

The Jenny Ito Case

Jenny Ito is a second-year graduate student working in the biology lab of Chris Holzer. Ito has been overseeing an experiment that Holzer designed to determine whether a special anti-bacterial coating can reduce the incidence of infection associated with the use of steel surgical pins. With Holzer's help, Ito has inserted a two-inch pin into the right tibia of thirty rabbits; fifteen of the pins are standard surgical pins, and fifteen have the anti-bacterial coating. About one-quarter inch of each pin protrudes through the skin. Ito also inoculated all of the rabbits at the insertion point with 1×10^8 *Staphylococcus aureus* and routinely administers morphine at 5 mg/kg to alleviate any discomfort the rabbits may be experiencing because of the procedure. For almost a month, Ito has cared for the rabbits and recorded her observations, watching for any sign of distress or infection.

In her weekly meeting with Holzer, Ito reports that none of the rabbits seems to be particularly uncomfortable, and none of them shows any signs of infection.

Holzer seems impatient. "If we don't get an infection, we won't learn anything. Here's what we'll do. Since it would be a shame to have put these rabbits through this, not to mention wasting all your time, without getting some results, I want you to help things along a bit. I want you to inoculate all of the rabbits with 1×10^9 *Pseudomonas aeruginosa*. We'll see what happens then."

Ito hesitates. "The protocol specifies *Staphylococcus*, Dr. Holzer."

Holzer brushes this off. "It's only a small change. We've been approved to run the risk of infecting these rabbits; all we're going to do is give the process a little boost." And with that Holzer walks away.

Ito knows how to do what she's been asked, but she is not sure whether she should. When she goes home that night, she mentions her dilemma to her roommate, Ruth Thompson, an English major.

Thompson snorts. "Why are you so squeamish now? Go ahead and do it. In fact, if you really want to make him happy, you should put the new bacteria on just the untreated pins. That'll prove his point!"

Ito responds, "Thanks for the sarcasm. You know I can't do that; it would be bad science."

"The whole thing is bad science," Thompson retorts. "Torturing bunnies like that."

Ito throws up her hands in exasperation. "You're not helping me at all, Ruth! I know you don't approve of animal experimentation, but sometimes it's necessary, and I'm convinced this is

one of those times. Still, *Pseudomonas* can cause a really nasty infection, and I hate to subject the rabbits to it, especially since it's so hard to treat. You know, they're sort of cute and I've gotten kind of fond of them over the last month. And then there's the whole question of the protocol. . . ” Ito moans as she throws herself down on the couch.

Thompson takes a deep breath. “Well, your boss has already told you that it falls within the realm of reasonable interpretation of the protocol. You've always got to interpret everything, you know. Besides, you always planned on some of these rabbits developing infections. What does it matter if they're infected by one bacterium or another? Hey, if it makes you feel better, look at it this way: If you don't get results, you'll just have to yank the pins from this batch and operate on a new bunch of bunnies. In the end, it would reduce the suffering if you just brewed up the new bugs and poured them on.” With that, Thompson walks away, clearly disgusted by the whole procedure.

Ito does not feel any more sure of the proper course of action.

Should Ito follow Holzer's suggestion? Why or why not?