

A Bumper Year

2017 was such a busy productive year, it's taken us months to finish this newsletter!

Good News:

- ✓ Dr Neshika Samarasekera has been awarded a Stroke Association grant and will re-join the team (below)
- ✓ Another major publication in *The Lancet Neurology* and Mark Rodrigues' scanning going well with Edinburgh's new state-of-the-art MR-PET scanner (page 2).
- ✓ Expanding the team - Dr Tom Moullaali has been awarded a British Heart Foundation 3-year clinical research training fellowship (page 3).
- ✓ We marked World Stroke Day again with another successful health promotion activity (page 3).
- ✓ We awarded the Arthur Fonville prize to another two medical students (page 4).

- ✓ Prof. Salman and others obtained MRC funding to enhance the brain tissue bank (page 4).
- ✓ Katie McGoohan returns to the team (page 5)
- ✓ News from the patient reference group (page 5)
- ✓ Donations (page 6)

Dr Nesh Samarasekera re-joins the team

We are very pleased to have been awarded a grant by the Stroke Association to look at the inflammation (swelling) that follows a brain haemorrhage. This will build upon work from our LINCHPIN study using the brain tissue samples donated by people who died from brain haemorrhage. By looking at how bleeding in the brain causes swelling, we hope to identify a treatment to improve outcome after brain haemorrhage. Nesh set up LINCHPIN in 2010, and will return to lead this study with a prestigious 'NRS fellowship'!

Edinburgh diagnostic criteria published in The Lancet Neurology

Some brain haemorrhages are caused by cerebral amyloid angiopathy (CAA). CAA is due to a protein called amyloid filling blood vessel walls. CAA may lead to a higher risk of dementia and brain haemorrhage happening again, but it is difficult to diagnose. Until now, only MRI has been able to suggest CAA.

We studied participants in our LINCHPIN study who had had a brain haemorrhage diagnosed on CT (the commonest type of brain scan) and underwent a research post mortem. We found that two simple features on the CT scan and a blood test accurately predicted who had CAA as the cause of their brain haemorrhage. These are called the 'Edinburgh criteria'. They can be used worldwide because they don't require high tech MRI scans. Check our Facebook page for a link to the article. The

work was done by Mark Rodrigues (pictured right), who has won lots of prizes for the research, including the Anne Hollman medal:



MRI-PET study update

Our latest study using the state-of-the-art MRI-PET scanner is going well (after a few delays...). The scanner allows use to look at the molecular changes in the brain as well as structural features. We hope this will provide more insight into CAA as a cause of brain haemorrhage. Thanks to 15 participants who joined the study so far. Mark Rodrigues is leading this study – only 30 more participants to find, Mark!

Meet Tom Moullali - our newest research fellow



Tom has made the move North from London, but he has taken an unconventional route... stopping off in Sydney, Australia first! His British Heart Foundation clinical research training fellowship asks, "Does blood pressure variability affect outcome after intracerebral haemorrhage?" In other words, after a stroke due to bleeding in the brain, does the amount a person's blood pressure fluctuates affect their risk of further strokes? He will be working with Rustam and other experts from across the UK and in Sydney to answer the question

Another successful World Stroke Day stand

The RUSH team again set up a stand in the Edinburgh Royal Infirmary concourse on 29 October, World Stroke Day. We invited colleagues from the NHS, The Stroke Association and CHSS to provide information about stroke.

Nurses conducted blood pressure checks for patients, staff and visitors, and distributed information. See you there again next year!



Left-to-right: Rustam (RUSH lead), Trish Elder Gracie (stroke nurse specialist), Juliet Bouverie (CEO of The Stroke Association), Rosemary (RUSH project manager) and others at the World Stroke Day stand.

Arthur Fonville Award for Stroke Research

This award was established in memory of Arthur Fonville, a Dutch medical student, who worked with RUSH in 2011-2013 and died in September 2014.

The award is a prize for the best 1,500 word dissertation on a research project into any aspect of stroke, conducted by a medical student in their third year or later at the University of Edinburgh.

The entries were so good that two students received prizes this year:

- Jason Chan for his work *Meta-Analysis of Randomized Controlled Trial Data: Efficacy of Endovascular Thrombectomy for the Treatment of Large-Volume Ischemic Stroke*
- Arina Tamborska for her work *Characteristics of randomised trials of stroke due to intracerebral haemorrhage: systematic review*

Arina's paper has already been published in the journal *Stroke*.

We were delighted to be joined by Arthur's parents Joost (far right) and Catherine (second from right), as well as a large delegation of Dutch friends of Arthur's. They presented Jason and Arina with their certificates and prizes below.



Left to right: Professor Salman, Jason Chan, Arina Tamborska, Catherine Fonville (Arthur's mother) and Joost Fonville (Arthur's father)

Arthur's family have been very active with fundraising. They are keen to broaden the scope of the prize, possibly by supporting students to present their research, and in collaboration with Arthur's medical school in Amsterdam.

Patient Reference Group (PRG) continues to be invaluable to RUSH

The RUSH PRG continues to help the team planning and conducting research by commenting on study priorities, design and materials. When one of our members, Gwynneth Clay, suffered a stroke up the Ratho climbing wall, it soon became clear to her that very little is known about brain haemorrhage. To help improve the lives of future stroke patients Gwynneth decided to participate in Professor Salman's research and joined the PRG. To find out what it's like being a patient involved in life-changing research see:

www.holyrood.com/articles/comment/first-person-account-haemorrhagic-stroke-%E2%80%98it-was-clear-something-was-wrong%E2%80%99



Ratho climbing wall and Gwynneth with her dogs!

Katie returned to restart LINCHPIN-COG study



After some time spent travelling, Stroke Association-funded PhD student Katie McGoohan (above) returned to reactivate the LINCHPIN-COG study in October of 2017. She is studying the risk of dementia and its impact after brain haemorrhage.

Katie is due to complete her PhD in 2018.

Final word from Prof. Salman

Rustam is completely exhausted after a busy year, in which he was awarded 8 grants, had 20 papers published, was made Fellow of the European Stroke Organisation, gave 5 keynote lectures, was the Mayman Visiting Professor in Boston, was elected a board member of a panel for the National Institutes of Health Research, and was elected the President of the British Association of Stroke Physicians. The USA National Institutes of Health has also agreed to fund five years of long-term follow up of the 20 year running SAIVMs cohort. However, what makes him happiest is that the RUSH team is stable again, several young doctors plan to join RUSH next year, and all of this will help him deliver an even better standard of care for patients with brain haemorrhage in Lothian from 2018 onwards...

Thanks to our donors

Many thanks for the donations to our research from patients, their families, carers and friends. In the last year, RUSH received £3,315 and the Arthur Fonville fund received £1,600. Donations help us conduct and publicise our research. If you would like to fundraise for us, please contact Kerry MacKay, Individual Giving Officer at the University of Edinburgh (Tel 0131 650 9221 or Kerry.Mackay@ed.ac.uk).

RUSH

c/o Ms. Rosemary Anderson, CCBS,
Chancellors Building, 49 Little France
Crescent, Edinburgh. EH16 4SB

Tel 0131 537 2944

Web www.RUSH.ed.ac.uk/

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