



Department of Twin Research & Genetic Epidemiology (DTR)



## Newsletter 2009

### Welcome

It has been a very successful year for the DTR, with one of the highlights being the summer twin party arranged together with the BBC. Since we had very short notice to arrange this event we contacted twins by email, so unfortunately some of you did not hear the news. Even more of a reason for those of you with an **email address** to share it with us. The BBC filmed the party for a 2-part documentary entitled 'The Secret Life of Twins' which was broadcast on 30 September and 01 October 2009 on BBC1 and featured the twin party throughout. One of the main themes focused on the interplay of our genes and the environment and how we are not just the sum of our genes. It had nearly 5 million UK viewers and good reviews. You can see photos of the party on the twins section of our website.



Following the TV programme we have also had new twins joining. We still need to increase our numbers for our research, so if you know any twins, please pass on our details and a good word on how your help translates into new and valuable medical findings.

Our genetic studies using your DNA are now revealing more than we could have hoped. In the last 15 months we, along with our international collaborators, have found over 200 new genes for over 30 diseases and traits. These include genes for baldness, diabetes, gout, heart disease, osteoporosis, osteoarthritis, blood pressure and

cholesterol to name a few. By counting your moles we have also found two new genes for skin cancer. We are confident of further breakthroughs next year, particularly in the field of "epigenetics", which featured in the BBC programme and is a phenomenon that explains why even identical twins do not always get the same diseases. For more information about our discoveries and press releases visit our web-site [www.twinsuk.ac.uk](http://www.twinsuk.ac.uk)

Thank you as always for your enthusiasm, time and support, it is much appreciated by us and the world scientific community.

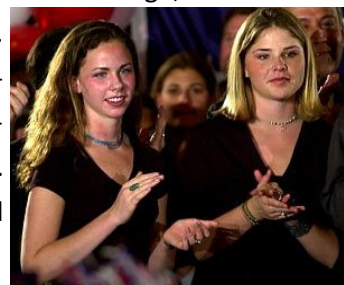
Season's greetings!

*Tim Spector*



### *DZ and MZ twins are both invaluable to genetic research!*

It is sometimes portrayed in the popular imagination and in the media, that identical (MZ) twins are somehow of more scientific interest than non-identical (DZ) twins, when in reality nothing could be further from the truth. DZ twins are crucial to our research. Heritability studies, one of the mainstays of twin research design, contrast the degree of similarity within MZ and DZ twin pairs for particular conditions and traits. Only if DZ twins are less similar than MZ twins can we estimate the contribution of genetic factors. Similarly, we use data from both DZ and MZ twins for many other modern genetic study designs. We thank **all** of our twins for making our research possible. You are all equally valuable to us and the research could not continue without each and every one of you - no matter what your twin-ship.



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## DTR Twin wins 'Pride of Britain' award

Victoria Vazquez, Tim's PA, interviewed Kristin Hallenga (age 23) about her Breast Cancer Awareness Campaign for young people:

**We as a society tend to associate breast cancer with middle aged women. It must have been a real shock for you to be diagnosed with such an illness?** As soon as I found out I was very shocked obviously. The doctors did not think that such a young person as myself could be getting this illness and that made me think that something needed to be done about this. I looked at what campaigns were out there and I really could not find anything so that is what motivated me to set up my website. This is something that I really enjoy and helps me to keep in high spirits. It has turned out to be a full time job!

**Have you had any feedback from people the same age as yourself?** The feedback from young people has been positive. They were thankful and supportive. Young people commented that they were not aware that they could get this illness and now feel more empowered going to the doctor and having check ups.

**You are an identical twin. How has this affected the relationship with your sister?** We have always been very close and I have a very supportive family, but we have become closer and we now make sure that we spend more time together. I do not know how I would cope without her. She is a very positive influence.

**How would you feel if your sister were the one suffering from cancer?** I would find it very hard. I do not know how she handles it as well as she does. She is always very positive and encouraging and always tries to keep my spirits lifted.

**Does it make it harder or easier to cope with your illness having a twin?** It feels easier although sometimes it is hard when I try to put on a good face or be positive when I am not feeling too well. She will notice it immediately even though I try not to show it and tell my mum.



Kristin Hallenga with her twin sister, sister and mother

**How did you feel about getting a Pride of Britain Award?**

I felt amazed when I found out I got the prize and really overwhelmed that people would recognize my work trying to help others. I think that what I am doing is just living and trying to get the most out of life and also helping other people by raising awareness.

**Any other projects planned to continue your campaigns for better cancer awareness?** We have a Christmas event coming up and are starting to look at 2010. We are getting more involved in raising awareness in universities and telling a lot of people about it. I will be giving lots of talks in schools and colleges. For more information visit [www.coppafeel.org](http://www.coppafeel.org)

## Passport photos

We would really appreciate it if you can post us a recent passport photo of yourself taken using passport photo guidelines, without glasses. We will examine these photos to see if there is a connection between different facial measurements and health. Please write on the back of the photo your study number (from the top of the questionnaire) and date of birth and the date the photo was taken. As a thank you, all those who return a passport photo by the end of January will be entered into a prize draw for five £20 M & S gift vouchers!



M&S

## DTR features in Wellcome Exhibition



The Wellcome Collection in central London opens its major exhibition of the year: **'Identity: Eight rooms, nine lives'**, 26 November 2009 to 6 April 2010. This exhibition takes a look back through history at how science has at-

tempted to determine human identity. One of the sections of the exhibition focuses on twins, and the DTR has provided mocked-up questionnaires which demonstrate how identical and non-identical twin responses can differ. In addition some photos of twins from the BBC twin party will also be displayed at the exhibition. For more information go to [www.wellcomecollection.org/exhibitionsandevents](http://www.wellcomecollection.org/exhibitionsandevents) or call

020 7611 2222.

**wellcome**trust

## Twin Cartoons



*The man who said it was fine to have twins because one made so much noise that you couldn't hear the other!*

Karina and Sonya were the third set of twins to join TwinsUK back in the 1990's. Their mother Elizabeth Cochrane, under her pen name JERI, was the creator of the first 'pocket' cartoon. Between 1922 and 1942 JERI's "Impossible People" were a feature of the national paper The Daily Sketch. JERI composed over 5,600 cartoons in total and some of them reflect her experiences of raising twins. Karina and Sonya have kindly allowed the DTR to print these 2 cartoons. Karina has recently composed a book that includes 250 IMPOSSIBLE PEOPLE cartoons which will be available towards the end of 2009 from Amazon or [www.impossiblepeople.com](http://www.impossiblepeople.com)



*The child who said, "I should keep that one." when shown the new twins.*

*Top tips from our expert on healthy aging, Dr Claire Steves on how to reduce your risk of..*

### ....Osteoarthritis (OA)

- ◆ Avoid over-straining the joints of your hips, knees and hands
- ◆ Keep your muscles strong to help support your joints (especially if you have early signs of knee OA) - at least 30 minutes of exercise 5 times a week
- ◆ Swimming and cycling are great, as is light weights exercise, especially on the 'quads' muscles
- ◆ If you work at a desk, make sure that your chair is at the correct height, and take regular breaks to move around
- ◆ Maintain a healthy weight

### ....Osteoporosis (OP)

- ◆ Regular weight-bearing exercise such as brisk walking or running, keep-fit classes and tennis
- ◆ Time out doors – sunlight is great for your bones (but don't get sunburned!)
- ◆ Wear supportive footwear such as trainers
- ◆ Eat/drink plenty of calcium, for example from milk, cheese, yoghurt, tofu and supplements if needed. A diet rich in oily fish, broccoli and spinach is high in essential vitamin D
- ◆ Quit smoking and limit alcohol intake
- ◆ Prevent falls by getting your eyes checked, improving your balance (try Pilates or Tai Chi), and keeping your muscles strong

## Exciting research results & secret skin care tips from DTR



Dr Bataille

The latest study from Drs Bataille and Glass, the DTR skin team, was widely reported in the media and found new genes for being 'moley.' Having moles is normal (around 1 in 20 people have over 100 moles), but it is recommended that people who have many large moles have a mole check especially if they have a family history of skin cancer or other cancers. Checks are also recommended for people with an irregularly coloured mole, or one with irregular borders, especially if growing. Most skin cancers are dark with different shades of brown and black but some may be red with no pigmentation.

However, it is not all bad news. The research also helped scientists to understand the ageing process and showed that 'moley' people tend to age better, have less sun spots and wrinkles and are at lower risk of osteoporosis! We managed to persuade Dr Bataille to reveal her well guarded skin care regime. She uses a daily moisturizer with sunscreen in the summer (L'Oreal Revitalift SPF15), but without the sunscreen in the winter, and in the summer sun, Dr Bataille covers up with L'Oreal Solar Expertise (SP15 or higher).

## Study volunteers needed

**Computer memory games** Are you over 50 **and** have taken part in computerised memory tests at St Thomas' in the past? If so, we are inviting you to take part in research that is aiming to identify the factors that enable people to maintain their memory and thinking as they get older. The study will involve computerised 'game-like' tests, and we are also offering you a hearing test. If you are interested or have any questions, please contact Dr Claire Steves on 0207 188 6726 or email [claire.j.steves@kcl.ac.uk](mailto:claire.j.steves@kcl.ac.uk) A big thank you to those of you who have been in the study and given us such positive feed-back.



**Eye-Eye!** Hello, my name is Sam Fahy and as part of my PhD I'm conducting a follow-up eye study to investigate whether retinal vessel measures are associated with health. If you had an eye test with Dr Chris Hammond about ten years ago at the DTR but have not had a second eye test with us and would like to take part (even if you have withdrawn), please contact the main office on 0207 188 5555 to arrange a phone interview or a visit. Thank you!



**Internet working memory study** If we have your email address, you should have received an email in June inviting you to take part in our on-line research with Dr Tracy Alloway from the University of Stirling, investigating whether we inherit our working memory skills from our parents. Thanks to those of you who have already completed the on-line memory tests. If you have not yet done so, have internet access, and can spare 20-30 minutes please go to [www.memoryandlearning.com/twins](http://www.memoryandlearning.com/twins) to complete the tests. You will need to use your study number that is at the top of your questionnaire. At the end, you will get feedback on your performance, including tips on working memory strategies. It would be most helpful if both you **and** your twin could complete the tests (separately of course!). If you have any questions please contact Dr Alloway on 01786 467 639 or email [t.p.alloway@stir.ac.uk](mailto:t.p.alloway@stir.ac.uk)

### Here we provide answers to some of your questions about the DTR questionnaire.....


**Q:** Why do you sometimes repeat questions from earlier questionnaires? **A:** Over time your responses may change so we need to keep our records up to date. Also new twins are constantly joining and we need their responses.

**Q:** Why do we ask questions on such varied topics? **A:** We have received funding from the prestigious Wellcome Trust and are encouraged to collaborate with other researchers to aid scientific and clinical advancement. Some questions are asked for these collaborations.

## DTR News



If you are reading this at home and have previously had to withdraw from participating in research, we would like to invite you to get back in contact. There are now many easy ways to participate, both through the internet and by post, so please contact Karolina on 0207 188 5555 or email [twinsuk@kcl.ac.uk](mailto:twinsuk@kcl.ac.uk) if interested.

**DO YOU HAVE TROUBLE READING SMALL PRINT?** Please call us on 0207 188 5555 and we will arrange for you to receive a larger print questionnaire or newsletter. 

<http://www...> Moving rapidly into the 21st century, we are developing a web-based questionnaire which may be a form of communication in the future - it is good for the environment, quick, and cheap!

If you are happy to be contacted by email and have **not** received an email from us in the last 6 months, please send us an email to [twinsuk@kcl.ac.uk](mailto:twinsuk@kcl.ac.uk) including your study number and date of birth from the top of your questionnaire. Having your email address will also allow us to inform you at short notice of twin-related news such as media events, press releases and studies of interest.



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