Electronic Supplementary Material (ESI) for Integrative Biology.

SUPPLEMENTAL MATERIAL

Reduction in E-cadherin expression fosters migration of *Xenopus laevis* primordial germ cells

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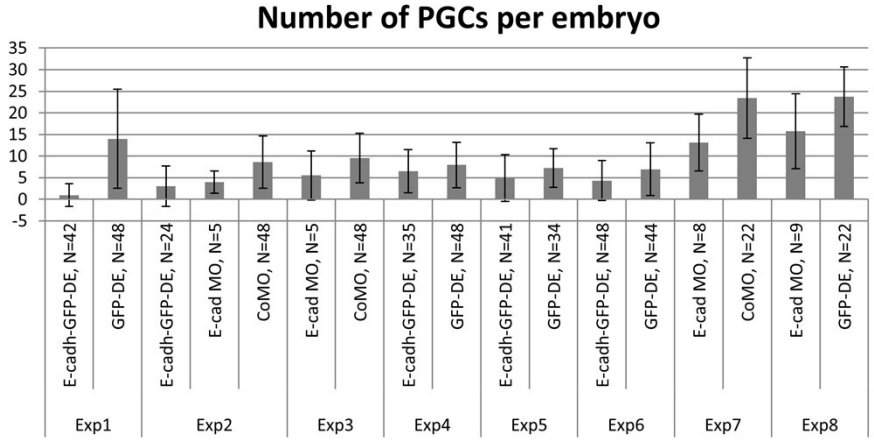
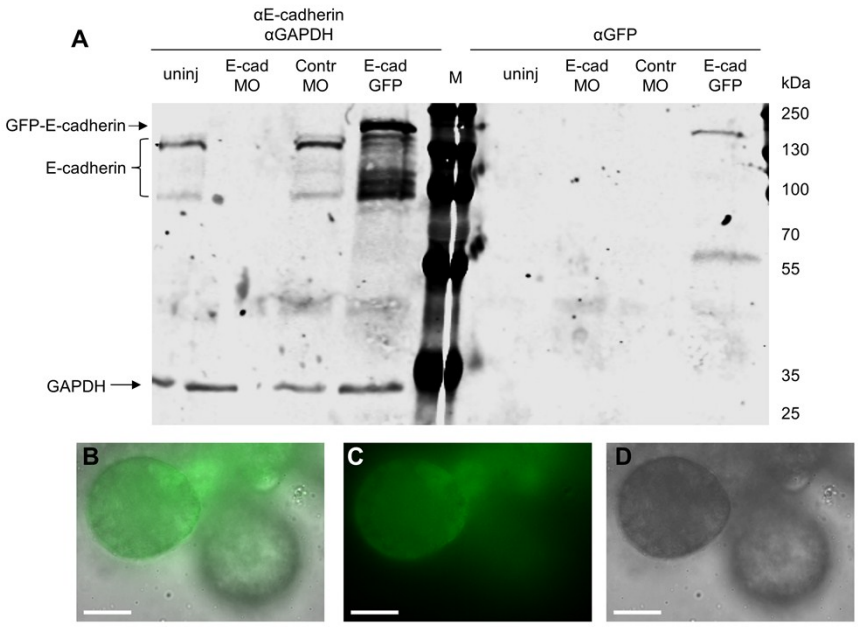
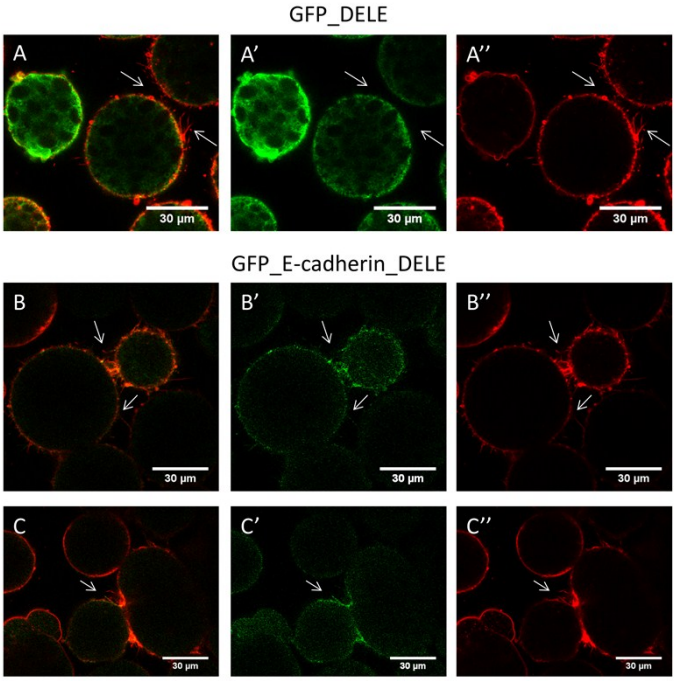


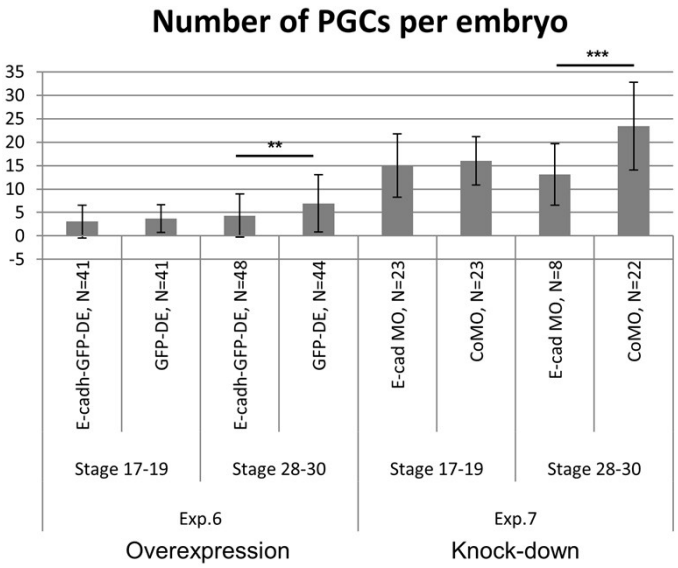
Suppl. Fig. 1. Number of PGCs per embryo in individual E-cadherin overexpression and knock-down experiments. Embryos were injected at 2-cell stage with *GFP_E-cadherin_DELE* mRNA (E-cadh-GFP-DE) or E-cadherin morpholino oligonucleotide (E-cad MO). For each experiment control injections with *GFP_DE* mRNA or control morpholino oligonucleotide (CoMO) were performed. Embryos were fixed at stage 28-30 and used for whole mount *in situ* hybridisation with antisense *Xpat* RNA as a PGC marker. Average numbers of PGCs per embryo were calculated in each individual experiment. *N* corresponds to the number of embryos analysed. Error bars represent standard deviation.



Suppl. Fig. 2. Knock-down and overexpression of E-cadherin in *X. laevis* embryos. Embryos were injected at 2-cell stage with control morpholino oligonucleotides (Contr MO), E-cadherin morpholino oligonucleotides (E-cad MO) or *GFP_E-cadherin_DELE* mRNA (E-cad GFP). **(A)** Western Blot analysis of endodermal explants obtained from the injected and uninjected (uninj) embryos. Expression of GAPDH was used as a positive control, M corresponds to the marker lane. Staining with αGFP antibody was used to detect GFP-E-cadherin expression, while staining with αE-cadherin antibody revealed endogenous E-cadherin expression in addition to GFP-E-cadherin. **(B-D)** Expression of GFP-E-cadherin (green) in dissociated endodermal cells. B – merged image, C – GFP channel, D – transmitted white light. Scale bar – 20 μm.



Suppl. Fig. 3. Expression of GFP-E-cadherin in PGCs. Embryos were injected at 2-cell stage with *GFP_DELE* mRNA or *GFP_E-cadherin_DELE* mRNA (green), both coinjected with *membrane RFP* mRNA (red). Cells were isolated from endodermal explants of stage 28-30 embryos by brief incubation in CMFM (3-5 min). White arrows indicate remaining cell-cell contacts via filopodia-like protrusions. **(A)** GFP is localized to the cytoplasm excluding yolk granules and is not present in the filopodia-like protrusions. **(B,C)** Overexpressed GFP-E-cadherin is localized on the plasma membrane, filopodia-like protrusions and is enriched at the sites of cell-cell contacts.



Suppl. Fig. 4. Number of PGCs is not decreased at stage 17-19 upon E-cadherin overexpression and knock-down. Embryos were injected at 2-cell stage with *GFP_E-cadherin_DELE* mRNA (E-cadh-GFP-DE) or E-cadherin morpholino oligonucleotide (E-cad MO) as indicated. Control injections with *GFP_DE* mRNA or control morpholino oligonucleotide (CoMO) were performed. Embryos from the same injection series were fixed at stages 17-19 and 28-30 and used for whole mount *in situ* hybridisation with antisense *Xpat* RNA as a PGC marker. Average numbers of PGCs per embryo were calculated in each individual experiment. Exp6 and Exp7 correspond to *Suppl. Fig. 1*. N - number of analysed embryos. Error bars represent standard deviation. ** - $p<0.05$; *** - $p<0.01$ (2-tailed homoscedastic t-test).