



# Theirworld

## Edinburgh Birth Cohort

Winter 2018

## Welcome...

...to this winter edition of the TEBC newsletter. News in this issue includes an update on recruitment of families to TEBC, new starters and both MD/PhD and promotion congratulations. Recruitment of families to TEBC depends on the dedication and hard work of Gillian Lamb (research midwife) and Gemma Sullivan (clinical research fellow) and you can discover more about them and their role. Published research by Emma Telford, which formed part of her recently awarded PhD is also featured. We couldn't do the research without the support of the families who give their precious time to contribute and we'd like to say a big thank you to you all. We look forward to keeping you up to date on TEBC progress in the summer.



## News

### Recruitment update

- Over 100 families have now agreed to take part and the first families are beginning to return for their 9 month visit. Also, families from our early work are now helping us and coming back for a visit when their child is 5 years old.



- We are delighted to announce that **James Boardman**, Chief Investigator on TEBC has been promoted to the position of Professor. James has also been elected President of the Neonatal Society. Many congratulations from all the team at TEBC!



- We've had several new starters with TEBC over the last few months: **Bethan Dean** and **David Stoye** (Clinical Research Fellows) and PhD students **Sinéad O'Carroll** and **Emily Wheater**. A warm welcome to all.

- TEBC investigators and researchers attended the Neonatal Society meeting on 9th November at the Royal Society of Medicine, London. Professor Rebecca Reynolds delivered a fascinating and well received keynote lecture titled 'Maternal health determines life course outcome'.



- Dr Sarah Sparrow** has passed her MD viva and **Dr Emma Telford** was recently awarded her PhD for research related to TEBC. Congratulations to Sarah and Emma. Emma's PhD research on the microstructure of the newborn brain is featured in this newsletter.



Sarah



Emma

- Dr Gemma Sullivan** was voted 'best presentation' for her talk 'Breastmilk exposure influences brain development in preterm infants' (Authors: Blesa M, Sullivan G, Telford EJ, Semple SI, Quigley A, Bastin M, Boardman JP). Congratulations Gemma!



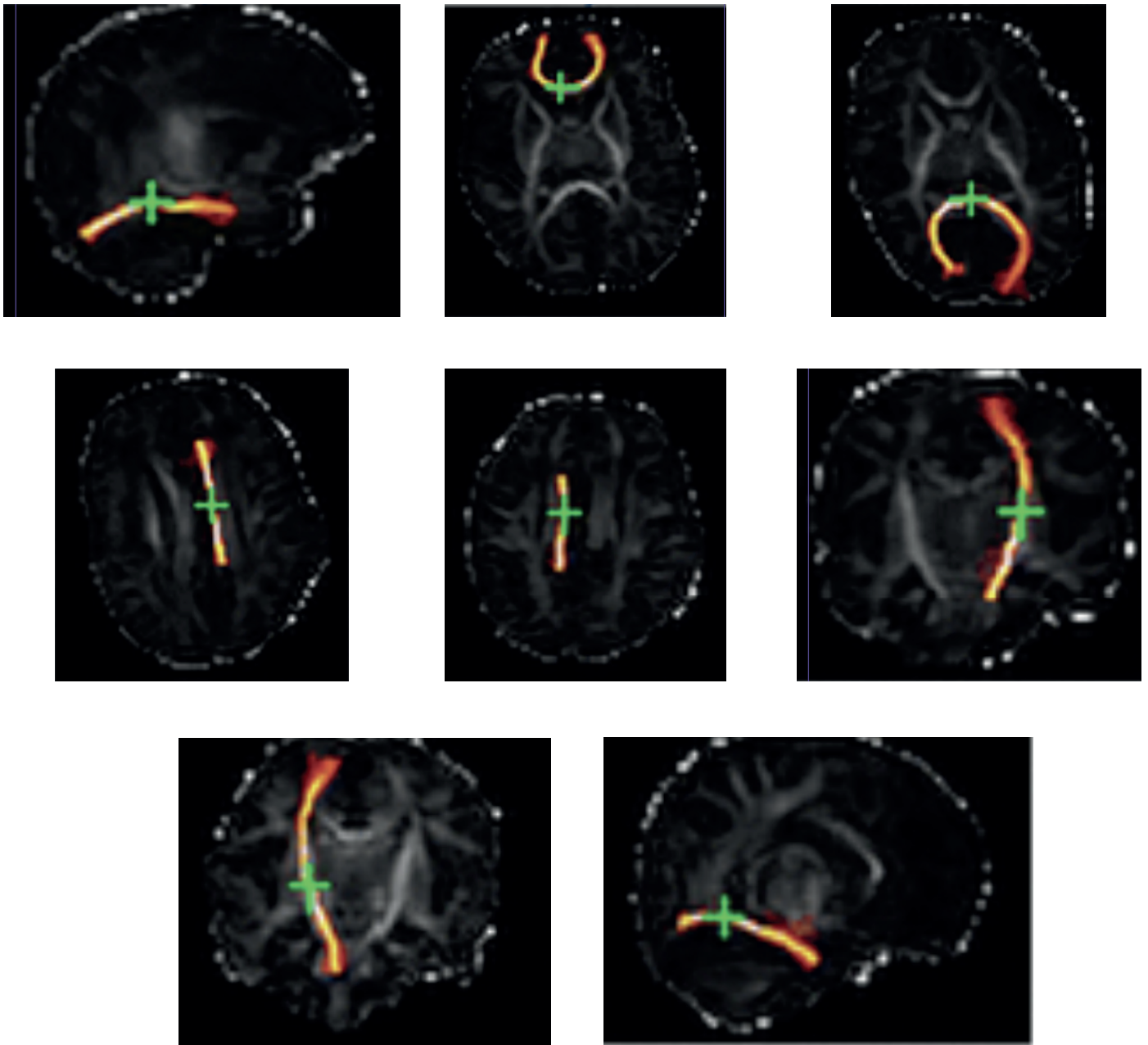
Dr Gemma Sullivan.

## Research

Our latest finding on newborn brain microstructure has been published. We obtained MRI scans from preterm babies at the time they were due to go home and from some healthy full-term time babies whose mums were happy to be part of the TEBC.

We used a type of MRI scanning which allows you to get pictures of brain connections and then we used sophisticated computer programmes to compare those connections between the two groups. We found that the brain networks that adults have to support intelligence is present in very early life, well before myelination is widespread: in this respect the newborn brain is a copy of the adult brain. However the 'scaffolding' is altered by preterm birth, and this could explain the difficulties that some preterm infants experience with learning as they grow up. You can find further information about this finding in the news section of our website (<http://www.tebc.ed.ac.uk/2017/06/tebc-paper-published-in-brain-structure-function/>).

### MRI pictures of brain connections in a newborn baby



## Who's Who

### Gillian Lamb – Research Midwife

Gillian is the TEBC's Research Midwife. She is responsible for approaching parents about the study, and data collection in the neonatal period until babies leave hospital to go home with their parents.



Gillian originally studied psychology at Heriot Watt University graduating in 2008, then started her midwifery training in 2012 at Napier University. Following her qualification as a midwife in 2015 she worked in the Antenatal clinics and Day Assessment Unit in the Edinburgh Royal infirmary before joining TEBC.

On a day to day basis, Gillian's role includes approaching parents with information about the study, consenting parents who decide to participate, collecting samples from babies and data collection about mother's pregnancies and the babies neonatal care. She also organises the MRI scans and supervises babies during their scans.

### Gemma Sullivan – Research Student

Gemma is a neonatal doctor and PhD research student in the Jennifer Brown Research Lab.

She studied medicine at Glasgow University graduating in 2006.

In 2010, Gemma became a member of the Royal College of Paediatrics and Child Health and came to the Edinburgh Royal Infirmary Neonatal Unit in 2014 for her sub-specialty training following an international fellowship at the Royal Children's Hospital in Melbourne.

Gemma started her PhD with the supervision of Professor James Boardman in February 2017 called "The effect of perinatal inflammation on preterm brain development".

As part of her PhD, Gemma's role within the TEBC is approaching parents about the study, collecting samples from babies and supervising babies during MRI brain scans.



## Contact Details



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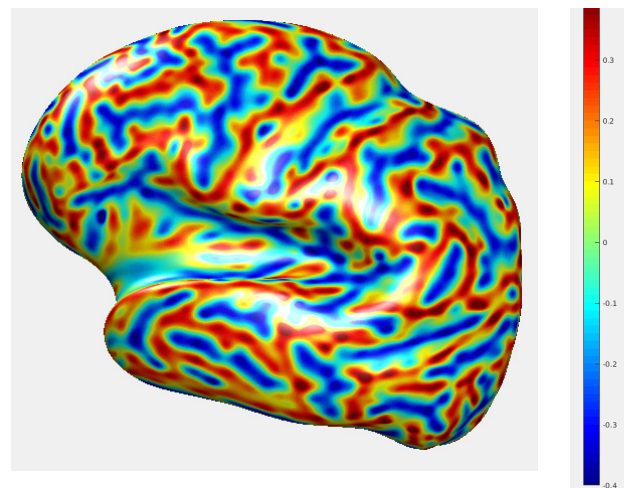


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## Image of the Issue



Scan image showing the curve of the brain surface in a newborn baby. Warm scale colours (red, orange, yellow) represent areas of protruding surface curvature. Cool scale colours (shades of blue) represent areas of sunken curvature.