

**PROFESSOR** My group studies slime.

**KATHARINA  
RIBBECK:**

[LAUGHTER]

[DING]

[DING]

It is largely viewed as some sort of waste product, similar to feces. And my mission is to, really, correct this image, and show that it has really very, very important functions for biology. We focus on mucus. That is a very important slime for our body.

Mucus is more commonly known as snot. And it coats all wet everything in our body-- eyes, nose, mouth, lungs, digestive tract, and female genital track. And it has very, very important functions.

These are bacteria swimming in slime. Some of the mucus can distinguish between good and bad. It allows many bacteria to live in that. That constitutes our microbiota. But then it rejects, in most cases, bacteria or viruses that are potentially harmful to the body. We have mucus from women who are in preterm labor, and women that are pregnant, at exactly the same gestational stage.

**GRACE YAO:** So mayo is similar to what mucus in a normal pregnancy should look like. It's thick, opaque, and it doesn't really form any kind of filament. It just breaks apart like this.

**PROFESSOR** In preterm pregnancy, we see that the mucus may be altered in ways-- that it is more permeable.

**KATHARINA  
RIBBECK:**

[CRACK]

**GRACE YAO:** Egg white-- so it's more translucent. And you can see that it forms a kind of filament when I stretch my fingers apart.

**PROFESSOR** It really resembles the mucus as it is during your fertile phase-- that is, the maximally

**KATHARINA**

**RIBBECK:**

permeable phase, which is very bad news because that means that, potentially, a lot of pathogens can go through. One of our goals with the study is to look for markers that might predict, far in advance, that a woman might be at risk for preterm labor.

If you grow too fond of your hypothesis, and then you do that one experiment-- which was supposed to be a control and that proves you wrong-- then, you can't fall apart. It's very, very important to always, always be prepared that you're wrong. Discovering mucus-- it's a roller coaster, really. Every experiment almost tells us something new and unexpected.