Arlotta Clip 4 Transcript

PAOLA ARLOTTA: OK. Lots of material here. Let's try to decode this experiment. When I take cells from a patient with schizophrenia and I compare them with a set of individuals controlled, they don't have schizophrenia. And I find that here there is a reduced number of synapses versus here, what is the problem of this experiment?

We just talked about the genetics of these diseases, how incredibly diverse our genome is, how each one of us is so different from each other, how we behave completely differently. Yet in this experiment, what are we doing? It's like a few lines from patients here and a few lines from control here. And I claim less synapses here versus there. What could also be happening? Yes?

STUDENT: They could have just picked a cell line that the pathway itself has less synapses just endogenously.

PAOLA ARLOTTA: Endogenously. Exactly. It's also possible-- I mean, this is very few patients. There is not enough statistics. You know, we had to sit in 60,000 people to find some sort of commonality in the genetics of these patients. And now we sort of pretend to be able to distinguish a phenotype based on very few lines.

This phenotype could would also be used by chance by the fact that fact that each of the [INAUDIBLE] may make a slightly different number of synapses in the culture. Not because we have schizophrenia, but simply because our nervous systems are different. And I may make less synapses then you make for whatever reasons. So the genetic background of those patients really matter. And it's the genetic background determines how these neurons behave. So it's very, very hard too.