



**Supplementary Figure 1** | General setup of microinjection station and micromanipulator. **(a)** Safe and efficient injection of larval zebrafish is achieved with a well-designed injection station. **(b)** The micromanipulator should be setup at right angles, with each knob giving exclusive control to x, y, and z-planes, and with the needle angled downwards to approximately 30°. After the initial setup, and during injections, the micromanipulator will only be moved in the z-plane by control of the z-knob (red arrow).