



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

APRIL 2017 NEWSLETTER

Quick Links

[ART Website](#)

[Donate Now](#)

[Contact Us](#)

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

Welcome the 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. Over the past 4 years, ART has funded 15 separate projects, supporting over 10 members of staff and students. The results of this research have been published in peer-reviewed scientific journals.

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

In the **RESEARCH** section of this newsletter you can find out more about the research we have funded at the Autism Research Centre.

Want to get involved? Find out more about upcoming events and find ideas to inspire you in the **EVENTS** section.

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 or send us an email at info@autismresearchtrust.org. We look forward to hearing from you!

Research

ART has recently awarded grant funding to four different projects at the Autism Research Centre, Cambridge University. These projects are at the cutting edge of new techniques. One takes advantage of recent advances in induced pluripotent stem cells (iPSC) that allow the generation of neurons derived from the hair samples. One extends a project that ART has previously funded, which



involves scanning of pregnant women with autism. A third project will analyse the hormone levels of mothers, and the final project will enable more in depth analysis of brain scans taken following an oxytocin nasal spray.

We are excited about these novel research projects, which will deepen our understanding of autism, may provide biomarkers for earlier detection and diagnosis, and add to our knowledge on the effectiveness of possible interventions to help those with autism.

All the latest publications from the ARC can be found on our [website](#)

We look forward to hearing from you if you would like further information about any of these projects.

Hormones and Biomarkers during Pregnancy

Research will analyse samples from an existing novel cohort of mothers who have a diagnosis of autism and a control group of typical mothers. Hormones analysed will include testosterone, dihydrotestosterone, estradiol, melatonin and luteinizing hormone.

A sub study will investigate how both behaviour, including autistic traits sex-linked cognition, and facial morphology are related to current hormone levels and fetal testosterone levels measured during pregnancy. This will help us understand what causes variation in autistic traits in the general population, why autism is more common in boys, and links to the ARC discovery that fetal testosterone is elevated in in the womb in pregnancies that result in autism.

Autism Early Brain Development Study

This study involves scanning the brains of high-risk babies during pregnancy and at birth. This is a unique study of mothers with autism who are pregnant, to understand why that child has an increased risk of developing autism compared to a child of a parent without autism. Such information will reveal how the brain of a baby who goes on to develop autism differs from a typical baby, at the earliest point of development.

Structural and functional properties and epigenetics of induced pluripotent stem cell (iPSC) derived cortical neurons in autism

The overall aim of this project is to model early cortical development in autism using induced pluripotent stem cell (iPSC) technology to study the structural and functional properties and epigenetic markers of cortical neurons.

The study of autism iPSC-derived cortical neurons will give us insights into mechanisms of atypical neuronal wiring and the pathophysiology of autism. The results may provide further information about the candidate genes linked to autism as well as providing biomarkers for autism.

Oxytocin Brain Scanning Study

Funding of this project will support a 12 month post-doctoral fellowship to further analyse the brain scans of adults after taking oxytocin nasal sprays. The research will look at whether social cognition/theory of mind/emotion recognition circuitry returns to more typical levels.

IMFAR

We have also continued to provide travel scholarships for students to visit the International Meeting for Autism Research, which this year will be held in San Francisco.

Other news

Professor Simon Baron-Cohen recently spoke at the United Nations, highlighting that people with autism still do not enjoy human rights to the same extent as everyone else. You can watch the keynote speech [here](#)

Events

Here at ART we actively encourage people to get involved in challenges and events to promote the cause of autism while raising much-needed funds for the terrific research carried out at the Autism Research Centre. And it's incredible what difference even one individual can make! Last September, an impressive £2,000 was raised by Sir Shankar Balasubramanian who completed a 100km ultra-Marathon to celebrate the milestone of his 50th birthday!



Other eventers have embarked on all kinds of activities and events, from music evenings to sponsored walks. We are particularly grateful to the 101 (City of London) Engineer Regiment (Explosive Ordnance Disposal) who raised a staggering £50,000 at a charity boxing event and recently presented the money to two charities. Felix Fund – The Bomb Disposal Charity and Autism Research Trust both received £25,000 at a special presentation at Carver Barracks.

We are also grateful to the Northallerton & District Lioness Club up in Yorkshire who, between Christmas and New Year, kindly organised a series of in-store bucket collections for ART, raising £1,000.



The year ended on an exciting note with the ART hosting a preview screening of the award-winning LIFE, ANIMATED documentary on 5th December. This fascinating film won the directing award at the Sundance Film Festival, and portrays an autistic child, Owen, who finds a pathway to language and to the world in Disney animations such as Lion King and Beauty & the Beast.

As a charity partner, ART organised the screening ahead of the UK theatrical release which took place at the Cambridge Picturehouse and included a Q&A with the wonderful Suskind family, the director of the film, Roger Ross Williams and Professor Simon Baron-Cohen. A percentage of proceeds were donated to ART.



We enjoyed the revolutionary play of Jon Adams' *Games with the Water Horse* which was performed at the Cambridge Union, as part of the Science Festival. Drawing upon linear time and Fibonacci numbers, Jon Adams described connected events informed by his autism and synaesthesia.



ART is looking forward to hosting an important and inspiring discussion event, 'Embracing Neurodiversity in the Workplace', in conjunction with C. Hoare & Co, on 25th April. The panel will draw on views and experiences from Professor Simon Baron-Cohen, Ray Coyle, UK CEO of Auticon and Mona Shah, MD of Harry Specters Chocolates.

April is a highlight of the ART calendar. As part of this year's Autism Awareness Month, we have been spreading the word and raising funds through film screenings, jewellery events, collaboration with LEGOLAND and street collections. Thank you to everyone who has been part of it!

We hope the above activity has been inspiring – why not join us in supporting ART! Talk to friends for ideas, take a look around your community for fundraising opportunities or why not have a look at our website . www.autismresearchtrust.org/get-involved to see what others have done or to browse some of the organised charity challenges including wonderful treks or bike rides. Alternatively please email Elizabeth@autismresearchtrust.org for fundraising and event information and tips. We look forward to hearing from you!

Please visit our website at www.autismresearchtrust.org
Donate to ART at www.autismresearchtrust.org/donate