

**Supplementary Figure 1.** mRNA injection of human *ACVR1 (ALK2)* mutant Glu328 receptors into wild-type (WT) and *bmp7* mutant zebrafish embryos. WT embryos were ventralized, while *bmp7* mutant embryos were partially rescued from C5 radial dorsalized (or lysed) to C4 and C3 phenotypes. A higher dose of Glu328 mRNA, 300 pg versus 100 pg, increased the proportion and the strength of ventralization in WT embryos, but did not increase the fraction of *bmp7* mutant embryos rescued and weakly increased the fraction of C3 embryos. Phenotypes were scored at 24 hpf.