

## SUPPLEMENTARY INFORMATION

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Body	Alternative names/examples	Localization	Function	References
P-body	Processing body, GW body, decapping bodies	Cytoplasm	mRNA decay, mRNA silencing	<sup>1</sup>
U-body	Uridine-rich snRNP body	Cytoplasm	Storage/assembly of snRNPs	<sup>3</sup>
Balbiani body		Cytoplasm, germ cells	Storage	<sup>4,5</sup>
Germ granules	P-granule, nuage, chromatoid bodies, Balbiani body	Cytoplasm, germ cells	Storage?	<sup>6-8</sup>
RNA transport granules	neuronal RNA granule	Cytoplasm, neurons	mRNA storage/transport	<sup>9</sup>
Synaptic densities	Postsynaptic densities	Cytoplasm, neurons	Neurotransmission	<sup>10,11</sup>
Stress granule	NA	Cytoplasm, upon stress	Translational regulation/mRNA storage	<sup>1</sup>
Nuclear pore complex	NA	Nuclear membrane	Nuclear import/export	<sup>12</sup>
Cajal body	NA	Nucleus	Assembly and/or modification of splicing machinery	<sup>13,14</sup>
Cleavage body	NA	Nucleus	mRNA processing	<sup>15</sup>
Gem	Gemini of Cajal bodies	Nucleus	Storage?; aid histone mRNA processing	<sup>16,17</sup>
Nuclear speckles	splicing factor compartments (SF compartments), interchromatin granule clusters (IGCs), B snurposomes	Nucleus	mRNA splicing	<sup>18</sup>
Nucleolus	NA	Nucleus	Ribosome biogenesis	<sup>19-21</sup>
OPT domain	NA	Nucleus	Transcriptional regulation	<sup>22,23</sup>
PcG body	Polycomb group bodies	Nucleus	Transcriptional repression	<sup>24</sup>
Perinucleolar compartment	NA	Nucleus	Associated with malignancy	<sup>25</sup>
PML bodies	nuclear domain 10 (ND10), Kremer bodies, PML oncogenic domains	Nucleus	Transcriptional regulation; apoptosis signaling; antiviral defense	<sup>26</sup>
Histone locus body (HLB)	NA	Nucleus	Histone mRNA biogenesis	<sup>14,27</sup>
Paraspeckles	NA	Nucleus	RNA processing?	<sup>28,29</sup>
Focal adhesions	NA	Plasma membrane	Cell adhesion/migration	<sup>30</sup>
Nephrin clusters	NA	Plasma membrane	Glomerular filtration barrier	<sup>31-33</sup>
TCR clusters	NA	Plasma membrane	Immune synapse	<sup>34,35</sup>
Podosomes	NA	Plasma membrane	Cell adhesion/migration	<sup>36</sup>
Actin patches	NA	Plasma membrane	Endocytosis	<sup>2</sup>

NA, not applicable

**Table: Various biomolecular condensates and their functions**

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