

## Swimming Through Mucus

Now that you've made it past the harsh acid, you can continue your search for a permanent home in the stomach! Don't get too comfortable, though, because you're going to need to sludge through a thick layer of mucus before you can set up camp. Luckily, *H. pylori's* corkscrew shape and a sneaky enzyme helps you move faster and break through to your destination!

In this experiment we will compare how well different shapes of "microbes" travel through a mucus-like substance. We will use hot water to represent how the enzyme urease breaks down mucus in the stomach to allow easier passage for *H. pylori*.

### Materials:

- 1) 2 packs of jello
- 2) A deep, clear casserole dish or tupperware
- 3) 3 different types of uncooked pasta noodles
  - a. 1 spiral shaped variety (like rotini or egg noodles)
  - b. 1 round variety
  - c. 1 flat variety
- 4) A cup of very hot water

### Method:

- 1) Prepare the jello in the deep dish according to the instructions on the packet.
- 2) Once the jello is firm, press the different varieties of noodles into the jello. Make sure to twist the spiral shaped ones as you press them in. See how far into the jello you can get them, how messy each one is, and pick a winner!
- 3) For a bonus experiment, dip the noodle in hot water just before pressing it into the jello to demonstrate how *H. pylori's* enzymes make it easier to pass through mucus.