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Challenge

Research into (dys)regulation and drug targeting of the early processes of biomolecular condensate formation, where condensates are small. Understanding dynamic liquid-liquid phase separation (LLPS) processes by observing the formation and size distribution of the proteins as they change over time.

Priorities

Flexible working bench for dynamic, low-volume particle characterization (100 μ l sample volume)

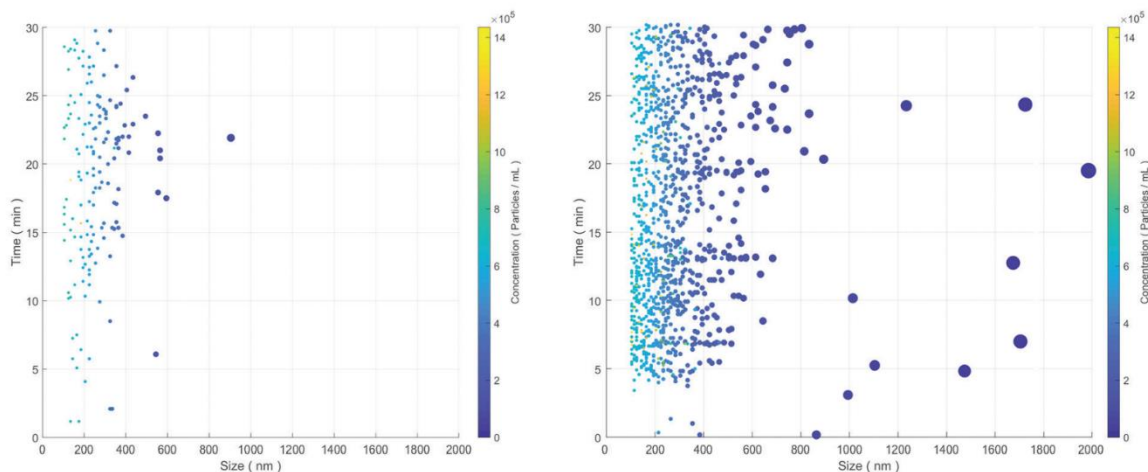
Sample properties

Buffer with 6 μ M protein and various amounts (0.02 μ M to 0.2 μ M) of RNA added

Statement

“As the small condensates we are interested in cannot be detected with microscopy their study remains a blind spot. The OF2i technology promises to close this gap and to provide unprecedented insights into the processes driving early condensate formation and targeting of condensates. First exciting results obtained on the B2 instrument demonstrate that the OF2i technology will be of outstanding interest for us and the entire field studying biomolecular condensates and their role in health and diseases. We are very much looking forward to the official release of the B2 and purchasing it in the near future.”

BRAVE solution: B2 benchtop instrument



Time-resolved PSD: Particle formation processes during liquid-liquid phase separation (LLPS) with low (left) and high (right) RNA concentrations

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