

Wessex Medical Research

Funding research to fight disease



Registered Charity
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The newsletter of WESSEX MEDICAL TRUST

Spring 2014

Spectacular results from London Marathon



Before



During



After

Professor Tony Kendrick vowed that, if his sponsorship money for The London Marathon went over the £1,500 mark, he would have his head shaved. Well, as you can see it did—and so did he! In fact the total raised by Tony, including GiftAid, was a remarkable £2,855. Well done Tony!!

Three enthusiastic young runners from Dibden Purlieu—Laura Burke, Kev Baker and Amber Jackson—joined the ranks of Wessex Medical Research Marathon Runners for the first time. As well as securing direct sponsorship, they organised a number of related events and the net result has been a total sum raised to date of over £6,000. They seemed to be enjoying themselves as well: an excellent result!

As always, we were well supported by runners from Guernsey, on this occasion Nigel Le Poidevin and Bernie Besnard. Nigel raised a very commendable £2,200. Sadly Bernie, who has run for us several times before, had to retire before the end of the race but he still succeeded in raising £800. Whilst we may not see Bernie in the Marathon too often now, he continues to be responsible for organising the annual Guernsey Quiz which normally raises some £2,000. Thanks for all your efforts, Bernie, and keep the Quizzes coming!



YOUR M&S

We are delighted to be able to announce that we have been selected by the staff at Marks & Spencer Hedge End as their Charity of the year for 2014-15. We look forward to working with them in the coming months to raise funds for the benefit of Wessex Medical Research.

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Fabric-based medical device

Dr Kai Yang is a research fellow in Electronics and Computer Science at Southampton. In 2011, she became the first researcher outside the Faculty of Medicine to be awarded an Innovation Grant when she was given £20,000 to investigate a fabric-based medical device. Kai has now completed her research under the grant and has reported to us on the results. Here is a summary:

“Functional electrical stimulation (FES) is a technique used to activate nerves with safe levels of electrical current in order to stimulate muscle activity. It is widely used to assist movement in patients with problems of the central nervous system which may result from stroke, head or spinal cord injury or other neurological disorders.

However, rehabilitation devices currently available for hand injuries are made of a mixture of rigid moulded plastic and large metal electrodes which have low selectivity and quicker patient fatigue owing to the fact that they stimulate more muscles than is necessary.

With the Wessex Medical Research grant, my research has pioneered the development of a screen-printed fabric FES array. The total thickness of the array is less than 1mm but it provides increased muscle selectivity and improved user comfort from flexibility, breathability, light weight and potential for integration into clothing.

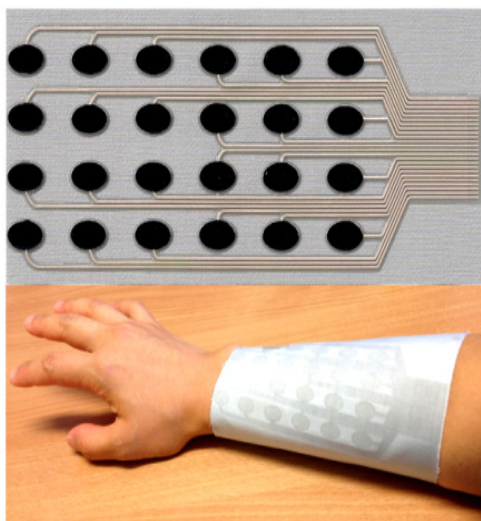
The materials used in the device which come into contact with the skin have passed the necessary ISO cytotoxicity test. The device has been tested on unimpaired participants who were instructed to provide no voluntary effort. It can provide highly accurate assistance to joint movement. Different reference postures (‘pointing’, ‘pinch’ and ‘open hand’) have been achieved by stimulating an optimised selection of elements. Further work will test the device on patients in order to improve user-friendliness.

The research into a fabric-based medical device has provided a practical and efficient approach to set up strong links into the multi-disciplinary activities of other researchers. This work has combined our team’s expertise on advanced material engineering (including fabric, ink formulation, printing and electronics) complementing skills on medical device control systems. We are now seeking collaboration with relevant experts to help us test the device on patients.

I believe the success of the fabric-based medical device will benefit broad communities including patients with hand movement difficulties, the NHS, medical device manufacturers and the government. I am very grateful for the Wessex Medical Research grant that enabled us to prove the feasibility of the fabric-based medical device. The promising results achieved in this project have built my confidence to apply for further funding to make the fabric-based medical device more efficient, robust and portable.”



Dr Kai Yang (yes—that's really her!) standing alongside her screen printer



The fabric-based device (top) and its application around a forearm (bottom)

Southampton Soroptimists

During their Presidential year just ended, members of Southampton Soroptimists raised almost £3,750 for medical research and dedicated this to the Child Brain Injury project. A significant element of this sum was contributed by the Camping Weekend organised by Stella Gardner in September 2013.

A cheque was formally handed over at a Soroptimists meeting in April. Our picture shows (L—R) WMR Patron Pamela Kimber, Lesley Courtney, Wendy Burchall, Dr Anne Biddle and Stella Gardner.

Our grateful thanks to all members of the Soroptimists for their generous gift.



Events

2014 got off to a brisk start with the following successful activities:

- ◆ New Forest Quiz Night (*pictured*) which contributed £672
- ◆ Romsey Curry Evening £825
- ◆ Salisbury Quiz Night £1,560
- ◆ We received £3,000 as a result of being the chosen charity to benefit from the Christmas Tree Festival 2013 at St Thomas's Church in Salisbury
- ◆ We received a donation of £1,300 from the Beaulieu Staff Charities at the recommendation of Jan Hoy.

In Memoriam

We are very sad to have to report the deaths of two stalwart supporters of Wessex Medical Trust:

Brigadier Terry White was Trust Director for many years until the mid-1990s. A longtime resident of Combe Bissett near Salisbury, he passed away in the autumn of 2013 after a brave battle with prostate cancer.

Professor Peter Sutton died in March 2014. A visiting professor of pathology at University College London, he was the first director of the Public Health Laboratory Service Centre for Applied Microbiology and Research at Porton Down from 1978 until his retirement in 1992. He was pivotal in establishing the Salisbury Volunteer Group of Wessex Medical Research in 2002 and was its chairman until poor health forced him to stand down in 2005.

We are proud to acknowledge the significant contribution each made to the Trust and extend our deepest sympathies to their families and friends.



For some time now, we have been promoting the idea of recycling used mobile phones and printer cartridges for the benefit of WMR. This is an ongoing appeal so please dig around and see what you can find. You can either send them direct to recycle4charity (go to their website as above for freepost instructions) but remember to tell them it's for the benefit of Wessex Medical Research and give our reference number (C16805) or call the office for a freepost envelope.

We are proud to be a member of the Association of Medical Research Charities



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PhD Studentships

We are pleased to report on two PhD studentships which we awarded in the Spring of 2014. Each studentship is for a total amount of £80,000 spread over four years and the supervisors are now in the process of recruiting suitable students to start their studies in October of this year. The supervisors and the selected projects (which have each been formally peer reviewed in accordance with the requirements of the AMRC) are as follows:

"A study of the first transgression mouse model of Infantile Nystagmus"

Nystagmus is an uncontrolled, to-and-fro oscillation of the eyes, which occurs in 1 in 1500 infants and is associated with poor vision. The student will exploit the opportunity to establish a relevant model for future treatment studies.

Principal supervisor: **Professor Andrew Lotery**
Director Clinical Neurosciences Research Group and professor of Ophthalmology, Clinical and Experimental Sciences.



Jointly funded by Gift of Sight



"Engineering mechanical stem cell niches for wound healing"

Regenerative medicine aims to replace or restore function to tissues lost or damaged through injury or disease. The student will seek a greater understanding of the factors that stimulate tissue-specific stem cells to respond to injury and promote repair.

Principal supervisor: **Dr Nick Evans,**
Lecturer in Bioengineering

Jointly funded by Rosetrees Trust

Dates for your Diary

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| June 7 | Midsummer Dinner Dance Romsey |
| June 18 | Speaker Lunch Gosport and Lee <i>Speaker: Pamela Kimber</i> |
| July 2 | Sunset Supper New Forest |
| August 30 | Quiz Evening Gosport and Lee |
| October 30 | Speaker Supper New Forest |
| November 2 | Quiz Night Romsey |

*For more information and tickets contact Wendy Burchall:
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Please check the website for additional activities and give us your active support wherever you can.