

**Figure S4**: Highly enriched <sup>15</sup>N-labeled vesicles in the foraminifer endoplasm at the periphery of the dinoflagellate. High magnification image of boxed region in Figure 2 that shows regions of elevated <sup>15</sup>N accumulation at the end of the light phase (t = 6 h). The <sup>15</sup>N enriched regions correspond to sections of the dinoflagellate nucleus and chloroplast, and an *Orbulina universa* fibrillar body where extensive protein and nucleotide synthesis occurred during the light phase. Arrowheads: <sup>15</sup>N-enriched vesicles, d: dinoflagellate, f: fibrillar body, h: large heterogeneous vesicle. Scale bars: 5 μm.