Crime lab appearance deceiving

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The late summer sun shines...
through the glass roof, as plants cast their shadows throughout the courtyard.

Not exactly what you would call an average setting for a laboratory.

But across from the greenery’s beauty is a group of bottles, containers and computers surrounded by stark white walls. Within those walls lie the heart and purpose of the building.

The State Police Crime Lab, though pleasing in appearance, is a fully computerized facility that, among other things, includes: four major investigative laboratories, a library, a photography lab, a garage and 18 staff scientists.

And, the area that sees the most action, according to a lab official, is the toxicology laboratory, which gets a lot of business analyzing blood samples from drivers suspected of driving while intoxicated.

“We do about 40 blood-alcohol tests per week, although we also do tests on things like poisonings,” says toxicology lab Superintendent Paul Cobb.

As he speaks, Cobb draws a sample from a small bottle into a hypodermic needle and injects it into a machine that is hooked up to a printer. The printer, which
typing on a computer terminal. The terminal shows a graph on its screen, and the graph is helping Singletary determine what drug any was present in a person's bloodstream.

Singletary's computers are similar to Cobb's. He injects a sample taken from the person's stomach into the machine, and a graph on his computer terminal begins to move slowly.

He is looking for peaks in the graph, he says. "The peaks will tell me what substances might have been in him."

Singletary says that certain drugs record certain peaks on the graph. After the computer finished drawing the graph, he checks the peaks against that of the known substance, he says.

Further down the hall from Singletary, two workers sit in front of tall computers. They also are analyzing drugs, but from a different perspective. They are trying to determine what a substance is.

The main computer is called a Chromatograph and employee Mike Koshia explains how it helps focus in on drugs.

It shoots a beam of electrons at the molecules of the substance and the molecules break up, he said.

He points to a graph on a small screen and said it shows the weight and intensity of the substance. This helps the scientists identify the drug.

If you took your car apart, you could identify it by the pieces, Koshia says, explaining the $170,000 computer's function.

On the other side of the building, across from the technological maze of the toxicology lab, lies an area with a longer history in crime investigation. It is the ballistics lab, where scientists try to piece together what happened after a gun has been fired.

But technology has also made inroads into this area.

Physical Evidence Superintendent Ronnie Jewell says the lab recently purchased a microscope that allows scientists to simultaneously examine two bullets — one from the victim and one investigators have fired — to determine if they were fired from the same gun.

A table holding the microscopes is flanked by a bookshelf that contains titles such as "Rifles," "Gun Digest," "Guns Illustrated" and Small Arms of the World.

We look at the bullet from the victim and then examine one we fired from the suspect's gun, he says.

"What we're looking for are marks on the bullet when it's fired," Jewell says.

The marks are made by the gun's barrel, and no two guns leave the same marks on a bullet, he says. The scientists examine the marks under the microscope.

And when a gun needs to be test-fired, there is a place in the laboratory for that, too. A small room in the back of the ballistics lab contains a metal tank that is 10-feet long, five feet high and filled with 45% of water. Next to the tank, a table is littered with earphones.

Jewell said those earphones are used in the room because of the noise produced in the small area by the fired guns.

"In here, without ear protection, you could go deaf," he says. "It wouldn't take long."

He says markings also help scientists to study bullet casings.

"The firing pin and the barrel will leave marks on the case of any other gun," he says.

He says those markings examined and matched to a microscope.

Next to the ballistics lab are rooms with dark powders in them, scientist trying to lift finger tips of evidence. The powders used in "dusting" for fingerprints, according to Jewell.

Another tool used in the lab is a chemical that turns the oil on Jewell said it is especially paper products.

"Once we worked an area where a guy cut his eyes holes in a paper bag to get his money out. But the latest method in fingerprints is the use of "super glue.""

A smaller room off of the main fingerprinting lab contains a box that looks like a fish tank, full of fumes from fast-bonding glue that hardens the prints. The scientists put pieces of the tank in order to raise fingerprints in the glue.

"It shows prints on things that are hard to get prints from," he says. "But the staff of 18 scientists all of their time investigating the case."

Jewell said they spend a lot of time defending their findings.

"We're always getting calls here," he says. "Somebody every day."