



**Figure S3.** Phenotypes of wild type BW25113 (*lptC*<sup>+</sup>) and *araBplptC* conditional strains lacking *ldtF* and of *araBplptC* lacking *ldtD-ldtF*. Cells of BW25113, the isogenic  $\Delta ldtF$  mutant (A), the *araBplptC*  $\Delta ldtF$  mutant (C) and *araBplptC*  $\Delta ldtE$   $\Delta ldtF$  mutant (E) were grown and imaged as described in the legend of Figure S2. Growth curves shown are representative of at least three independent experiments. At  $t = 120$  min, 210 min and 270 min (arrows), BW25113 and BW25113  $\Delta ldtF$  (B), *araBplptC*  $\Delta ldtF$  (D) *araBplptC*  $\Delta ldtE$   $\Delta ldtF$  mutant (F) cells were collected for imaging. Phase contrast images are on the top and fluorescence images are on the bottom. Scale bars 3  $\mu$ m. *araBplptC*  $\Delta ldtF$  cells displayed morphological defects even when grown under permissive conditions.