



van Geest Voice

The newsletter for supporters of the John van Geest Cancer Research Centre

Fundraising
round-up

VicFest

An idiots guide to Mass
Spectrometry

A warm welcome



Having been a member of the Board of Governors of the University for many years and Chairman for the last six, I am aware of the great work being done in the public interest across the University in many areas. None of these are greater than the cutting edge work being done at the John van Geest Cancer Research Centre.

Nottingham has a long and fine tradition of cancer research. This was enhanced by the original research grant from the John and Lucille van Geest Foundation and the fact that the running costs of the centre are supported by the University. However there is a constant need for new equipment and staff to maintain and enhance the rate of progress.

Virtually the entire population of the country has been affected by cancer in one way or another. Sometimes by having been diagnosed themselves, others by having someone very close diagnosed and treated. Work at the John van Geest Cancer Research Centre is focused on improving diagnosis and management of particular cancers by developing effective vaccines and immunotherapies to improve the survival rates and quality of life for cancer sufferers. This is why I chose, as Chairman of the Board, to also chair the Development Board of the John van Geest Cancer Research Centre. I wanted to try and lead a successful public fundraising campaign to enable the work there to carry on its growth from strength to strength.

We launched our campaign in spring of last year with a delightful concert with the London Philharmonic Orchestra at the Royal Concert Hall in Nottingham. We need to carry on our approaches to individual giving as well as our search for research grants and our applications to charities and trust funds whose aims are aligned to our own. If after reading this edition of the van Geest Voice you think you can offer us any support or leads to greater support I would be very glad to hear from you. Please direct your enquiries directly to me or through our Head of Fundraising, the ever energetic Sue Dewey OBE.

Thank you for your help so far and please ask yourself what further help or support you can give to enable Bob Rees and his colleagues to find even more out about overcoming this dreadful disease.

Best wishes.

Richard Bullock OBE
Campaign Chairman
Cracking the Cancer Code

New faces at the top table

The University has said goodbye to Professor Neil Gorman and to Sir Michael Parkinson and we welcomed both a new Chancellor and a new Vice-Chancellor to NTU last summer.

Mr Kevin Cahill OBE, the Chief Executive of Comic Relief – has been installed as the new Chancellor of Nottingham Trent University.



He succeeded Sir Michael Parkinson CBE, who retired as Chancellor in July, after six years and who has now taken up the role of Campaign Patron for Cracking the Cancer Code. Mr Cahill has been with Comic Relief since 1991, becoming the Chief Executive in 1997; in the intervening time the scale and influence of the charity has grown immensely, with Red Nose Day revenues increasing by 370%.

Coining the idea for Sport Relief in 2002, Mr Cahill has seen it go from strength to strength to raise more than £195 million so far.

Before Comic Relief, Mr Cahill was Head of Education at the Royal National Theatre from 1982 to 1991. Between 1989 and 1992 he was a member of the council of the Drama Centre. He was chair of the Gate Theatre for many years and has been a board member at the Young Vic.

Mr Cahill played a key role in the Make Poverty History and Live 8 campaigns and is president of America Gives Back, a US charity set up by Comic Relief in 2007. In 2007 he was awarded a CBE for services to charity.

Mr Cahill's position at NTU will involve him undertaking a number of important duties for the institution, including representing the University on special occasions and conferring degrees at graduation ceremonies.

Professor Edward Peck

has become the new Vice-Chancellor of Nottingham Trent University.



He was raised in Skelmersdale in Lancashire and attended Ormskirk Grammar School. He graduated from the University of Bristol with a BA in Philosophy in 1981. This was later followed by a Diploma in Personnel Management at which point he joined the National Health Service graduate management training scheme in 1982. Over the next few years he studied for a Diploma in Health Services Management through a correspondence course and a part time Masters in Social Policy and Administration at the University of Nottingham.

He has worked for the NHS in Nottingham and Newcastle. In 1997, the University of Newcastle awarded him his PhD in Power and Decision-Making in the NHS from which he developed his academic interests in public policy and management and he has published papers in a range of leading journals.

In October 2002, he moved to the University of Birmingham as Director of the Health Services Management Centre and subsequently became Head of the School of Public Policy in 2006. He was appointed Head of the College of Social Sciences in January 2008. Whilst based in Birmingham, he became a Non-Executive Director of the Heart of England NHS Foundation Trust and Vice-President of the Chamber of Commerce. He joined Nottingham Trent University on 1 August 2014.

On a personal level, Professor Peck is married with two grown up daughters with whom he shares interests in eventing, music, film and theatre. Sadly, none of his family can understand his passion for Everton Football Club although they are more sympathetic to him playing in and umpiring hockey matches.

Fundraising round

runNTU 2014 was held on our Clifton campus last April. 300 people registered for the 5km and family runs which raised over £6,000 to support our vital work. The event was fun, and runners were cheered into the finish line by the Trent Tigers cheerleading squad before relaxing in The Point bar on campus with acoustic acts playing. Runners of all ages and abilities took part, including a large group of Nordic walkers, one of whom said: "I cannot tell you how good I felt after the event and coming down the finishing straight to all the cheers was something I will never forget."

Keep an eye on our website for details of our **runNTU 2015** event.

Our annual **1 in 3 day** took place in February and once again, staff at the University joined together to raise over £2,000 for the centre. A mountain of cake was consumed (and enjoyed!) as well as healthier challenges, including a flash mob line dance and staff cycling the equivalent of the distance from Land's End to John O'Groats on exercise bikes. We have plans to grow this day out into the community, so if you have an idea for how you could get involved please do get in touch – we'd love to hear from you!

Not to be outdone by our staff, students at NTU voted for the John van Geest Cancer Research Centre to become their nominated **Raising and Giving (RAG) charity for 2013/2014**. The students undertook a variety of activities to raise funds for the centre, including a show from the NTU pole dancing society, various stalls selling pre-loved clothing, a marathon touch-the-inflatable game, and a variety of collections. Overall the students raised over £15,000 from their efforts over the year so we are incredibly grateful for their contribution.



d-up



David Bailey – Head of International Development at NTU tells us about recent activities for him and some of his team.



David recently swam 15km of the Thames from Henley to Marlow to raise money and awareness for the John van Geest Cancer

Research Centre. He is a regular swimmer, but still trained by racking up an impressive 15-20km per week at the swimming pool at the University of Nottingham campus. He cheerfully acknowledged that there were some evenings during the winter where he wanted to throw in the towel, but the importance of the challenge he had set himself was what kept him going.

On 2 August 2014, dressed in a wet suit, he joined the 500 other swimmers also doing the Bridge to Bridge swim (or, as it's known locally – Farrow and Ball to Fired Earth). The race was almost cancelled the previous evening, because the edge of Hurricane Bertha was lashing the UK and the swimmers waiting for news believed the race would not happen and took to the bar. At the eleventh hour the organisers decided to push on with the race. As a consequence of the weather, the river was very choppy and full of sewage. David did the race in four hours including rest stops and remembers swimming past Sir Michael Parkinson's house as he passed Bray. His marvellous efforts were rewarded with two days of vomiting thanks to the filthy water, but he says he is proud to have done it for such a wonderful cause.

Following their leader's example, some of the International Development team decided to do the Three Peaks Challenge. This involved climbing up the three highest peaks in the UK, Ben Nevis, Scafell Pike and Snowden, all within 24 hours, including travel between the three. The team were joined by Steve Knott from the Development Office and other NTU colleagues from Estates. Most of them managed to climb all three peaks, but unfortunately due to a number of factors they did not complete it in the time. Although they all agreed that whilst it was hard work and took a huge mental effort, they were unanimous in their desire to finish. They are an inspiration to us all.

The team between them raised an impressive total of £3,000.

Thanks to you all for a sterling effort.

Here's to next year's challenge!

Our campaign board

A quick catch-up with the board members we didn't have chance to introduce you to in the last issue.

Stephen Dixon

Stephen Dixon has been a national and international broadcaster for 20 years.



Currently presenting Sky News Sunrise, he is watched in more than 100 million homes worldwide.

Having previously worked at ITN on both ITV news and Channel Five news, Stephen started his career in radio in Nottingham.

He studied BA (Hons) Broadcast Journalism at Nottingham Trent University.

He is Type 1 diabetic and works closely with charities and pharmaceutical companies in this area.

Tim Cobb

An Economics graduate of NTU, Tim began his career in theatre management at Nottingham Playhouse in the early



80s. During that time he was given the opportunity to return to what was then Trent Polytechnic to teach economics to student surveyors, builders and accountants. In 1988 Tim moved to the BBC in Nottingham where he took responsibility for its local finance and HR functions.

He moved into university fundraising and development in 1995 when he joined the Development Office at the University of Nottingham. There he helped to launch the Jubilee Campaign, taking responsibility for individual giving. He returned to NTU in 1997 to help construct its development and alumni relations function. He has subsequently completed a postgraduate diploma in marketing and three years of evening-class Spanish at the University.

Steven Barwell



Steven Barwell has been involved with development since his studies as an undergraduate. His career spans development positions with the Harrogate International Festival, CBSO, the University of Hull and De Montfort University. Steven is primarily interested in prospect research, namely, identifying possible sources of funding for key University projects and initiatives. He is responsible for researching and profiling potential donors, including alumni and friends, companies and grant-making trusts.

Tim Terry

Tim Terry is a consultant reconstructive urologist at Leicester General Hospital. He qualified at King's College and St George's Hospital in 1975 and did his general surgical training in Southampton and London. He obtained his Fellowship in 1980 and MS in 1987. He then trained in urology at Leeds University Hospitals before being appointed to Leicester University Hospitals in 1990. He specialises in prosthetic andrology and female urology and is a co-director of BAGURS. He is a past BAUS Secretary and BAUS Chairman for Andrology. He has a major interest in education, holding a PG Dip Med Ed from Dundee and was an Associate Postgraduate Dean EMLETB and currently is the SAC Chair Urology UK & Ireland. He is an Egan trained mentor and performance coach and was appointed as a Visiting Professor to Nottingham Trent University in 2014.



Heather Mayfield

Heather began her career as an intern at the Castle Museum, Nottingham working in the exhibitions unit. In 1979 she joined the Science Museum as a Museum Assistant, leaving the Museum in 2014 as the Deputy Director.



In her time at the Science Museum in London and the Media Museum in Bradford, Heather has led major transformational development projects including the build and fit-out of the multi-award winning Wellcome Wing at the Science Museum (a £50 million HLF funded project), and the original set up of the National Media Museum in Bradford. In 2010-2012 she directed the delivery of three major new galleries in the Wellcome Wing with a budget of £10 million.

At the Science Museum Heather managed all of the teams that delivered content in exhibitions, on-line and through traditional publication; curators, exhibition teams, new media and design.

She is an adviser and mentor nationally and internationally to museum re-development projects.

She is an expert in the dissemination of contemporary science in a museum.

Sue Dewey

Born and educated in Nottingham, Sue has had a varied career which includes time in the Royal Navy and a role at the Science Museum. She has been involved in organising major sporting occasions like the 2002 Ryder Cup, as well as large scale fundraising events for various charities. She worked for a wide range of public and private sector organisations in sales, marketing and project management before joining the Development team at NTU in April 2013. She describes her role as Head of Fundraising for the John van Geest Cancer Research Centre as the most inspirational job she has ever had. In her spare time, she is Chairman of Nottingham Sea Cadets and is on the Advisory Board for Nottingham Playhouse.



VicFest



Our friends over at the Victoria Hotel in Beeston have been doing some fantastic things to raise money for us recently – thank you! You can read more about what they've been up to below.

How would you describe the Victoria Hotel to someone who knows nothing about it?

A fairly traditional pub with good food, a real ale pub with an ever changing range, it is a freehold owned by my wife, Linda and myself. It is very much a family run pub, my step-daughter works here and we have had some staff who have been here ever since it opened. We are celebrating our 20th anniversary this year.

What is your history of the place?

I'm a director of Castle Rock Limited, now the biggest brewery in Nottinghamshire, but when we started off in the pub trade about 36 years ago, it was very small and we had only just started developing pubs in the East Midlands. My speciality was taking over derelict properties and turning them into pubs. This one in particular was in a terrible state of repair 20 years ago, and we have been renovating it ever since.

Can you tell us a bit more about the VicFest?

VicFest has been going for about 16 years and its grown from having a few bands on at the weekend to a full blown, 17 day festival. It is always the last three weekends in July, and it has its own format which entails live acts with very broad tastes ranging from jazz to blues, to folk to comedy, to all sorts of things. It all takes place outside and during the weekends we do things like BBQs which we sell tickets for. During the week we have different things happening each night including a Ready Steady Cook themed evening, curry and quiz night, paella evenings, Spanish food and wine event and pub games evenings.

Anything for a bit of fun and to bring people in to support the good cause. It has been very well supported, in fact I actually know at least 10 people who fitted their summer holidays around the festival.

Do you have any acts who you would like to recommend?

It is mostly local bands but we always try to give some new bands a chance to play because it gives them very good exposure. We are always happy to hear from people who would like to be involved in performing at the festival.

Did you choose the John van Geest Cancer Research Centre for any particular reason?

Well, we have been raising money for years for national charities but we always looked for someone local to support where we can see where the money is being spent. When a friend of mine told me about the John van Geest Cancer Research Centre we visited the lab and we were won over by the enthusiasm. I was a technician at Trent Polytechnic many years ago so I understood a little bit of the science-stuff but it makes what I was doing look very Health Robinson.

Do you have anything else to say about the charity?

My younger brother passed away from a brain tumour five years ago so it's very close to my heart to see something done for any form of cancer. I think the John van Geest Cancer Research Centre is definitely on the leading edge of this platform for exploration.



Ok, controversial one, is there any chance you can give me any secrets on your paella?

Fresh ingredients are very important, as is putting things in the right order and knowing how long it should be in there for. And then it must rest for about 20 minutes before you serve.

Paella is basically a peasants dish from all over the Iberian peninsula and it's great because you can feed 50-60 people from one pot. It's very photogenic and very nice for people to be able to watch something like that being cooked.

What is the charity champagne day all about?

It's the curtains down of the festival and curtain up for our wine and food evenings that we do throughout the year (every month we do one on a Saturday). The champagne day started as a bit of a laugh years ago when this place first opened and 20 of us sat around a table outside drinking champagne, eating lovely food and having a really good time. We then started inviting more people, and it soon became a black tie, dress up event which then exploded to a stage where we now have about 100 people attend. The day raises a huge amount of money for charity, and this year we presented a cheque to Professor Bob Rees for the John van Geest Cancer Research Centre.

When a friend of mine told me about the John van Geest Cancer Research Centre we visited the lab and we were won over by the enthusiasm.

Are there any upcoming events which you would like to mention?

We have live music every Sunday. St Patrick's Day, of course, which is always a big day for us, as is Burns Night.

There is a myth that the local pub is dying yet this place is very busy and there is a great atmosphere, what is the secret of your success?

Ever since the smoking ban some pubs have had to focus on less drinking and more dining.

It's very important to adapt to all markets as drinking pubs have traditionally been very male dominated so it is important to provide something for everyone, more so now than ever before.

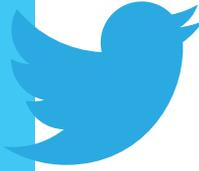
Also, don't compromise, stick to what you are doing and do it well. The staff have been very supportive and do an excellent job at these large scale functions which means customers will continue to return to the pub.

Finally, can you recommend us a good beer to try?

Without a doubt, Castle Rock Harvest Pale, it goes well with seafood, steak and ale pie, curries – anything really.



Join us on Twitter



The Twitter feed for our centre has been running since September 2013 and has picked up a number of loyal followers.

The ethos of our Twitter is to provide a range of interesting stories which represent every part of what happens at the John van Geest Cancer Research Centre. You will see everything from the fun activities we are doing to raise money for our vital research, to blog articles from our scientists and links to stories in the media which highlight how important cracking the cancer code is.

However, it wouldn't be Twitter if we didn't have your input so please follow us and get in touch, we would love to hear from you.

@vanGeestCancer

Our Head of Fundraising with 2 new converts to the JvG cancer research cause at the #cricket #testmatch @TrentBridge ow.ly/i/6aX0b

Reply Favourite More



 **JvG Cancer Research**
@vanGeestCancer

'From the heart – a pa
Read this touching blo
#prostatecancer patier

Reply Favourite More

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Karen just popped into the office. She raised over £200 & a half marathon PBI! Well done!

Reply Favourite More



JvG Cancer Research @vanGeestCancer Jun 5
Want to see some of our dancing scientists? Of course you do. Please watch this video ow.ly/xCnmP #DancingScientists

YouTube



1

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Why do people do challenges for charity? Read why one of our colleagues did our 5K #runNTU and how the day was for him ow.ly/zUBmM

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Two great minds - Prof Bob Rees showing the Centre to Dr Stewart Adams, who discovered Ibuprofen

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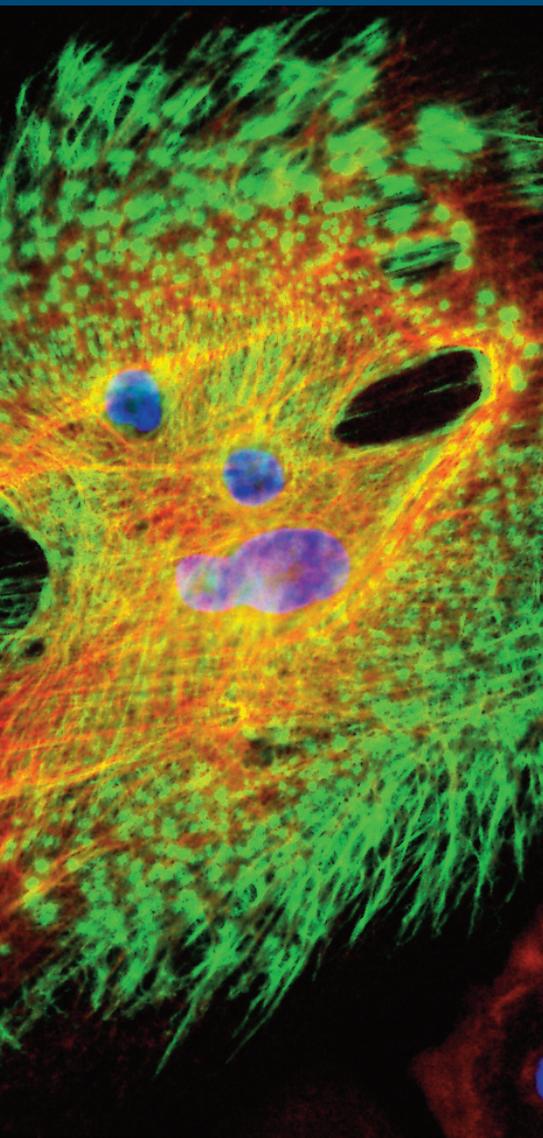


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Research updates

An idiots guide to Mass Spectrometry by Dr David Boock



Cancer, Proteins and Mass Spectrometry

The type of molecules that I'm interested in are proteins – these are the tiny machines that make living things function. Each one of the 100 trillion cells that make up your body has many thousands of different proteins in them, all carrying out different tasks that keep you alive.

In cancer, the cells of the body have gone wrong somehow and start to grow unchecked and multiply out of control (a group of these cells is called a tumour) and after some time these cells, in certain types of cancer, can start to spread away from where they formed and travel around the body and cause more tumours. Now, cancer cells are not quite like the normal cells – they make slightly different proteins and don't work in the way they were designed to anymore. If we can identify these minuscule amounts of cancer proteins, for example in someone's blood, we may well be able to test early on whether someone has cancer or not. The earlier we find it the better the chance of treatment working.

So how do we go about identifying them? In our laboratory we use something called a mass spectrometer or "mass spec".

What is mass spectrometry and why do we use it in the John van Geest Cancer Research Centre?

Well... put very simply it's all about weighing things. Tiny things, that make up everything around you and inside you. These things are called molecules. Now single molecules are, in general, very small. We're talking really, really tiny – you may think a grain of rice is small – but the sort of things we are measuring in the lab are over a million times smaller than that!

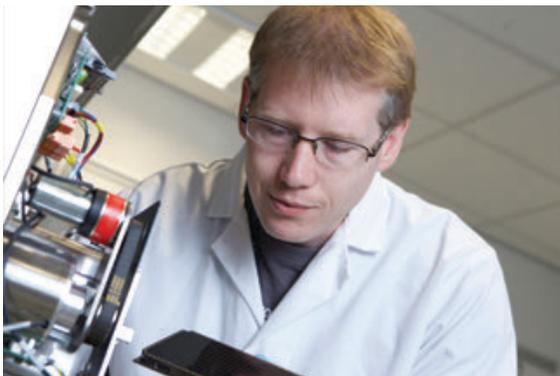
Now, obviously, you can't easily see these single protein molecules to identify what they are, and you can't put one on a set of scales to weigh it.

The weight of a molecule is referred to by scientists as its mass and a mass spec electronically weighs molecules by sorting them into groups that all have the same mass. A molecule of water for example, weighs 18 mass units, drinking alcohol 46.1 and aspirin 180.2. Now imagine a mixture of these three things (apart from making a good night out!) being put into a mass spec, being sorted and what you would see on the screen would be three peaks on a chart – one for each different mass. The different heights could tell you how much of each there was in the mixture.

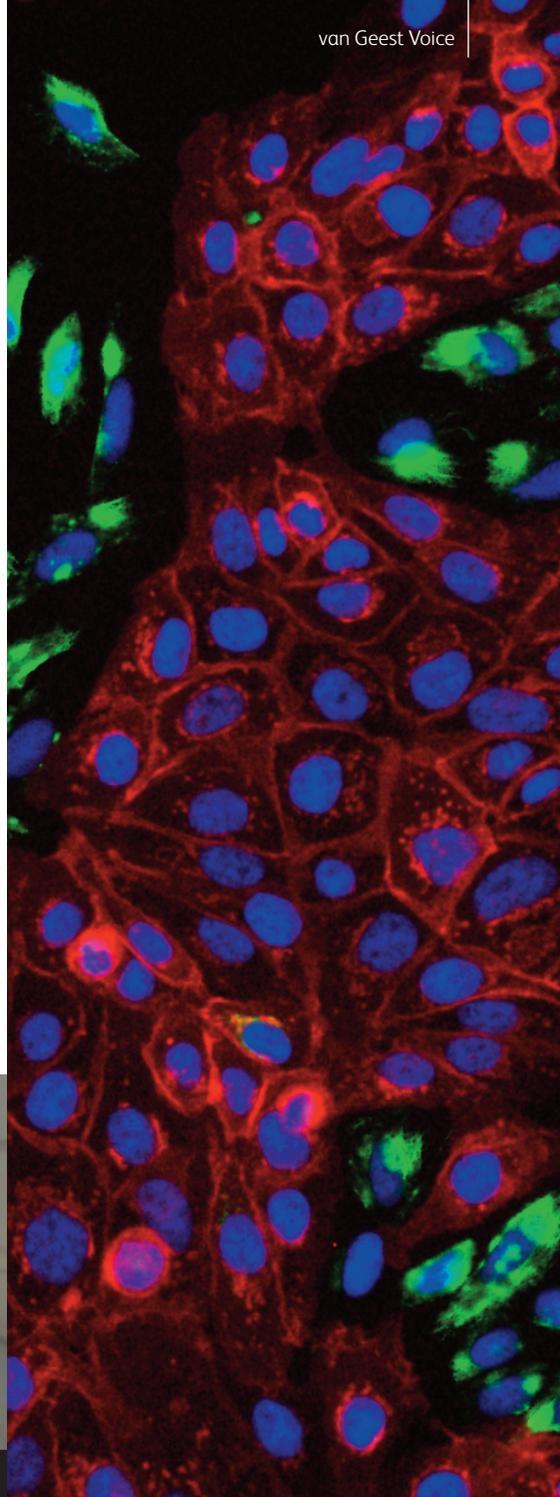
This is what we do in the JvGCRC but on a bigger, more complex scale – blood is a mixture of hundreds of thousands of different molecules, which are sorted in the mass spec into their different masses. From this (after a great deal of complex calculations) we can then work out what they are, how much of them there are and if there are proteins in blood from cancer patients that don't appear in blood from healthy people. It is a bit like playing find the needle in the haystack, where the haystacks are the size of a city and the needle is straw coloured!

The new mass spectrometer we have just taken delivery of in the JvGCRC will take our research to the next level.

The instrument, the first in the UK, is an AB SCIEX TripleTof ® 6600 and is worth more than £450,000.



• Dr David Boock



Meet the team

Interview with Dr Stéphanie McArdle



How long have you been at NTU?

For 15 years, I can plot it exactly, as I started here when my son was six months old.

Would you say that you are very much part of the team that built the centre?

Yes. There were three distinct stages and associated moves. It has been very exciting to see it grow.

Where did your career in science begin?

I originally completed a two year technical qualification in Paris and then went on to do a BSc in Applied Biology. That was followed by a move into Immunology as one of Bob Rees' PhD students – and I never escaped! I was offered a research post in the USA but Bob asked me to stay in the UK and I followed him and other colleagues after they had moved from Sheffield to NTU – which I did in 1999.

What do you enjoy most about your job?

The sense of purpose and the prospect of coming up with something that will ultimately cure cancer and save lots of lives.

Do you have a typical day?

In this field there is really no such thing – but most days will usually contain an element of lab work, student supervision and meetings.

Which is your favourite activity?

The lab work, it is why we are all here, to make discoveries.

What is the most significant discovery you have made?

Seeing the results of our studies into a biomarker called PAP – which injected into a tumour appears to stop it growing in 90% of cases.

How did that make you feel, was there a eureka moment?

It was more that I was completely overwhelmed by the response to the publication of the paper (December 2013). I had people ringing from Australia to find out about it and volunteer for trials. We picked up a lot of press coverage including some international web news sites and it prompted a quote from PCUK. We still have a long way to go with this type of immunotherapy but the early indication is that this will help to prolong the lives of very many patients in the future.

What do you do to relax?

I love Yoga and I enjoy reading non science books, I also knit when I have the time.

Anything in particular?

I am currently knitting a shawl for my mother and have just finished an Arran cardigan and matching bobble hat for my seven month old nephew.

What would you be doing if not this?

I would probably be a nurse – still something in the health field – helping people!



Thank you!

On behalf of the entire John van Geest Cancer Research Centre we would like to say thank you for taking the time to read this edition of van Geest Voice.

We hope that what you have read has helped you to understand who we are, what we do, and how we have already helped make a difference towards finding a treatment for cancer.

We will continue our dedicated work towards cracking the cancer code and improving the lives of cancer patients. In order to maintain this cutting edge research though, we need your help.

Philanthropic gifts, both large and small, allow us to continue with our vital scientific work to improve diagnosis and take vaccines and medicines into clinical trials.

You can make a single donation, set up monthly giving or even leave a legacy in your will. No donation is too small, every penny that we receive will bring us one step closer to helping us facilitate our research.

You could even change your own life while helping to save the lives of others. Why not:

- take on a personal challenge?
- participate in our annual runNTU event?
- encourage your friends, family and colleagues to get involved too?

Please spread the word and tell your friends about this amazing facility and what we do. Cancer is personal to all of us, help us to make the difference today.

Thank you,

**John van Geest Cancer
Research Centre**



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