

## Legends for Supplementary Movies:

### **Title: Supplementary Movie 1: 3D lightsheet imaging of the arising *drl* reporter-labeled LPM**

**Description:** SPIM time lapse imaging of a zebrafish embryo transgenic for *drl:EGFP* (green) together with the nuclear marker *actb2:H2afva-mCherry* (magenta) to visualize LPM emergence from 50% epiboly to 10 ss.

### **Title: Supplementary Movie 2: Panoramic lightsheet imaging of the arising *drl* reporter-labeled LPM**

**Description:** Mercator projection of SPIM time lapse imaging of zebrafish embryos transgenic for *drl:EGFP* to visualize LPM emergence from 50% epiboly to 10 ss. From somitogenesis onwards, the embryo is oriented with anterior to the left and posterior to the right.

### **Title: Supplementary Movie 3: 3D lightsheet imaging showing overlap between *drl* reporter expression and endoderm during gastrulation**

**Description:** SPIM time lapse imaging of *drl:mCherry* (red) combined with *sox17:EGFP* (green) to visualize the *drl*-expressing emerging cell population versus endoderm from 50% epiboly until 16 ss.

### **Title: Supplementary Movie 4: Panoramic lightsheet imaging showing overlap between *drl* reporter expression and endoderm during gastrulation**

**Description:** Mercator projection of SPIM time lapse imaging of *drl:mCherry* (magenta) combined with *sox17:EGFP* to visualize the *drl*-expressing emerging cell population versus endoderm from 50% epiboly until 16 ss. From somitogenesis onwards, the embryo is oriented with anterior to the left and posterior to the right. Double-positive cells during gastrulation and early somitogenesis are shown in blue.