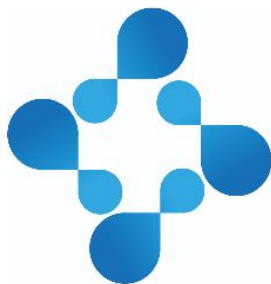


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Charity No. 1060423

**Peninsula
Medical
Foundation**
Research, Innovation & Education

e-briefing**April 2023**

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Editorial

The e-bulletin is delighted to include regular contributions from the Plymouth Medical Society. What better way to start than with a report of an outstanding lecture by Professor Sir Jonathan Van Tam who was Deputy Chief Medical Officer of England during the recent epidemic. The lecture was delivered to a packed auditorium in the Postgraduate Medical Centre on Monday 27th March. You will find a brief account towards the end of this bulletin. We are hoping that a webcast will be available shortly. It will be 40 minutes well spent.

In passing it is worth mentioning that the PMF was founded by a group of doctors and local business leaders, including Rotarians and other philanthropic groups, who wished to see Medical Research and Education in Plymouth and the SW thrive. Those ideals remain true to this day.

Presently, we are focussing our fundraising efforts on the local Parkinson's research team. It is estimated this miserable condition will affect one in four adults during their lifetime. The object of our fund-raising attentions, Ms Katie Bounsall, is doing splendid work on a programme, which will alleviate much suffering across the UK when it is completed. In this issue Katie has provided an update on her research. The 2022 Christmas Gala Ball,

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Katie's final year of research. We are doing well but there is still a considerable way to go if we are to honour our undertaking by June next year. It goes without saying that any help will be much appreciated.

Have you ever wondered what happens to all that rubber we burn off the tyres and our wallets? Look no further, Dear Reader, than...everywhere. It ends up alongside most other synthetics as Microspheres. Book a cruise to the Antarctic. Make friends with a local whale and dive down a couple of miles with him or her to the ocean floor. Ahh, there they are! Take a look under the Tamar Road Bridge and we are told you can more or less walk from shore to shore on them. But do they matter? Derriford's liver disease specialist, Professor Cramp, tells us about his team's research into microplastics, which is both fascinating and important.

With sadness we are saying farewell to our much-esteemed Administrator, Louisa Gillett. Operating a modern charity with ambition, especially in the field of healthcare, requires systematic and skilled administration to deal properly with charitable activities and the substantial load of regulation and bureaucracy which goes with it. During her time with us, Louisa has provided a huge boost to the charity's development. The Trustees offer sincere thanks for her service and wish her well for the future. We are advertising for her successor on '[UK Charity Jobs](#)' and the PMF website, but please get in touch directly to denis.wilkins@btopenworld.com or admin@peninsulamedicalfoundation.org.uk
Denis Wilkins, Editor

What's On?

Summer Ball '24. Parkinson's is a terrible scourge and most of us know of someone first or second hand who has it. To continue raising funds for research which will directly help sufferers and their families, the charity is planning a Summer Ball for June 2024 in support of the PMF Parkinson's Campaign. We have a venue and will provide a date in due course, but meantime we are seeking a main sponsor (s) for this important fundraising event. Anyone interested, please get in touch as below.

Hospital Display: The PMF is here to support excellence in medical research, training and innovation wherever it can. Derriford's University Hospital is a terrific regional specialist hospital, proudly serving Plymouth Devon and Cornwall with state-of-the-art medical care. We feel this needs to be better known and intend maintaining a regular presence in the main foyer to beat the drum. If you are interested in joining us or just interested (!), please come and say 'Hello'.

Showcase Visits to the Medical School: four times a year the PMF arranges short evening tours of the Medical School and Research Labs, kindly hosted by its staff. There are a limited number of places and if you or your group are interested, please get in touch.

For any or all of the above, contact admin@peninsulamedicalfoundation.org.uk or denis.wilkins@btopenworld.com

Plymouth: a Research Assistant's view

"Hello, my name is Katie and I am a Research Assistant and PhD student within the Applied Parkinson's Research Group at Plymouth University. We are working towards a new care pathway for people with a Parkinson's disease under the direction of Professor Carroll and Professor Meinert. As you may already be aware, Parkinson's disease affects over 140,000 people in the UK. I suspect the characteristic tremor is well known to most of us, but there are many other symptoms which make life particularly hard – for example, speech problems, balance, weakness of limbs, bowel upset, sweating, urinary incontinence, depression and eventually even dementia. The good news is that rapid access to specialist care provides the opportunity to apply the latest and most effective new treatments. These can make a huge difference to the quality of life and enable those affected to continue with many of the activities that they and their families love.

Some years ago Professor Carroll, a consultant neurologist at Derriford, became convinced that the NHS needed to change the way patients with Parkinson's were being cared for. There were many delays; care was not personalised enough for each patient, and Parkinson's sufferers and their families did not fully understand the condition and what made their symptoms better or worse. The research team, guided by people with Parkinson's and their families, developed "Home-Based Care" (HBC) – a pathway designed to help those affected by triggering reviews whenever they are needed rather than the current, rather hit and miss system of regular outpatient appointments with all the delays, parking, journeying etc, involved. This is achieved through specially adapted equipment worn by the patient and installed in the home so that families and local teams can trigger access to specialist care and obtain advice 'on tap'.

The project is well advanced and at present, we are developing the data collection system to design the way doctors and nurses work with it. It is essential that they can correctly identify patients who need urgent help and then make sure it is delivered. My role is to identify problems with the new system as they inevitably arise and then help design 'fixes'. In other words, to make sure the system develops and works properly before it is released for general use. I work closely with many lovely patients and once this important aspect is complete, the system will be ready to submit to the NHS for rolling out across the UK. What an achievement that would be! The funding that many kind donors are providing through the PMF will be vital in making sure that I can complete my task and see the project through to completion."

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Thank you all and I do hope you will feel able to continue your vital support.

Katie Bounsall – for Parkinson’s Home Based Care research project

Microplastics and human health

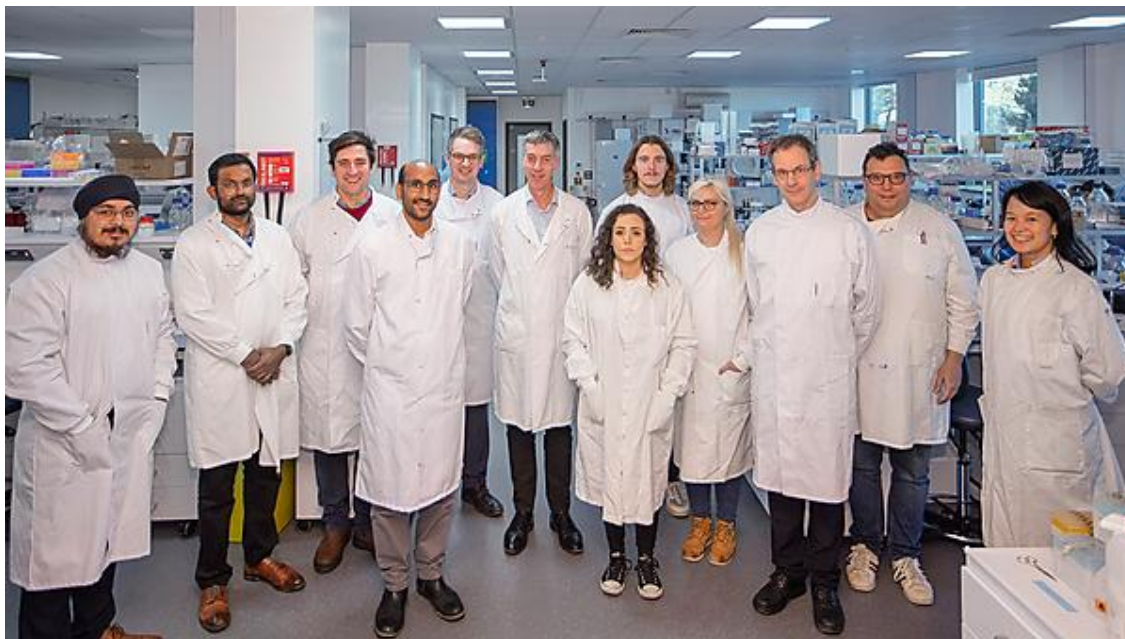
The PMF has recently funded Professor Cramp’s team to set up a local biobank in support of his research into microplastics and human health. Microplastics are the end-product of a huge variety of man-made materials derived from oil products. The name speaks for itself. Microplastics vary in size and within them ‘nanoplastics’ are some of the smallest, measuring less, and often much less, than 1 micron or micrometers. A human hair is 100-150 microns across – a speck of household dust visible in bright sunshine measures between 1 and 8 microns, and hairspray droplets between 1 and 3. They are very, very small. Readers may be interested to know, and take pride, that it was a SW team based in Plymouth University which first coined the term ‘microplastics’ (Professor Richard Thompson 2004). Moreover, our local teams continue to lead in this hugely important field of environmental research.

Researchers have established that microplastics are present everywhere from the World’s deepest oceans to the North and South poles. They are to be found in much of what we eat and drink. We consume an estimated 0.1 to 5 grams of microplastics under 1mm in size each week. Does this matter? Possibly a bit. Possibly a lot. Possibly not much. But the point is that despite the foregoing, remarkably little is known about this material’s presence in human tissue and any impacts it may have on human health.

Matthew Cramp at the Peninsula Medical School, Richard Thompson at University of Plymouth and John Beckly at RCHT are collaborating to help answer some of these questions.

They have established that nanoparticles are small enough to be absorbed into the bloodstream from what we eat. All of this passes through the liver which in a sense ‘filters’ and ‘cleans up’ much of what we absorb from our intestines. Whether liver cells – hepatocytes - play a part in this is not yet understood. Key to this is being able to detect and analyse these tiny particles in the liver and other cells. To this purpose, Plymouth University has invested in state of the art equipment (pyrolysis gas chromatography mass spectroscopy) to examine samples of tissue and it is here also that the local availability of a biobank is critical. As samples become available, they can be analysed and then stored for future re-examination in anticipation of even more sophisticated equipment becoming developed in the future.

global importance and researchers in the southwest are uniquely placed to perform a significant role in this vital field.



Hepatology Research Groups team photo from 2020



Plymouth Medical Society

We are grateful to Dr David Dance for this account of 'JVT's lecture on 27th March 2023

It is not often that doctors become so well known to the public that they are recognised simply by their initials, and even less often that they accept an invitation from a former colleague to come to speak to an audience in Plymouth. But, a packed lecture theatre at the Plymouth Postgraduate Medical Centre was doubly fortunate to hear Professor Sir Jonathan Van Tam, the former Deputy Chief Medical Officer, reflect on his experiences of the darkest days of COVID in a talk entitled 'Science and Leadership during the SARS-CoV-2 pandemic.

JVT's regular briefings became so familiar to us all during the pandemic, delivered in his no-nonsense style, strewn with footballing metaphors, and as we now know delivered from a small step behind the Downing Street lectern to raise him to a suitably elevated position (apparently also used by a diminutive but perfectly formed PM). Sir Jonathan gave us a detailed insight into how scientific evidence was used to advise politicians, the final decision makers, some of whom also used the same step behind the lectern to similar

exclusively) in relation to the over 50s. A shortage of diagnostic capacity in many developing countries meant that excess mortality was probably the best indicator of the true COVID burden, which by the end of 2021 had reached nearly 15 million worldwide. Political leaders had the difficult job of integrating scientific advice with social and economic issues before taking major policy decisions, in the context of inevitable uncertainty and constantly changing evidence. He praised a number of his colleagues and gave particular prominence to the extraordinary teamwork of the UK Vaccine Taskforce, which had achieved amazing results in a remarkably short time by 'spread betting' on a range of different vaccine modalities. This had enabled the Joint Committee on Vaccines and Immunisation to devise strategies that have led to widespread immunity in the UK population. This, along with the evolution of the virus, meant that we can now live with a virus that is no more deadly than seasonal influenza, although we can never afford to relax completely, and he warned that further pandemics are inevitable. Finally, he gave us a few pithy insights into the workings of the CMO team in government, and his personal (and unique) approach to communication.

After taking questions, some friendly and some more searching, the proceedings were completed with a vote of thanks from Prof. Laura Bowater, who captured the feelings of the audience that we were fortunate that, not only had JVT come to speak to us, but also that the UK had had a man of such experience, wisdom and clarity in the right position at the right time. And with that we adjourned to the John Bull Building for an excellent curry, whilst JVT continued to take questions from those at both ends of their medical careers.

This was the first meeting to be hosted jointly by the two PMS's (Plymouth Medical Society and Peninsula Medical School), and it is hoped that this will be the first of many.



Sir Jonathan as we knew him at No.10 and meeting students at the Peninsula Medical School

University of Plymouth: achievements 2022

2022 has been a year of celebration at the University of Plymouth.

As we marked three decades of university status, we were delighted to be shortlisted as Times Higher Education University of the Year recognising, in particular, our global marine and maritime science and innovation impact.

During 2022 we have:

- seen 78% of our research recognised as world-leading or internationally excellent in the most recent Research Excellence Framework
- achieved Scope 1 and 2 net-zero status three years earlier than planned and progressed with new developments that will transform our future
- played a leading role in strengthening the regional economy through initiatives such as the Plymouth and South Devon Freeport and the Appledore Clean Maritime Innovation Centre
- shared our expertise on a global scale, attending COP27 in Egypt and forming partnerships with two universities in Ukraine.

We hope that you enjoy reading about these successes, and many others, in our Annual Review 2022.

Everyone connected with the University – our staff and students, our graduates, partners and community – is integral to our achievements and impact.

Thank you for your ongoing support.

Professor Judith Petts CBE

Vice-Chancellor and Chief Executive
University of Plymouth



Supporting PMF and local medical research

You can support the work of the PMF and its beneficiaries in several ways:

- A regular donation by Standing Order to our unrestricted funds. This provides the Trustees with maximum flexibility to dispense within its charitable purposes.

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- Making provision in your will for a donation from your estate.
- **Running a sponsored charitable event of your own choosing.**

Ways to donate:

- By BACS. Please email me at: admin@peninsulamedicalfoundation.org.uk and I will send you the bank details. (If you wish your donation to go to a specific fund please mark accordingly, otherwise it will be treated as 'unrestricted')
- If you would like to set up a standing order, please do so through the same BACS portal and again it would be much preferred if this could be left unrestricted.
- You can send a cheque made out to Peninsula Medical Foundation to the PMF Treasurer, Metherell Gard, The Old Memorial Hall, Looe, PL13 1PN.
- Just Giving <https://www.justgiving.com/peninsulamedicalfoundation>
- If you are a UK taxpayer, please don't forget to submit the [Gift Aid form which is attached.](#)

You can read more about PMF and medical research [here.](#)

Thank you on behalf of the Trustees and beneficiaries.

Denis Wilkins, Trustee and Head of Fundraising

admin@peninsulamedicalfoundation.org.uk

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