

The Cambridge BioResource

NEWSLETTER

BRINGING TOGETHER LOCAL PEOPLE AND LEADING RESEARCH

Issue 2 Autumn 2009




National Institute for
Health Research

Cambridge Biomedical Research Centre


Blood and Transplant

 UNIVERSITY OF
CAMBRIDGE

 MRC
Medical
Research
Council

Help us reach our target!

Thanks to the support of the Cambridgeshire community, our current volunteer panel stands at over 9,000 members. Our goal is to exceed 10,000 members by 2010.

We would like to take this opportunity to welcome any new members who have recently joined us. As our volunteer panel grows, the CBR becomes an increasingly valuable resource for researchers investigating common diseases.

This year we are recruiting as enthusiastically as ever, visiting annual events such as the Cambridge University Science Festival and Freshers' Fairs, as well as many varied workplaces and clubs.

These events are our main source of new volunteers, but this year we are hoping that you might be able to help us achieve our target by doing some of the recruitment for us!

We would like to ask each of you as existing members of the CBR, to help us recruit new volunteers, by telling your family and friends about the CBR and encouraging them to contact us if they are interested in taking part in local research. Together we can ensure that the CBR continues to be a valuable resource supporting world-leading research.

As a thank you, for a limited time we will be offering a £10 shopping voucher to each CBR member who introduces at least one new volunteer to the panel*. We have enclosed in this newsletter a copy of our current information leaflet for you to pass on to anyone who may be interested in finding out more.

We would also be very pleased to hear from you if you know of any workplaces, clubs or organisations that might be interested in receiving a visit from us.

Joining the BioResource is now easier than ever as we can not only offer flexible appointments to collect blood or saliva samples but depending on location we may also be able to arrange visits to volunteer's homes or work places to collect samples.

To increase our population demographics we have now extended our age range to include everyone over the age of 16 years.

Being a CBR volunteer continues to provide a unique opportunity for local people to get involved in the exciting research being undertaken in Cambridge.

Contact details:

Phone: 01223 769 215

Email: bioresource@cimr.cam.ac.uk

Text: 'CBR' to 82727

Web: www.cambridgebioresource.org.uk

**Until 31 March 2010. Terms and conditions apply. Limited to one £10 voucher per member. Full details can be found on our website www.cambridgebioresource.org.uk*

Bioresource Box 3

CURRENT RESEARCH

Genes and Mechanisms in type 1 diabetes

PROF. JOHN TODD

Last summer over 300 CBR volunteers were recalled to donate a small blood sample for this research study. This recruitment effort led to some very interesting research being published (Dendrou et al, 2009, below): a link has been discovered between one of the many genes involved in diabetes, called *IL-2RA*, with the level of protein expression on the surface of immune cells. This result has led to further research in this area, with some of the original volunteers returning to donate second and third blood samples. New volunteers are also still being recruited to the study.

Phenotypes linked to common weight gain/diabetes genetic variants

DR DAVID SAVAGE

Dr Savage's research into the genetic control of body weight regulation continues to show very promising results. However, further volunteers are still needed to quantify the current data. The study protocol has been condensed to a single-overnight stay in the Clinical Research Facility to facilitate recruitment to the study. If you have received an invitation to take part in this study and wish to participate please do get in touch with us as there still may be time to enrol you in the study.

Genes and Mechanisms in Cardiovascular disease

DR WILLEM OUWEHAND

Dr Ouwehand and his team have been using BioResource volunteers to help investigate the genes involved in cardiovascular (heart) disease. BioResource volunteers sourced from the National Blood Service have been invited to donate a blood sample to help the team better understand the function of blood cells in cardiovascular disease.

Study of the effects of polymorphisms in PTK2B and the FCRG genes on leucocyte function

PROF. KEN SMITH

Professor Ken Smith will be leading this study looking at the way the immune system responds to stimuli including infectious organisms and immune complexes. In particular, Prof Ken Smith and his team will be investigating how genetic differences between individuals affect the way their white blood cells respond under a number of conditions. It is hoped that a better understanding of how genetic variation affects immune responses will lead to new ways to treat infections, transplant rejection and autoimmune disease.

Coming soon...

Studies investigating other autoimmune diseases such as type 2 diabetes and inflammatory bowel disease.

Research Publications

We would like to thank all volunteers who have made these research studies possible.

- Dendrou et al (2009) Cell-specific protein phenotypes for the autoimmune locus *IL2RA* using a genotype-selectable bioresource. *Nature Genetics*, 41 (9), 1011-1015. PubMed ID: 19701192.
- Jones et al (2009) A functional genomics approach reveals novel quantitative trait loci associated with platelet signalling pathways. *Blood*, 114: 1286-7. PubMed ID: 19429868.
- Meisinger et al (2009) A genome-wide association study identifies three loci associated with mean platelet volume. *Am J Hum Genet*, 84, 66-71. PubMed ID: 19110211.
- Soranzo et al (2009) A novel variant on chromosome 7q22.3 associated with mean platelet volume, counts, and function. *Blood*, 113, 3831-3837. PubMed ID: 19221038.
- Watkins et al (2009) A HaemAtlas: characterizing gene expression in differentiated human blood cells. *Blood*, 113, e1-9. PubMed ID: 19228925

TAKING PART: A volunteer's perspective

Participating in world-leading research is what the CBR is all about. We are often asked about the different studies that volunteers may be invited to and what taking part in these studies involves.

To help answer this, we have introduced a column for volunteers to tell us of their experiences. In this issue, we feature a short article from a volunteer with a unique perspective.

Maureen Wiesner is one of our Research Nurses and she recently took part in the study 'Phenotypes linked to common weight gain/diabetes genetic variants'. She tells us her story:



I must say I was rather surprised but quite pleased when I received an invitation to take part in this study. As a research nurse working for the Cambridge BioResource I thought it was a great opportunity to experience research on the 'other side' as a volunteer.

I had been selected on the basis of my genotype – it has been found that certain genes predispose people to weight gain. Volunteers with different variations of one of these genes were invited to the study.

On arrival Dr Savage explained the study in detail, I signed a consent form and I was off! General measurements of my body were taken and a scan was done to look at my bone density and muscle: fat ratio, which revealed a rather larger fat: lean ratio than I would have hoped. I did get a good bone density score though!

The next morning before I got up my Basal Metabolic Rate was measured – a transparent canopy was placed over my head and shoulders and an analysis was made of the amount of energy I was using in my resting 'basal' state. Several samples of blood were also taken throughout the morning to measure things like thyroid and liver function.

In the afternoon an MRI (magnetic resonance imaging/spectroscopy) scan was performed to look at the distribution of fat in my body. I must admit that I found this a little scary and claustrophobic at first as it involved lying in a narrow tube – this surprised me as I used to be a keen pot-holer and didn't think I suffered from claustrophobia!

The second night was spent in a special calorimetry room (comfortably furnished with TV, DVD, video and computer). By measuring changes in oxygen and carbon dioxide, a calculation was made of how much energy I used while sleeping. A glucose tolerance test was performed the next morning and a muscle biopsy done later in the day. Although I was apprehensive about the biopsy, it was a completely painless procedure; all I felt was a bit of pressure as the needle was pushed into the muscle in my leg.

Then the best bit – an 'ad libitum' lunch – a whole trolley of food was wheeled in to my room and I could choose exactly what and how much I wanted to eat – and it was all delicious.

Overall I found participating in the study a very interesting experience; everything was thoroughly explained and (although I may be a bit biased) the staff and researchers were all charming!

WANTED: Volunteer Representative

We are looking for 2 members of the panel to become Volunteer Representatives. These people would represent the volunteer panel at Management Committee meetings, consult with researchers regarding use of the CBR panel, assist with recruitment strategies and provide an important link between the researchers and volunteers. If you think you would be interested in becoming a CBR Volunteer Representative, please email bioresource@cimr.cam.ac.uk, with a short statement demonstrating your suitability for the role.

News

The Cambridge Science Festival Family Fun Day



The Cambridge Science Festival is one of the largest family events in Cambridge and with the University celebrating its 800th Anniversary, this year it was bigger than ever. The Cambridge BioResource exhibit featured activities for young and old, from colouring and decorating our CBR logo, to joining our 'Virtual Volunteer Panel'. The day was a great success with many local, national and international visitors visiting our stand and it helped us to spread the word about the Cambridge BioResource.

Cambridge BioResource Open Evening

From the large number of returned newsletter reply slips, many of you expressed an interest in attending an Open Day to learn more about the BioResource and the research that volunteers are involved with. In response to this we are pleased to announce that we will be holding a CBR Open information evening in Cambridge on Thursday 10th December 2009, from 5.30pm (for 6.30pm start) –8.30pm. This event will be open to all members of the CBR and their guests and will feature talks from leading researchers on some of the exciting studies that have involved BioResource volunteers. It will also provide an excellent opportunity to meet members of the team and to ask questions and give feedback. Places will be limited so booking is essential. Please email us at bioresource@cimr.cam.ac.uk or phone us on 01223 769215 by 16 November to reserve your place(s). More information on the venue will be sent in late November to those who have registered places.

STAFFING NEWS

As our volunteer panel grows, so does our fantastic BioResource team. In early June we welcomed Simon Hacking to the team as a Research Assistant, and bid farewell to our Research Assistant, Rachel Simpkins whilst she is on maternity leave.



SIMON HACKING

Website update

You may have noticed a few changes to our website. We have recently reviewed the layout of the website in response to feedback from our volunteers. The website helps us keep volunteers up to date with information regarding recruitment events, research studies and CBR news. As always, we'd love to hear your feedback, so please don't hesitate to get in touch with any comments or suggestions.

CONGRATULATIONS TO OUR QUESTIONNAIRE DRAW WINNER!

Congratulations go to Ann Jackson, winner of the £50 shopping voucher from our questionnaire draw.

All volunteers who returned lifestyle questionnaires by January 31 2009 were entered into the draw.

Rachel Simpkins visited Ann to talk to her about her involvement with the CBR.



Ann joined the CBR in 2006, after hearing about it through the Cambridge University Cognition and Brain Sciences Unit, for whom she also volunteers. Ann said 'I decided to join the CBR as I have always been very interested in volunteering.'

Since joining, Ann has taken part in Prof. Todd's type 1 diabetes study. Ann commented that she found participating in the study very easy and convenient, as it only required a small blood sample.

Ann told us, 'I think that participating in the CBR is a worthwhile thing to do, as these research studies may help others in the long term. It also provides an invaluable resource to local researchers.'

Ann also suggested, 'I would like to see more newsletters and communication with volunteers to let them know what is going on with the CBR.'

Our kind thanks go to Ann Jackson for allowing this interview and photo to appear in our newsletter.

We hope that Ann is pleased with our latest effort!

Our thanks go to all volunteers who have returned their questionnaires to date. This new data will enable us to better match volunteers to upcoming research studies. It has also been a great opportunity for us to get in touch with you and ensure that we have your up-to-date contact details. If any of you have not returned your questionnaires we would still be happy to receive them. If you have lost or misplaced the questionnaire please do get in touch with us for another copy. Alternatively, you can complete the questionnaire on the phone with one of our study team.