

**Table S5. Candidate-gene approaches did not identify genes required to establish the bilateral asymmetry in the ABaraap cell lineage**

**(A) Mutations affecting the ASE bilateral asymmetry do not affect the MI-e3D asymmetry**

Genotype	% MI or e3D absent*	<i>n</i>
Wild type	0	50
<i>cog-1(ot28)</i>	0	50
<i>lim-6(nr2073)</i>	0	50
<i>lin-49(sa470)</i>	0	50
<i>lsy-6(ot71)</i>	0	50

**(B) Mutations affecting the AWC bilateral asymmetry do not affect the MI-e3D asymmetry**

Genotype	% MI or e3D absent*	<i>n</i>
Wild type	0	50
<i>inx-19(ky634)</i>	0	50
<i>nsy-4(ky616)</i>	0	50
<i>unc-43(n498 n1186)</i>	0	50
<i>unc-43(n498sd)</i>	0	50

\*The presence or absence of MI and e3D was determined using Nomarski microscopy.