

News from the Network:

- The 4th meeting of the Fondation Leducq network 'Understanding the role of the Perivascular Space in SVD' took place in Toronto, 15-16th October 2018. The meeting was hosted by Professor Sandra Black and organised by the Leducq fellows at the Sunnybrook Research Institute. The agenda included updates on the work packages, data blitz presentations from junior researchers and talks invited speakers including Professor Adam Brickman, who spoke about his work on white matter hyperintensities in Alzheimer's Disease. Read more about the network at www.small-vessel-disease.org



Left: Attendees of the 4th Fondation Leducq SVD network meeting, 15-16th October, Toronto. Right: Professor Sandra Black opens the meeting.

- Professor Joanna Wardlaw received the Karolinska Stroke Award for Lifetime Contribution to Excellence in Advancing Knowledge in Stroke in November, awarded by the Karolinska Institute in Stockholm.



- The UK Dementia Research Institute held a two day conference in September, with members from all six UK DRI centres. The action-packed schedule included talks and posters from the Edinburgh researchers, a quiz and a ceilidh!
- Dr Sarah McGlasson from the Edinburgh UK DRI was awarded the UK Scopus Early Career Researcher award for Medicine for her work with Dr David Hunt on how immune activation can lead to neurological damage, including damage to cerebral blood vessels.

Network Member Profile:



Dr Jon Moss joined the group of Prof Anna Williams in January 2018 as part of Prof Joanna Wardlaw's UK Dementia Research Institute programme, to investigate how early-stage endothelial cell dysfunction in small vessel disease animal models leads to white matter vulnerability and dementia. He has used correlative light and electron microscopy to describe how plasma membranes of dysfunctional endothelial cells of disease model rats show increased blebbing, and secretion of vesicles capable of packaging factors deleterious to the surrounding deep white matter.

He plans to isolate these vesicles to investigate their action further, as well as isolating and RNA sequencing dysfunctional endothelial cells, to discover the signature of their pathological action. Outside interests include teaching his daughter to swim, classical music concerts at the Usher Hall, and sampling a new guest ale at the Southern bar.

- Dr Grant Mair won the Lucien Appel prize for his paper '[Effect of IV alteplase on the ischemic brain lesion at 24-48hours after ischemic stroke](#)'. The prize is awarded at the European Society of Neuroradiology meeting for the best research paper.
- Dr Gaia Brezzo joined Professor Karen Horsburgh and her team to work on the Vascular Dementia priority programme. Gaia is interested in neurovascular function and coupling in health and disease. Read more about the project here: <https://www.vadmatrix.com/project/>
- The Centre for Cardiovascular Science has been successful in securing a renewal of the BHF Centre of Research Excellence and has retained the previous funding level of £3M over 5 years . The overarching mission is to transform diagnosis, risk stratification and treatment of patients through a new Centre of Research Excellence focusing on understanding and exploiting mechanisms that drive cardiovascular injury and repair
- The Mild Stroke Study 3 recruited its first participant on 22nd August. The study aim is to improve understanding of what makes small vessel disease (SVD) worsen (or perhaps improve) and identify novel targets for SVD prevention and therapy. The study receives support from Fondation Leducq, UK Medical Research Council Dementia Research Initiative, and Row Fogo Charitable Trust.



Members of the MSS3 study team

Papers of Interest:

[Humphreys et al.](#) (2018) A protocol for precise comparisons of small vessel disease lesions between ex vivo magnetic resonance imaging and histopathology. *Int J Stroke*

[Shi et al.](#) (2018) Small vessel disease is associated with altered cerebrovascular pulsatility but not resting cerebral blood flow. *J Cereb Blood Flow Metab*

[Sigfridsson et al.](#) (2018) Astrocyte-specific overexpression of Nrf2 protects against optic tract damage and behavioural alterations in a mouse model of cerebral hypoperfusion. *Sci Rep*

[Ter Telgte et al.](#) (2018) Cerebral Small Vessel Disease: from a focal to a global perspective. *Nat Rev Neurol*

[Rasmussen, Mestre and Nedergaard](#) (2018) The glymphatic pathway in neurological disorders. *Lancet Neurology*

[Ghezali et al.](#) (2018) Notch3^{ECD} immunotherapy improves cerebrovascular responses in CADASIL mice. *Ann Neurol*

[Ringstad et al.](#) (2018). Brain-wide glymphatic enhancement and clearance in humans assessed with MRI. *JCI Insight*

[Mestre et al.](#) (2018). Flow of cerebrospinal fluid is driven by arterial pulsations and is reduced in hypertension. *Nat Commun*

[Benveniste et al.](#) (2018). The glymphatic system and waste clearance with brain aging: A review. *Gerontology*

[Rodrigues et al.](#) (2018). The Edinburgh CT and genetic diagnostic criteria for lobar intracerebral haemorrhage associated with cerebral amyloid angiopathy: model development and diagnostic test accuracy study. *Lancet Neurol*

[Nation et al.](#) (2019). Blood-brain barrier breakdown is an early biomarker of human cognitive dysfunction. *Nat Med*

Volunteers needed!

If you are interested in helping to organise the next SVD network event, please contact:

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Any news of interest?

Got an article to contribute?

Contact:

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