Experimental Methods

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1. 100 *C. elegans* were grown at 50 mM NaCl.
2. Agar plates were made at 50 mM NaCl concentration. Using pins, empty pillars were created at each city location. Marks were made on the petri dishes to keep the alignments consistent.
3. A secondary solution of agar made at 200 mM, with a minute amount of methylene blue, was poured into the pre-constructed pillars. The composite plate was allowed to set and diffuse for 30 minutes, creating radial gradients.
4. The agar plate was set up under the mounted camera and inside the ring light.
5. A single *C. elegans* was placed at a pillar.
6. Immediately, the camera began to acquire an image sequence for 5 minutes at 2 frames a second.
7. We repeated this process for each city as many times as possible, conducting each trial on a new plate as to avoid any possibility of interference from previous trials.