

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



The Anti-Viral Role of Fused in Sarcoma (FUS) during Enterovirus Infection

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Monday May 25<sup>th</sup> 2020 9:30 – 10:30 a.m. Zoom Video Conference \*\*details in body of email\*\*

"Amyotrophic lateral sclerosis is a neurodegenerative disease that targets the motor neurons in the brain and spinal cord. While the disease is commonly categorized into sporadic (unknown etiology) and familial (genetic mutations) cases, the overlapping features of the two categories are the existence of abnormal pathologies (mislocalization and aggregations) in proteins such as TDP-43 (Transactive Response DNA Binding Protein 43 kDa) and FUS (Fused in Sarcoma). Recently, we found that Enterovirus infection, a family of RNA viruses commonly known to cause viral myocarditis, can lead to similar TDP-43 and FUS protein pathologies as those seen in ALS patients' tissues. Upon further investigation, it is found that in addition to its known roles in regulating RNA metabolism, FUS appears to be translationally regulating many key proteins in the host anti-viral immune pathway and the formation of stress granule during anti-viral response."

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



a place of mind



