Wellcome Genome Campus | 1-12_course_2_-_roundtable_2__technical_challenges_and_tips_-_cog-train (1080p)

[MUSIC PLAYING]

Can you remember what those first libraries that we made? How was that process?

Painful.

Painful. It was definitely a learning curve, I think, for us coming through. Obviously, the process then was very slow. We were working with protocols that we weren't familiar with. So we were double checking and triple checking all of our work and making sure that everything was in place. And I think it-- our first sequencing run, we all put it on fingers crossed, not knowing whether it was going to work. But--

I know. And it took so long the first day, maybe it was like 10 or 11 hours in the lab. It was so exhausting trying to, like you said, follow this complicated protocol that we hadn't used before and trying to get every step right. It took ages. And I think in the beginning we were just doing 24 samples--

Yeah.

--maybe even a week. We were doing one run a week at the time because it would take us ages to handpick all the positives out of the hospital extraction plates so there wouldn't be a whole collection of positive samples. There'd be a mixture. And we would have to go through and take out multiple stacks of elution plates and then hand select each individual positive. And we only had single channel pipettes, everything was done manually, by hand. And there's so much opportunity for mistakes when you're doing that that you want to like triple check everything all the time, which also adds a huge amount of delay onto how long it takes to process them.

Yeah.

And I think probably having the two of you working in tandem really helped with that because you were able to make sure that-- you were able to check with each other--

Yeah.

--about, as you're going through, making sure steps weren't missed, making sure that you weren't-- and you had a lot of-- I remember you had a lot of tricks to make sure that you didn't miss out a sample on a plate or anything along those lines.

Yeah, we got very proficient with Excel, lots of Excel spreadsheets, and making sure that, yeah, our work plans were really set out. I think that was a really good thing to be able to have those 96-well plates and highlight which of those samples that we needed to pull out, and running through, and making sure that we knew from whereabouts in one 96-well plate it was going to to whereabouts in the next set of samples it was going to and being able to tick those off as we went along. Even back then when we were only doing 24 samples, it was a good start out for that practise.

Definitely or opening a fresh box of 96 tips when you're handling a 96-well plate. Because then each time you take a sample, if you suddenly get lost and forget where you are, you can look back at your tip box and see exactly how many samples you processed already. That saved me a few times. Because when you're doing it day in day out, you can just so easily--

Lose track.

--lose track, exactly, daydream for a second, and you're completely lost.

Yeah, obviously back in those days again, like you were saying, using single channel pipettes to do full on 96-well plates, it is definitely a challenge.

Yes.

So making-- moving across to-- using a multi-channel was definitely needed for when we scaled up.

Yeah.

Yeah, absolutely.