

ASRC - City College of New York

Seminar in Biochemistry, Biophysics & Biodesign

SEMINAR LOCATION:

ASRC Main Auditorium
85 St. Nicholas Terrace

For non-CUNY attendees,
advance registration is required;
please contact Hyacinth
Camillieri at

hcamillieri@gc.cuny.edu

THE SEMINAR WILL ALSO BE AVAILABLE VIA ZOOM:

[Click here for Zoom link](#)

Meeting ID: 966 7763 1144

Passcode: asrc-ccny

HOSTS:

Shana Elbaum-Garfinkle

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Kevin Gardner

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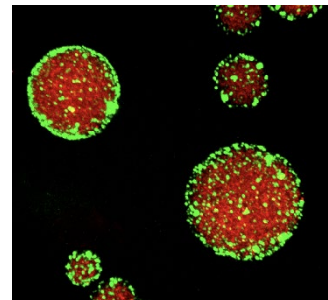
(212) 650-8803

The Biochemistry Seminar series is supported in part by The Office of the President; The Foundation for City College; the CUNY Institute for Macromolecular Assemblies; and the Advanced Science Research Center at the Graduate Center of the City University of New York.

Wednesday, Sept. 13, 2023

Coffee & tea 11:30 AM

Seminar 12:00 – 1:00 PM



Geraldine Seydoux

Huntington Sheldon Professor in Medical Discovery
Department of Molecular Biology and Genetics
Johns Hopkins University School of Medicine
Investigator, Howard Hughes Medical Institute

Assembly and Function of RNA granules in *C. elegans*

ABSTRACT RNA granules are assemblies of RNA and proteins not limited by membranes. RNA granules contain factors for RNA biogenesis and turnover and are often assumed to represent specialized compartments for RNA biochemistry. We use the *C. elegans* model to study RNA granules in a native, whole animal context. Our studies support the view that RNA granules are assembled by phase separation, a thermodynamic process that causes interacting proteins and RNAs to de-mix from the cytoplasm to form condensed droplets. I will discuss active mechanisms used by cells to control the assembly and distribution of P granules in embryos, including protein clusters that form a type of “primitive membrane” on the surface of P granules to reduce surface tension and regulate granule dynamics. I will also discuss recent experiments that challenge the view that RNA granules represent specialized compartments for RNA biochemistry and present evidence that some are “incidental condensates”, non-functional minor condensation by-products that form when sub-soluble RNA-protein complexes saturate the cytoplasm.

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