

## **Description of Additional Supplementary Files**

**Supplementary Data 1.** Results of quantitative proteomic measurement of the relative protein abundance over a developmental time series from the mature oocyte past the ZGA.

**Supplementary Data 2.** Proteomics quantification of the half-times that proteins enter embryonic nuclei (Tembryo1/2) and nuclear fraction (NF) over a developmental time series.

**Supplementary Data 3.** Proteomic estimation of importin  $\beta$ / $\beta$  affinity, DNA affinity, and importin  $\beta$ / $\beta$  +DNA affinity in arbitrary units.

**Supplementary Data 4.** Absolute abundance of proteins in the frog eggs reanalyzed with *X. laevis* protein Fasta file based on genome version 9.220.

**Supplementary movie 1.** The movie shows the formation of  $\sim 50\mu\text{m}$  diameter cell-free droplets of *Xenopus* egg extract in a continuous oil phase using a T-junction microfluidic device.