

THE
CATHOLIC UNIVERSITY
of AMERICA



Department of Physics
Colloquium

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Molecular Mechanism Underlying RNP Granule Assembly
in Neurodegeneration

Ribonucleoprotein (RNP) granules are membrane-less cellular compartments used for RNA storage, degradation and localization. They form liquid like droplets in cells but such property is converted to fibril or amyloid-like state in neurodegenerative diseases such as ALS and FTD which are hallmarked by pathogenic aggregation of FUS, TDP-43 and other hnRNPs. Recent studies reported on the spontaneous formation of liquid like droplets by these proteins promoted by conditions such as low salt and high protein concentration, but the molecular mechanism that gives rise to granule assembly and dynamic state of granule remains elusive. In order to find a treatment for these debilitating diseases, we need to decipher exactly how individual protein molecule interacts with RNA/protein and how this process is altered in mutants. We are employing a combination of single molecule fluorescence, biochemical, biophysical tools to dissect molecular underpinnings of granule assembly and dynamics.

Wednesday, November 29, 2017

4:00pm

108 Hannan Hall

Refreshments will be served at 3:45

Sponsored in part by the Graduate Student Association

For more information or if you would like to request disability accommodations, please contact:

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