



*Supporting ground breaking research  
at the Autism Research Centre,  
Cambridge University*

## MARCH 2016 NEWSLETTER

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### HELP MAKE A DIFFERENCE

**We need your support to fund the vital research projects at the Autism Research Centre.**

Your generosity could make it possible to identify at birth those who have autism and help develop new and validated interventions which could make a real difference to people's lives.

[Donate now](#) or find us on [JustGiving](#) and [VirginMoneyGiving](#)

### CONTACT US

If you would like to find out further information about any of the projects or would like to become more involved in ART, please [email us](#)

You can also find ART [@AutismResearchT](#) and [facebook](#)

Further information about research at the ARC can be found at [www.autismresearchcentre.com](http://www.autismresearchcentre.com)

### Welcome our bi-annual Autism Research Trust newsletter

The Autism Research Trust (ART) exists to fund research into autism predominantly at the Autism Research Centre at Cambridge University, directed by Professor Simon Baron-Cohen.

Since the charity began in 2010, we are proud to have supported the Autism Research Centre produce high quality and influential research into autism. Just after our last newsletter, we produced a review of the 36 research papers that ART have helped support, which you can read about [here](#).

***Thank you to all of our supporters without whom this research would not have been possible.***

If you would like to find out more about what we do, the research that we fund, or feel inspired by any of our generous supporters and eventers and would like to be involved further with ART, please drop by our website [www.autismresearchtrust.org](http://www.autismresearchtrust.org) or send us an email at [info@autismresearchtrust.org](mailto:info@autismresearchtrust.org). We look forward to hearing from you!

### News from the Autism Research Centre

#### Study of half a million people reveals sex and job predict how many autistic traits

Autistic traits are characteristics that everyone has, which are linked to what is seen in autism. For example, difficulties in taking another person's point of view or excellent attention to detail. The University of Cambridge developed a test to measure these 15 years ago, the Autism Spectrum Quotient, or AQ.

Emily Ruzich, a PhD student at the ARC and Professor Simon Baron-Cohen tested the theory that autistic traits are linked to both sex and to having a 'system-thinking' mind in the this largest study to date with over 450,000 individuals.



The results confirmed this link to sex difference and jobs in science, technology, engineering and mathematics (STEM).

Professor Simon Baron-Cohen said: *"Previous studies have found the number of autistic traits a person has is influenced by both genetic factors and prenatal testosterone levels. These may shed light on why we find males in the population on average have slightly more autistic traits than females do, and why fathers and grandfathers of children with autism are over-represented in STEM fields."*

#### Read article

#### **Alexa Pohl, PhD student at the ARC, presented to the UN**

Alexa Pohl, spoke at the United Nations as a disability advocate at a briefing for the Committee on the Elimination of all forms of Discrimination Against Women.

She presented research on the stigma surrounding autistic mothers, and participated in a discussion on this topic. Her research at the ARC looked at the experiences on autistic mothers in order to understand challenges and issues and coping strategies used.

Alexa commented: *"With the dramatic rise in autism prevalence, we should be living in a society that is aware of both the capabilities of people on the autism spectrum, as well as the challenges they face. Although great progress has been made in autism awareness, autistic women are overlooked, as they represent a minority within a minority. For years, autistic women have been advocating for better access to services (such as diagnostic assessments) and adult autism awareness in domains where autistic women need it most, including in reproductive healthcare and amongst professionals who may interact with an autistic mother. We hope that the results of our research can convey the importance of considering autistic mothers in service provisioning and policy, and the briefing for CEDAW was an excellent first step towards educating decision-makers who can create change for autistic mothers."*

#### **Other research**

The ARC continues its research with the testing of specific sex steroid hormones to see whether there is an association with autism spectrum conditions. Researchers are using fMRI scanners to see changes in the brain after the administration of the 'social' hormone oxytocin in females. Pregnant women who have a diagnosis of an ASC are being scanned during pregnancy to see how the brain of the baby develops and DNA testing of families with many members with an ASC continues.

In addition to these projects, ART is looking to fund innovative projects reprogramming hair cells of a person with autism to reverse them back to stem cells. Nerve cells are grown from these to test for physiological

markers such as proteins expressed by genes, shape and size of the neurons, and nerve impulse transmission. This study will help to identify the biological causes of autism, to better understand how the brain of someone with autism differs and why, for instance, there may be over- or under-sensitivity to sounds, touch, tastes, smells, light or colours. This will also help to estimate what environmental factors trigger autism, or whether autism is a result of neurodiversity of the human species and an effect of the process of human evolution.

While there are many tools available to non-verbal children and adults with autism that provide them with an alternative means of communicating (signs, flashcards, etc.), there are very few tested methodologies and products that look at teaching non-verbal children with autism how to produce and use recognisable and meaningful utterances. ART are looking to fund a project that intends to design and test an app that will respond to the gap in resources that this represents for non-verbal children with autism as well as for their families, caregivers and educators. Methodologies used in this app will incorporate sound production, association of sound meaning and lexical categorisation.

### Other news

A new series, **Employable Me**, begins on Wed 23rd March at 9pm on BBC2. Featuring Professor Simon Baron-Cohen, this series aims to look beyond first impressions to uncover the hidden talents of those on the extreme end of the neurological spectrum.

## Events

Now that the warmer months are approaching, it's an ideal time to sign up for one of our many active challenges right here in the UK. We have a range of walking and trekking events taking place over the Summer so take in the scenery, sunshine and fresh air while raising money for ART! Take a look at the [event pages of our website](#) for more information about the events below.

### Just Walk - South Downs



This wonderful flagship walking event in its tenth year, offering something for all ages and fitness levels. Choose from 10km, 20km, 30km, 40km and 60km and a 10km Twilight route. The event starts and finishes at Goodwood Racecourse near Chichester and takes in the stunning South Downs National Trail and West Sussex countryside. It takes place on Saturday 7<sup>th</sup> May 2016.

### The London 2 Brighton Challenge



This event on the weekend of 28th-29th May is now one of the UK's greatest endurance events. Most of the 3000 challengers will walk the 100km; some will jog it, and many will run it as an ultra-marathon. However you take it on, it's a test of determination and stamina but also promises to be great fun!

### Trek Fest The Peaks Challenge



This takes place on 3rd – 4th September. The Peak District is stunning and more than lives up to its reputation as one of Britain's most inspiring National Parks. Choose from 25km, 50km, 75km and 100km routes.

*Please visit our [website](#) for more fundraising challenge inspiration, including ideas and events for 2017. Also, if you know of any local events or activities which ART could be part of, please get in touch and we would be delighted to support you. For all fundraising and event enquiries please email [elizabeth@autismresearchtrust.org](mailto:elizabeth@autismresearchtrust.org).*

## Events Round-up

### Autism Awareness Month plans are taking place

This year we have drawn inspiration from keen ART fundraiser Jenny Jones and family, and are encouraging friends and families to organise their own Awareness Walks. Jayne Tasker, mother to Matthew who is on the autistic spectrum, is organising a walk in Wimbledon on Saturday 16th April to raise funds and awareness for ART.

We have also reached out to schools, and Malden Manor school in Surrey is an example of one school planning to fundraise for ART next month through an array of fun activities!

Stella & Dot, the boutique-style jewellery and accessories company, is hosting an ART charity event on Thursday 28th April, with a raffle and percentage of proceeds going to ART.

### Norton Rose Fulbright LLP

A corporate panel discussion is being hosted by law firm Norton Rose Fulbright LLP in London and includes the Autism Research Trust and Aspirations - an advocate group for those with Asperger's Syndrome. The aim is to create a stimulating, insightful and positive discussion promoting new thinking by corporates when it comes to recruiting, nurturing and supporting employees with AS.

### **Sporting Challenges**

The next few months are full of sporting challenges including the Virgin Money London Marathon, the Prudential RideLondon-Surrey 100 bike ride and the Edinburgh Nightride to name a few. Good Luck to all our fundraisers!

*If you are able to put ART forward for any local events or activities please do get in touch. We also have a growing active challenge team participating in running, cycling and trekking events throughout the year. To join the team and fundraise for ART just sign up to the event of your choice and set up your fundraising page. We will support you in any way that we can! Visit our website for inspiration*  
**Take Part in an Event**

Please visit our website at [www.autismresearchtrust.org](http://www.autismresearchtrust.org)  
Donate to ART at [www.autismresearchtrust.org/donate](http://www.autismresearchtrust.org/donate)