision was therefore taken by the Trustees to cancel two grant application rounds which were scheduled for funding decisions in September 2016 and March 2017. Whilst dispiriting, I do believe this action was a prudent one and will protect the sustainability of the charity. The Trustees recognise the charity is still in a transitional phase but do believe that the ongoing strategic plans to diversify the income streams and develop new ways of engaging with supporters will come to reverse the current trend.

Fundraising costs were reduced in the year by 21%. This reflects the continued focus on reducing administration and support expenditure while not compromising on the good governance of the charity. Further progress was made in the strategic development of the new fundraising programmes. Internal system improvements and up-skilling staff have continued to ensure our people and processes are developed to enhance supporter relationships and partnerships and help future-proof the charity to cope with the changing wider fundraising and legislative landscape.

I wish to thank all members of staff for their continuing commitment. It is thanks to all of them that the charity remains an inspiring place to work. There is no doubt that our research kick-starts future developments that one day our friends, family or ourselves may rely on. Heartfelt thanks are therefore above all given to our thousands of supporters. Every contribution is valued, no matter how large or small.

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JAMES C MURRAY, MA LLB DL Chairman

## With risk comes reward

Charities are not set up to stand idly by. Our core purpose is to act. To create the change we all need.

Back in 1979, Dr Colin Thomson set up this charity to support pioneering new thinking in understanding cancer with the sole purpose of outsmarting the disease for future generations to come. Dr Colin Thomson was a risk taker. As a researcher he understood that the path of research is never clear. At the very beginning of a new line of inquiry, the next step often remains shrouded in fog. And it's not always the route from A to B that was predicted that we end up following. To fund research therefore is to accept a certain amount of risk, to know that there can never be a guaranteed return on the investment. From our early beginning, Worldwide Cancer Research has recognised that the best you can do is to support great ideas from great scientists. Give them the freedom to unleash their imagination, help them uncover new understandings of cancer and trust that the science will lead us to new medical advances.

A great example of this is olaparib. The first in a brand new class of cancer drugs called PARP inhibitors and the first real hope for improving ovarian cancer survival in years. It works by exploiting a defect some types of cancer have in their ability to repair DNA. But before starting to develop olaparib, scientists first needed to spend years working out how DNA can be damaged and subsequently repaired in our cells, and how these processes can go wrong in cancer. These researchers might have hoped, but they could not have foreseen that their work would ultimately lead to olaparib. Worldwide Cancer Research funded some of this early background work and without this, olaparib would not exist. Yet much of it was funded without the explicit intent to develop a drug later on. There was just no way the researchers could guarantee their work would lead to a new cancer treatment years later.

Taking risks in funding early-stage, pioneering and brave research is what Worldwide Cancer Research does. It is what we are good at. And the relentless spirit of Dr Colin Thomson: to make change happen, to ask for support to fund the world's new thinking, has never been more to the fore than today. Fortunately, his passion to make this change happen has not been diluted.

As the Chairman's report highlights, we are in a challenging financial position at Worldwide Cancer Research. We need to be bold about our fundraising investment decisions and how we operate. We need a healthy and diversified fundraising portfolio and this requires testing and taking risks. Starting small, testing quickly, learning and adapting is vital until an idea works. The advantage of being a small team means we can be innovative and nimble.

Years ago we funded Professor Dario Alessi from Dundee University, whose early work on the use of the diabetes drug metformin in cancer renewed the world's interest in the drug. He recently told me that if we hadn't taken a chance and chosen to think outside the box, "... nothing would have happened in this area. No other bit of funding [he] has ever received has achieved quite so much."

We need to take this bold approach to funding the research and apply it to our approach to fundraising. For without more supporters – people who understand that with risk comes reward – we will not see the changes we all need in the way we will beat cancer.

Change happens when a group of brave and passionate people identify a problem and commit that something must be done. Worldwide Cancer Research has that passion and I'm sure Dr Thomson would testify to that.

DR HELEN RIPPON Chief Executive



DR FLAVIO CURNIS Italy

Using gold nanoparticles to boost the effectiveness of his cancer therapy.

# A year of great scientific discoveries

Our mission is to support high quality scientific research aimed at improving the prevention, diagnosis and treatment of all cancers.

To do this we fund diverse and unexpected research projects, anywhere in the world. And this financial year has seen a plethora of game-changing findings come out of this investment and even a new drug for patients.

### A REVOLUTION IN BOWEL CANCER DIAGNOSIS

In October, Dr Louis Vermeulen in the Netherlands was part of a group of experts who agreed that bowel cancer should be classified as four entirely distinct diseases. Each type has unique molecular and genetic characteristics, meaning they behave differently and do not respond to the same treatments. This revelation will enable researchers to understand each type in more detail and to identify new treatments, with better results for patients.

### NEW DRUG FOR WOMEN WITH OVARIAN CANCER

In December, olaparib was approved for use on the NHS in England and Wales and by April, ovarian cancer patients were receiving the drug. Worldwide Cancer Research were involved in the early stages of olaparib's development. We gave grants to Professor Steve Jackson in England for a series of projects studying DNA repair. He went on to set up a company called KuDOS Pharmaceuticals Ltd (later bought over by AstraZeneca) which developed olaparib, a drug targeting DNA repair. We also funded Professor Alan Clarke in Wales whose work supported the case for using olaparib in cancers with BRCA mutations and helped olaparib on its way to clinical trials.

#### HOW GOLD IS IMPROVING CANCER THERAPIES

In May, Dr Flavio Curnis and Professor Angelo Corti in Italy demonstrated that tiny gold nanoparticles could potentially boost the effectiveness of their prototype cancer treatment. The team are now working on improving the effectiveness and safety of the treatment before testing it in patients.

### THE SECRET OF INDESTRUCTIBLE CANCER CELLS

In August, Dr Nabil Djouder, in Spain, identified a protein 'switch' that allows seemingly indestructible cancer cells to survive with no blood or energy supply. This provides important clues that could help researchers understand how cells resist dying when treated with drugs that starve the tumour, and how cancer cells survive in the centre of a tumour mass where barely any oxygen or nutrients can reach them.

Dr Djouder is now working on understanding this switch more fully and investigating if there is a safe way to turn it off.

#### REPURPOSING A BLOOD PRESSURE DRUG TO TREAT CANCER

As the financial year ended in September, Professor Michael Seckl, in England, revealed that a common blood pressure drug may make a type of lung cancer treatment more effective. Although these are early-stage findings, this discovery could potentially provide patients with more treatment options and save money for the NHS in the future.

A year of great scientific advances and discoveries, adding to the global effort to ensure that in the future, no life is cut short by cancer.

DR ALICE SORAGNI USA

Developing new treatments for women with ovarian cancer by focusing on the p53 protein.

# Funding the next generation

Dr Alice Soragni, University of California Los Angeles (UCLA) was awarded almost £200,000 to study ovarian cancer, an aggressive disease that claims thousands of lives each year.

After receiving the grant, she contacted us to explain what the support means to her.



#### THE IMPORTANCE OF RESEARCH

Much progress has, and is, being made in cancer therapy, and this is due in no small part to funding from charities such as Worldwide Cancer Research. Despite the progress, too many lives are still lost to cancer each and every day. We need to do better. And the only way is to continue funding basic and translational research, like Worldwide Cancer Research do. Scientists need support to explore innovative, high-risk ideas that may open novel and unexpected therapeutic avenues as well as propel advancement of promising leads to the clinic.

#### A LIFELINE FOR THE NEXT GENERATION

Young investigators, like me, transitioning to independent group-leader positions, are in a particularly vulnerable spot and often have access to very few funding opportunities. It can be difficult and isolating to start anew, but having Worldwide Cancer Research invest in me and support my research just makes the transition so much easier; in a way, we are going to hit the ground running.

#### DEVELOPING NEW OVARIAN CANCER TREATMENTS

My lab aims to develop novel therapeutic approaches to ovarian cancer by targeting the crucial protein p53. It protects cells from becoming cancerous. As such, in order to proliferate out of control, cancer cells must find a way to inactivate p53. Most often, this is achieved through mutations, which are very common in ovarian cancer. Many mutations inactivate the protein by helping p53 to lose its shape and 'clump up' in the form of protein aggregates.

Our Worldwide Cancer Research funded project focuses on targeting p53 aggregation in ovarian cancer stem cells, which are believed to be involved in the initiation of cancer. In our quest for a new treatment, we developed a peptide, called ReACp53, which has shown great promise so far. In particular, we are investigating if, and how, ReACp53 makes ovarian cancer stem cells more susceptible to traditional therapies.

#### THE DIFFERENCE WORLDWIDE CANCER RESEARCH MAKES

By supporting our work, it propels our research efforts that will facilitate taking ReACp53 into clinical trials in patients in the near future.

We would not be able to pursue this line of research without Worldwide Cancer Research funding. I am truly thankful to all staff and supporters; it is humbling to be part of the family. Many of us, me included, are affected by cancer in one way or another, whether directly or indirectly.

Research is our way to try to make a difference. This would not be possible without your enthusiastic and brilliant support so I just wanted to say – thank you.





#### Our year in numbers: **FORMULATION EVALUATION EVALUA**



#### AT THE YEAR END, OUR ACTIVE RESEARCH PORTFOLIO COMPRISED:

20 Countries





#### CANCER TYPES

Adrenocortical Cancer x 1 Bladder Cancer x 1 Brain Tumour x 2 Breast Cancer x 4 Colon and Rectal Cancer x 2 Kaposis Sarcoma x 1 Leukaemia (including: Acute Lymphocytic Leukaemia, Acute Myeloid Leukaemia, Chronic Lymphocytic Leukaemia, Chronic Myeloid Leukaemia & Hairy Cell Leukaemia) x 2 Liver Cancer x 1 Lung Cancer (including: Mesothelioma) x 1

### Five year view:



Melanoma x 3 Non-Hodgkin's Lymphoma x 1 Oesophageal Cancer x 1 Oral Cavity & Lip Cancer x 1 Ovarian Cancer x 1 Pancreatic Cancer x 2 Prostate Cancer x 1 Relevant to all cancers x 17

# The Siemens Big Summer Cycle

1,500 miles 100 events 15 days 6 countries

In August 2015, Ian Thompson and his ambitious team at Siemens based in Poole, England set out to raise £45,000 cycling across Europe for charity. In the end a combination of the cause they championed and the network of Siemens employees

they galvanised caused their fundraising to skyrocket, almost doubling their overall donations.

Siemens said that Worldwide Cancer Research was the "ideal partner to do it with."

Here Ian Thompson



1 UNDERSTANDING CANCER MECHANISMS

> ICG, Lisbon, Portugal **SCIENTIST** Dr Colin Adrain

#### PANCREATIC CANCER

INSTITUTION CNIO, Madrid, Spain **SCIENTIST** Dr Núria Malats

OF LIVER CIRRHOSIS TO LIVER CANCER

Institute for research in biomedicine, Barcelona, Spain

DIVIDING

INSTITUTION Institute of Molecular Genetics, Montpellier, France SCIENTIST Dr Daniel Fisher







IAN THOMPSON Head of Strategy and Planning at Siemens

## An event two years in the making

Building on the success of a UK based cycling event the previous year, in the Summer of 2015 our team at Siemens started to develop a fundraising concept called the 'Big Summer Cycle 2016'. We set ourselves an ambitious fundraising goal: £45,000 for three international health related charities including Worldwide Cancer Research.

Worldwide Cancer Research was chosen because of their international footprint, their health related focus and their desire to make a difference. As a company, Siemens has a passion for innovation and creating sustainable value: for our customers, for society and for each individual. Siemens calls this 'Ingenuity for life' and this fits well with what Worldwide Cancer Research stand for. Siemens, the Big Summer Cycle and Worldwide Cancer Research therefore seemed to me to be a great match and as our relationship grew during the planning of the event, we were convinced that we had picked a perfect partner.

### A cause to inspire everyone

As our plans came together for the route and we heard the personal stories of families, friends and colleagues who were touched by what we were doing, our ideas and fundraising ambitions grew. We decided to cycle across different countries and visit other Siemens sites, which enabled us to raise money from employees who wanted to support us but were not able to join in for the whole route.

Four main riders safely negotiated the route from Lisbon, through Portugal, Spain, France, Belgium, the Netherlands and the UK, involving local and international riders from across the company taking part every day. Training and fundraising events were organised on every site we visited, not only helping us to smash our fundraising targets but bringing employees and teams together in support of a common goal. As we visited each location, it was amazing to experience welcome events and see the positive energy generated by what we were doing. Many of our colleagues have now become friends.

Over 1,000 employees took part via static bikes and organised rides and over 100 different fundraising events including cake sales, skittles, quiz nights, raffles and book sales were organised across Europe. In all we were delighted to raise over £80,000.

## Seeing Worldwide Cancer Research scientists in action

When we finished the event we got an opportunity to see the type of research our fundraising would support, with a visit to Southampton University Hospital to meet the amazing Professor Graham Packham and his team, who are researching Non-Hodgkin's Lymphoma.

It was at this point that we really appreciated how important our fundraising was and how vital the work of Worldwide Cancer Research is. The work that the charity fund is bold and courageous, funding revolutionary and innovative research projects that will make true changes in the way we diagnose, treat and cure cancer in the future.

I am so proud that the Big Summer Cycle will make a real impact. To Siemens, it leaves a positive benefit and amazing memories with all those involved. To loved ones we have lost to cancer, it shows that we remember them. To friends, family and colleagues who face their own challenges – it shows we care, and finally to Worldwide Cancer Research – it shows our trust that you can create a different and better tomorrow.

IAN THOMPSON Head of Strategy and Planning at Siemens

5 HOW TO CONTROL PROTEINS

> INSTITUTION EMBL-GR, Grenoble, France SCIENTIST Dr Daniel Panne

6 MAPPING CANCER'S GENETIC LANDSCAPE

> INSTITUTION INSERM, Paris, France SCIENTIST Dr Valentina Boeva

7 HOW DOES CANCER HIDE FROM THE IMMUNE SYSTEM?

INSTITUTION Institut de Duve, Brussels, Belgium SCIENTIST Professor Pierre van der Bruggen 8 HOPE FOR KAPOSI'S SARCOMA PATIENTS

> INSTITUTION University of Leeds, England SCIENTIST Professor Adrian Whitehouse

Thank you to all our corporate partners and fundraisers for their support this year. If you'd like to get your company involved with helping fund pioneering research around the world please get in contact with us on 0300 777 7910

GRENOBLE

ST. QUENTIN

FONTAINEBLEAU

DEN HAAG

BRUSSELS

NOTTINGHAM

CHIPPENHAM

POOLE

FINISH

NORTHAMPTON

STOKE POGES & FRIMLEY

PARIS

## Shaping the world ahead with what you leave behind

Last year, the charity received £1.2m through gifts left in Wills. For some of our supporters, donating through their Wills enabled them to make the biggest gift they had ever given to the charity.

These legacies will help the future of cancer treatment, improving chances of cancer survival for future generations by funding more much-needed research. That's a very powerful legacy to leave behind. Worldwide Cancer Research is actively encouraging people to consider this unique way of giving and last year for the first time used digital messaging such as Facebook and Twitter to reach new audiences.

The charity also launched a partnership with the National Free Wills Network, through which supporters of the charity can write or review a simple Will with a qualified solicitor, for free. If you have any questions or would like more information, please contact our Legacy Manager, Phae Jones on 0300 777 7910 or at legacies@ worldwidecancerresearch.org

We'd like to take this opportunity to say thank you to all of our supporters who have chosen to pledge a gift in their Will this year.

## Thank you

Thank you to everyone who has helped support our work over the last year. It's not possible for us to mention everyone but we would like to give particular thanks to our Scientific Advisory Committee who give their time, energy and expertise for free in the difficult task of deciding which research proposals we will fund and which we have to sadly turn away.

#### DR JOHN MAHER

King's College London, England (Chair) Leiden University, Netherlands (outgoing Chair) PROFESSOR EDUARD BATTLE Institute for Research in Biomedicine, Barcelona, Spain PROFESSOR CEDRIC BLANPAIN Université Libre de Bruxelles, Brussels, Belgium DR JAMES BRENTON University of Cambridge, England PROFESSOR AMPARO CANO Autonomous University of Madrid, Spain PROFESSOR PAUL COFFER University Medical Center Utrecht, Netherlands Erasmus University Medical Center, Rotterdam, Netherlands PROFESSOR DEAN FENNELL University of Leicester, England University of Nottingham, England University of Birmingham, England PROFESSOR AWEN GALLIMORE Cardiff University, Wales PROFESSOR MICHELLE GARRETT University of Kent, England PROFESSOR KAIRBAAN HODIVALA-DILKE Barts Cancer Institute, QMUL, London, England DR RICHARD JENNER University College London, England DR KIM JENSEN University of Copenhagen, Denmark

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PROFESSOR CHRISTINE WATSON University of Cambridge, England

We continue to value the generosity of all charitable trusts and organisations that support our pioneering research. Our special thanks go to the following who have made an immense contribution in 2016:

#### The Riada Trust

A M Pilkington's Charitable Trust The Holliday Charitable Trust Miss Isabel Harvey Charitable Trust Mrs Iris Noreen Setchell Charitable Trust The Dorothy Howard Charitable Trust The Gosling Foundation Limited The JTH Charitable Trust The Sym Charitable Trust The PF Charitable Trust The Eveson Charitable Trust The Eveson Charitable Trust Once again, many thanks to our agency partners. Their hard work, advice and creative thinking remains crucial to our success as a charity. Special thanks also to the Campaign Boards, our ambassadors, and to our corporate supporters for 2016:

#### Siemens

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