Centre for
Heart Lung Innovation
UBC and St. Paul's Hospital

Centre for Heart Lung Innovation Research in Progress (R.I.P.)

Co-Segregating Proteins Differentiate Frontotemporal Dementia with TDP-43 Pathology from Related Dementias

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Monday, May 31st, 2021
9:00 – 10:00 a.m.

Zoom Video Conference
(Meeting ID: 693 1997 7044; Passcode: 030679)

"Frontotemporal dementia (FTD) is a form of early onset dementia that is difficult to distinguish from other dementias. While a biofluid test for FTD is highly desired by physicians, we do not yet know what markers may help specifically identify FTD. Thus, we aimed to identify proteins that differentiate FTD from controls (i.e., symptomatically related dementias and neuropathologically unaffected cases).

Proteomic analysis was performed on human brain tissues of FTD and controls using high-resolution mass spectrometry. To identify proteins that differentiate FTD from controls, proteomic data was subjected to both unsupervised and supervised clustering.

Unsupervised clustering revealed 10/13 FTD cases could be differentiated from controls using a single protein, which was not TDP-43. Using a supervised analysis, we identified 3 proteins with 100% specificity, 2 with 80-85% specificity, and 1 with 77% specificity in separating FTD from controls. These candidates should be investigated further in biofluids and pathological mechanisms."

This event is a Self-Approved Group Learning Activity as defined by the Maintenance Certification Program of the Royal College of Physicians and Surgeons of Canada

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