VIDEO TRANSCRIPT

A Look inside the Lab: Microscopes – Video transcript

Microscopes — we kind of think about them usually by scale. There are a number of different types of microscopes that you might use when you're doing research, depending on what kind of magnification you need.

The ones that you see usually in the classroom are your standard compound microscope, which means there's a lens and there are mirrors inside, which reflect the light into another lens, which allows you to have greater magnification.

I use an inverted compound microscope a lot. I couldn't fit an entire flask on a standard compound microscope, so they've created an inverted compound microscope where the light source is on the top, and then the lenses that I rotate are actually on the bottom.

EVOS is really helpful because it is highly powered. So, as you can see, there's a very large lens on it compared to some of the other microscopes you look at. So, you can look very closely at things. It also has the advantage of being able to take photographs of whatever you're looking at, and then we can use different kinds of software to actually analyze that.

Something that's really cool that we have now, there are certain microscope technologies. So, we've looked at the Countess, which actually expands an image and we'll count the numbers of cells in it. And then also, oftentimes you can attach a camera to newer microscopes and actually display what they are looking at on a screen instead of having to look into the eyepiece. And this is really great, too, because we can take photographs of what we're looking at, and it really helps us communicate exactly what I see when I'm in the lab.

Microscopes are really useful to look at cells when they're growing, which is important for me because I can see if they're healthy and if they're dividing the way that I want them to. And so, a lot of my work centers around being able to culture human cells so that I can study them.