

outlook

THE NEWSLETTER FOR SUPPORTERS OF THE INSTITUTE FOR CANCER VACCINES & IMMUNOTHERAPY (ICVI)

FROM THE CHAIRMAN



Sir Harry Cotterell Bt OBE
Chair of Trustees

WELCOME TO OUR SPRING 2021 ISSUE OF OUTLOOK

At the time of going to print, we are approaching a year since this pandemic took over our lives and tested our resilience to say the least. Our last newsletter reflected on how we were responding to the crisis. Now, looking back over the year the ICVI has had I am pleased to report that we have continued to rise to the challenges facing our charity and our research.

This issue focusses on the future – specifically our young scientists just starting out in their careers. The ICVI has a strong history of supporting PhD students, and your recent generosity towards our Christmas Appeal has contributed to the funding of our current students Alex and Issy. We report back on some interesting progress made by them. Mark Bodman Smith who is in charge of our research team and has personally supervised all of our PhD students outlines how the ICVI's influence has impacted on the scientific community over the years.

We continue to be very proud of Professor Dalglish who you may have seen on Good Morning Britain and in various newspapers in the past few months. He writes about recent progress on Covid-19 and cancer research in this issue.

On the fundraising side of things, it has been wonderful to read what Sue Ellis has achieved since the first lockdown in March 2020 – having raised almost £4,000 for the ICVI which will go to her son Steve's tribute fund. How inspiring to hear how Sue has turned unwanted items of her own and those of friends into much needed funds for the ICVI. Thank you, Sue, for your sage advice and thank you also to all our other fundraisers and donors who are helping us get through these turbulent times.

FUNDRAISING DONATIONS

DANIEL WALKS MILES FOR THE ICVI

Huge thanks to Daniel Dean who raised a wonderful £559 for the ICVI by getting sponsorship for running a total of 150 miles during January – not only that, he gave up alcohol for the whole month as well. Congratulations Daniel for a doubly impressive feat!

£559

CHRISTMAS APPEAL

Thanks so much to everyone who donated – we raised an impressive £14,413 which will help fund PhD students Issy and Alex.

£14K

ICVI TV

If you have exhausted everything Netflix and the like have to offer over the various lockdowns, please do have a look at the new film section on our website, which links to our brand new YouTube channel. Professor Dalglish has recorded short films on a variety of subjects, including Covid-19 prevention tips, Vitamin D, Thalidomide and Cannabinoids in the treatment of cancer.



NEW WAYS TO DONATE



TELEPHONE DONATIONS

We can now take credit and debit donations over the phone so please give us a call on **020 7498 8263** if you would like to do that.

AMAZON SMILE

We have recently registered for Amazon Smile, which means that Amazon will donate 0.5% of your purchases to the ICVI. Simply type Amazon Smile into the search box and you will be asked to search for the ICVI.



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EBAY WINNERS

One of our most long standing and loyal supporters, Sue Ellis, has been making excellent use of time spent in her house during lockdown. Sue has lots of good advice on how to use Ebay to donate to the ICVI, and clear your house of clutter at the same time.

Sue says, "Using spare lockdown time for me was all about making use of Ebay, and to this end I achieved the following:

- I cleared the house, garage & sheds of lots of unwanted items
- These items found a new home where they were wanted & loved!!
- Nothing went into landfill
- ICVI benefited from the proceeds of my sales – including Gift Aid which is handled automatically by Ebay

My brain was kept active & I avoided lockdown boredom
 ebay really has a very straightforward & intuitive process. It is safe for buyer & seller with both being protected by their processes and systems.

Between the beginning of the first lockdown in March 20 and February 2021 our sales amounted to nearly £4,000, including gift aid. Abi in the ICVI office kindly adds our sales to our son Steven's tribute site and we have now managed to raise a total over £55,000 in aid of ICVI, which we are delighted with.

We've had a couple of gems. One really valuable sale was a WWII flying jacket given to us by a friend. It raised an incredible £570 plus Giftaid, raising it to £712. 50p in total. Even more exciting was the

broken windscreen of a WWII Spitfire. The windscreen was removed from a Spitfire, by my husband Nigel's father, just before the Battle of Britain in 1940 (It was replaced with an armoured windscreen). That raised £1,333 including Gift aid – and I'm delighted to say the windscreen has now been returned to Biggin Hill!

It is amazing what people want – we sold a rusty old bike stem for £100, Meccano, toy cars, pictures, old ladybird and observer books... loads of things that we had stuck up in the loft!!"

If anyone would like any further advice on selling through Ebay in aid of ICVI please contact Abi in the ICVI office and she will give you my phone number.



£570 FOR THIS WW2 FLYING JACKET



OLD MECCANO SELLS WELL ON EBAY



SUE ELLIS' SPITFIRE WINDOW



THESE OLD TOY CARS RAISED £29

TIPS TO GET YOU STARTED

The secret we found was to start with a few small cheap items. List them as honestly as you can, with a quick few photograph from your smart phone – photograph any damage rather than hiding it.

Post off promptly once your buyer has paid. It is easy to stay Covid safe buying postage on line & with Royal Mail & couriers all collecting if required. Make sure you add enough money for postage as those costs can mount up. Royal Mail isn't always cheapest –

companies like DPD have really upped their game in recent years. Ebay does not charge fees on any items being sold 100% in aid of charity although there is a very small fee on the cost of the postage, and Paypal charges will apply, but these fees might be compensated for by reducing the percentage given to the charity.

The money you raise can automatically be transferred to ICVI 21 days after a sale – just the postage costs will remain in your account. Gift aid (if you register) also follows automatic-

ally, into the ICVI account, the following month.

After a while you will generate a good score on Ebay and gather confidence to sell more expensive items. Buyers seeing your good score will have confidence to pay you for more expensive items.

Watching the bids come in can be really exciting, especially in the last few seconds – it's addictive and so much fun. A great and rewarding hobby!

UPDATE FROM PROFESSOR DALGLEISH

The COVID pandemic continues to interfere with normality. However, we are learning to live with it and adapt our cancer knowledge to it and vice versa. It was nearly a year ago that we proposed using IMM-101 as a COVID preventative for front line workers and at risk patients based on the absence of flu being reported by patients who were on it as part of cancer therapy. Unfortunately, Prof Whitty did not understand the logic proposed in that COVID takes hold in persons who are vitamin D3 deficient and who have a depressed innate T cell response due to age, cancer or both!

I am so pleased that the Canadian Health Care system understood and agreed to run a trial. Seven centres have been recruiting patients since December and we await the results.

On another tack we have been very excited to have shown that LDN (Low Dose Naltrexone) and CBD (Cannabidiol) both enhance responses to chemotherapy in laboratory based models and that this effect is even more pronounced when LDN and CBD are combined.

We have previously shown that LDN inhibits a major inflammatory pathway that produces IL-6, which is a cytokine which enhances cancer progression and death in Covid hospitalised patients.

I have been impressed how LDN appears to slow cancer progression down especially when it involves the liver, and this may be associated with the fact it concentrates there. Another observation is that patients report having more energy on LDN and that there have been many reports that LDN is effective in chronic fatigue syndrome.

We have therefore suggested that it may be effective for long Covid which is probably going to be the major problem left by Covid once the vaccines have reduced hospitalisations and deaths to levels normally seen with the flu.

Last year we designed a specific Covid vaccine based around IMM-101, together with my Norwegian colleagues who had highlighted unusual sequences which were more similar to engineered viruses than those which jumped straight from bats. Proof that science is no longer objective was confirmed when no one would publish our observations, claiming that they were not

in the public interest. We finally published it in QRB Discovery as the editor recognised the subtlety of our arguments as being biophysical – QRB Discovery is a biophysical journal. A couple of months later we had a call from the editor to say that our paper had been downloaded 210,000 times. To put it in context my previous highest scored paper was on HIV in Nature and hit 3,500 times!!



PROFESSOR DALGLEISH

One of the people who read it closely is a fellow cancer specialist at one of the biggest cancer centres in the US and has recognised that the IMM-101 component could boost his latest high tech radiotherapy techniques.

Watch this space!

OUR CURRENT PHD STUDENTS AN EARLY SUCCESS STORY!

In our last issue we told you about the two PhD students who had recently begun projects funded by the ICVI. Both of these students have made great progress since they began their

projects and as they have been partly funded by our Christmas appeal to you, we thought you might be interested to hear how they are getting on.

We are delighted with the exciting progress made by both Alex and Issy and look forward to sharing their future successes with you.

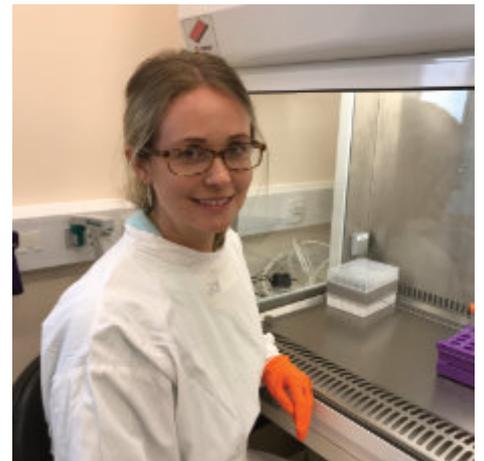
ALEX MORRISON

We fund 30% of the costs of Alex alongside Public Health England and she is based at their laboratories in Wiltshire.

Alex is working on a project looking at models of BCG vaccination and the subsequent protection against TB infection and cancer. Her work is testing a hypothesis that if a cell is infected with bacteria (Mycobacteria which causes Tuberculosis or SARSCoV2 which causes COVID19) or is transformed into a cancer cell, it expresses 'danger signals' which can be recognised by the immune system. Our work has shown that Mycobacterial stimulation of the gamma delta T cell population can increase the ability of these cells to kill tumour and infected tar-

get cell. As with most of PHE, Alex has been working on SARSCoV2 and we are lucky that BCG vaccination is being investigated as a potential therapy there.

Excitingly, Alex has very recently shown that BCG vaccination can activate the gamma delta population and that these cells are increased and activated in the lungs after SARSCoV2 infection when compared to non-BCG vaccinated individuals. Alex's data adds to the growing evidence that the gamma delta cells, when activated by mycobacteria, may play a role in COVID19. These data also support the trial in Canada looking at the role of IMM101 in COVID19 which is championed by Prof Dalglish.



ISSY SCHIAVI

ICVI funds 100% of Issy's costs and she is based at St George's with the rest of our research team.

Issy is working on a project with Laura Ridgley, Prof Tim Bull and Mark Bodman Smith which looks at breaking mycobacteria apart and examining the effects of different parts of the bacterium on the gamma delta T cell activation.

Issy has only been working with us for 6 months but has already mastered many of the techniques she will need in her project both in terms of the microbiology

and the immunology. Usually the first year of any PhD project is used to form a foundation of techniques which will then be used to examine the question being asked. Issy is already ahead of the game here. She has separated the mycobacteria into a number of 'fractions' and is now starting to see how these affect the gamma delta cells. The ultimate aim of this project is to identify new 'components' of mycobacteria that could substitute for BCG or IMM101 in clinical studies.



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THE ICVI'S IMPACT – A REVIEW FROM MARK BODMAN SMITH



MARK BODMAN

I've been involved with Gus and ICVI for some years now and I thought I'd share how I feel the charity has changed over this time, particularly how we've spread our influence on the scientific community.

When I joined Gus in 2004 the CVI, as it was then, was only part of a much larger group. Gus was running a clinical trial using dendritic cells to treat melanoma and I was asked to investigate biomarkers associated with the success of the approach. Quite often Gus would join our lab meetings and say that we'd been given some money and how could we best use it. Now most people, when donating a sizeable sum to a charity, would like something to recognise that contribution, a name-plaque on a piece of equipment for example. The problem is that we need people, not equipment, most of the time. Gus and I discussed this problem and came up with the idea of a named PhD studentship. This is a great use of funds as PhD students are very motivated and keen to push their projects forward. Katie Lowe was the very first ICVI funded PhD student we supervised. Katie, and two other ICVI funded PhD students, have kindly contributed to the recent 'where are they now' article in the newsletter. So far, the ICVI has funded 6 PhD students

and 2 MD students, and is currently funding, or co-funding, two more.

The use of money in this way is of huge benefit as it increases our influence on the scientific community. The published output from our students is usually 1 or 2 papers per project. In addition to this we ask scientists from around the country, and sometimes the world, to examine our students and this also disseminates our work. At SGUL we have a policy of encouraging young scientists to present their work at national and international meetings. Anyone who wishes to attend one of these meetings has to give an oral presentation or a poster presentation to justify the cost which is met by the institution and the charity. But again, this is a way in which we can take our data and ideas out to the wider scientific community. It is also a great opportunity to meet other scientists and discuss ideas: science is still very much a collaborative, rather than competitive, endeavour.

So, the combination of papers published, meetings attended and data presented, and our successful record of

PhD supervision, ensures that work done by ICVI funded staff reaches a much wider audience.

And this approach pays off. We have had a long-standing collaboration with Dr Sally Sharpe at Public Health England which combines their interest in Mycobacterial infection with our ideas on how Mycobacteria can be used to treat cancer (IMM101). This is a profitable collaboration as we are now working on our second PhD project with them (Alex Morrison) where 70% of the funding is provided by PHE. In 2019 Gus and I arranged a 'Spotlight on Science' event at SGUL. This is an open seminar series attended by a scientific and lay audience designed to inform the public about new developments in a particular field: in our case the immunotherapy of cancer. Ours was the most highly attended event in this series and delivered the ICVI's work to a wide audience.

More recently we have spread our influence further with additional collaborative projects with Dr Audrey Teh and CRUK, working with Laura Ridgley and



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myself on the production of Check Point Inhibitor molecules which aims to reduce the cost of these drugs and make them available to more of the world. Laura and I are working with Prof Tim Bull to supervise Issy Schiavi in her ICVI funded PhD studentship looking to isolate the important molecules in Mycobacteria which might be responsible for their anti-tumour activity. Most recently we are working with Dr Ferran Valderrama on a project to recreate a model prostate tumour with which we can investigate mechanisms of

delivering cellular therapy. All of these projects have come out of our work being taken up by the wider scientific community.

There is one more aspect where we can demonstrate the influence the work undertaken by ICVI funded staff and that is recognition as being leaders in our field. A PhD student's thesis has to be examined by two independent scientists, one internal to the institution where the student studied, and one external. Both Gus and I have been, and are being, asked

to act as external supervisors on our areas of expertise. This again highlights that the work we do, funded to a large extent by the ICVI, is being seen as of huge importance to the field of Cancer Immunology.

So thank you to everyone who supports us in our work and I hope this goes some way to emphasising just how important and effective the ICVI is to this crucial field of work.

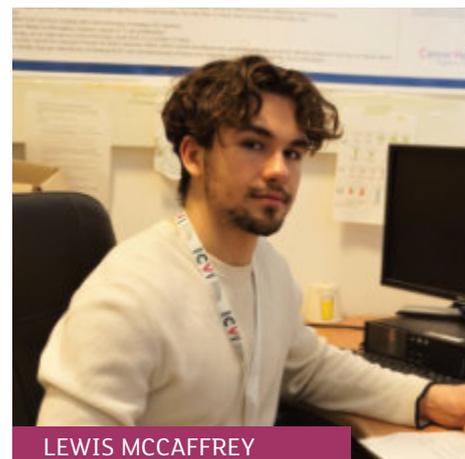
NEW DATA MANAGER

We are delighted to welcome Lewis McCaffrey to our trials team. Lewis has a degree in Philosophy, Psychology and Scientific Thought from University of Leeds, followed by a Masters in Philosophy at King's College, and has experience in university administration.

Lewis's main focus at present is to support Dr Alberto Fusi's trial programme. At present this is obviously very quiet because of the pandemic but we are hopeful that by the time Lewis has settled in and completed his training we will be able to

recruit new patients again. Lewis will also be working on our ovarian cancer trial once that is up and running.

If you would like to donate towards Lewis's project please contact marie@icvi.org.uk



LEWIS MCCAFFREY

OVARIAN CANCER TRIAL

Sadly this trial was delayed due to the pandemic, however we have recently started the recruitment process for a clinician to run it. We are hopeful that they will be appointed in the next few months and we can report on progress in our next issue of Outlook.

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DONATING - PLEASE HELP US FIGHT CANCER TODAY



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WHERE DID YOU HEAR ABOUT US?

We would like to keep you in touch with our work. If you prefer not to receive our newsletter twice a year please tick here:

DONATION

One hour of research undertaken by the whole of the research team costs £400 and £2,000 per patient per year for a trial (this is an average cost, including salaries, consumables and supervision)

£400 £200 £100 £50 £

OTHER

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I enclose a cheque / CAF Voucher made payable to the ICVI

Please tick this box if you wish to receive an acknowledgement of your donation

IN MEMORY OF (optional):

Please treat all donations I make or have made to the ICVI as Gift Aid donations until further notice

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You must pay an amount of income tax and/or capital gains tax equal to the tax we reclaim on your donations. Please notify us if your address or tax circumstances change and this in no longer the case.

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