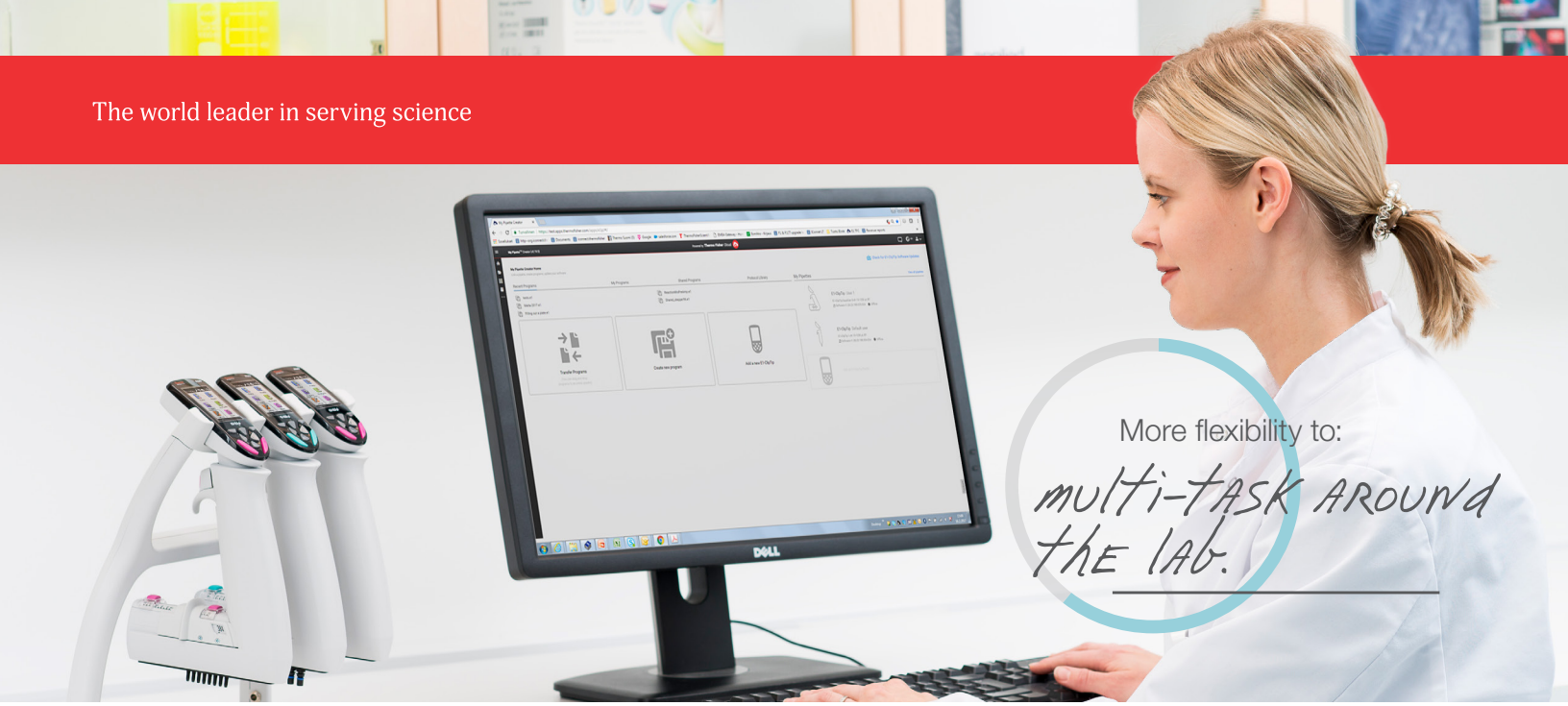

SUCCESS STORIES

Connected instruments: E1-ClipTip pipettes

The lab tech and the dead robot: how an intelligent electronic multichannel pipette saved the day (and a lot of money) for a Canadian lab

"I can program it to do what I want with the right number of repeats. Working manually, if you're not careful, you can make errors; but because the E1-ClipTip pipette counts, it helps you keep track of where you are."

—Anne Easton
Lab Technician
Aquaculture Genomics
University of Guelph, Canada

The challenge

Anne Easton, a lab technician studying aquaculture genomics at the University of Guelph in Canada, had a broken robot on her hands—and to make matters worse, repairing it would cost her lab over $6,000. Working under two professors as the only lab tech and leading a team of grad students, Easton was responsible for managing the lab—and that meant solving the broken robot problem.

The lab's research involved studying the DNA of 30 different species of salmonids, so the PCR process was challenging. The lab had initially commandeered the department's Janus™ Automated Workstation in order to switch from the time-consuming, manual process of running one microsatellite marker at a time to multiplexing, so they could run between 8 and 10 microsatellite markers at once. But now with the Janus robot out of order, Easton decided to look into less-expensive alternatives.

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> “The ClipTip technology helps save my shoulder because I don’t have to push so hard on the pipette. They just connect, and you can go—without worrying about the tips falling off.”

The solution

Easton tried out several brands of multichannel pipettes in the lab, and a clear winner emerged: Thermo Scientific™ E1-ClipTip™ Bluetooth™ Electronic Multichannel Pipettes. What she appreciated right away about her trial E1-ClipTip pipettes was the advanced programmability feature. With this unique feature, users can create custom programs for the device to help ensure pipetting accuracy, as well as store and share programs and data online through the cloud-based Thermo Fisher™ Connect platform.

“I can program it to do what I want with the right number of repeats. Working manually, if you’re not careful, you can make errors; but because the E1-ClipTip pipette counts, it helps you keep track of where you are,” Easton said. This ability to write custom programs using the companion software, she explained, made the E1-ClipTip pipettes highly flexible and saved the lab a significant amount of time.

The programmability function was particularly helpful with the pooling step, where the robot hadn’t been able to help at all. Because of the complexity of the salmonid DNA structure, all of the markers that the lab studies can’t be multiplexed in one PCR run; separate PCR runs have to be performed for every primer. The pooling step required taking a different volume from each of the 8 to 10 runs and manually changing a regular pipette every time. But with the E1-ClipTip electronic pipette, all Easton had to do was program in the volumes and move the pipette from one PCR run to the next. It did everything in one pipette tip. This streamlined the pooling step, taking even less time than she says she’d hoped it would.

The ability to create and store programs using cloud connectivity was also helpful. Easton liked how she could make the program work exactly the way she wanted online and easily figure out ways to optimize her protocol.

“Like, if you’re doing a step pipette and you don’t want it to draw up, the amount of excess can be easily lowered using the cloud-based program. With two E1-ClipTip pipettes, I was able to create the program online with the cloud-based software. Then I downloaded the program into each pipette, so I didn’t have to program them individually.”

Another feature that led Easton to choose the E1-ClipTip pipettes is the ClipTip™ function. “The ClipTip technology helps save my shoulder because I don’t have to push so hard on the pipette. They just connect, and I can go—without worrying about the tips falling off.” This is especially helpful with multichannels, she explained, adding that compared to the specialty tips they’d been using with the robot, the ClipTip function ended up saving the lab money. “None of the other pipettes we tried had this feature.”

Summarizing her trial of the product, Easton said, “The E1-ClipTip electronic pipettes met and exceeded my expectations; they did everything I needed them to do.”

“The pipettes work really well, so I would definitely recommend them,” Easton said. “I wish we had looked into the E1-ClipTip pipettes sooner. The robot wasn’t the most accurate and had to be constantly checked. If you do a lot of repeat pipetting, these are definitely something to look into. The E1-ClipTip pipettes can be an asset.”

The results

Easton was convinced by the trial to purchase the E1-ClipTip pipettes, and took advantage of a “buy two, get one free” promotion. She considered cost when buying the devices and calculated that versus repairing the robot or working with regular pipettes, the E1-ClipTip pipette purchase would save the lab money.

She recommends that any lab seeking a multiplexing solution consider a trial of the E1-ClipTip pipette: “The trial pipettes really helped me make the decision. I had tried two other pipette brands in the lab. The programmability of the E1-ClipTip pipette was unique and the ClipTip technology helped reduce my shoulder pain. None of the other pipettes I tried had these features.”

Her lab has been using the E1-ClipTip pipettes now for about seven months, and she is still the primary user. She’s happy that her lab found a less-expensive alternative to fixing the robot that does everything the robot did and more. The professors she supports are also “quite happy” with her choice. With time saved from using the E1-ClipTip pipettes, Easton has been able to focus more on other lab work, analysis, and supervising the grad students. She hasn’t trained any of them on the pipettes yet, but claims that the E1-ClipTip pipettes “seem foolproof for new users.”

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Discover E1-ClipTip electronic pipettes at
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