

Lab worker shortage threatens hot industry

BY RON LEUTY
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A tug-of-war for hiring specialized, hard-to-find lab workers could pull a potential growth industry out of California.

Molecular diagnostic test companies — part of the personalized medicine boom — are competing with hospitals and reference labs for master's degree-level clinical laboratory scientists, or CLSs. That conflict is driving wages higher, company leaders say, as underfunded job-training programs can't keep up with demand.

But leaders in the life sciences industry and academia will launch a program in September that could alleviate the supply-demand crush. Tapping federal economic stimulus program cash, the program will narrow the scope of CLS training for molecular diagnostics companies, helping them land the workers they need to quickly send test results back to doctors and patients.

At the same time, the new program could allow hospitals to hold onto more broadly trained lab workers.

"Because they are in high demand, they get paid more," said Pierre Cassigneul, president and CEO of Brisbane's XDx Inc., which developed, sells and processes a \$3,400 test that looks at 20 genes to determine whether a transplanted heart is being rejected.

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Growth problem

It's a simple supply-demand issue,



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President and CEO of XDx Inc., a gene-testing firm

made more acute by the growth of Bay Area diagnostics companies like XDx, Genomic Health Inc., Tethys Bioscience Inc. and CardioDx Inc. Those companies have developed tests that can predict, in the case of Redwood City's Genomic

Health, the likelihood that a type of breast cancer will recur after treatment.

CLS-trained employees process those tests as they arrive from doctors' offices worldwide.

XDx has seven CLSs. The company has run more than 30,000 tests through its lab.

By 2013, as test volume grows, XDx likely will have to decide whether it will double its Bay Area operations lab — but keep its research lab here — or open a second operations lab in the East or move the entire operation, Cassigneul said.

The ability to find enough CLS graduates to fill positions with salaries of \$50,000 or more will play into the decision, Cassigneul said.

"It will take about two months to find a replacement (CLS)," Cassigneul said. "That's much longer than for any scientist working in the research lab."

XDx isn't alone.

It can take Palo Alto-based CardioDx as long as three months to fill an open CLS position, said President and CEO David Levison. It has less than a dozen CLS workers.

CardioDx, whose simple blood test measures the RNA levels of 23 genes to help determine whether a heart patient's symptoms are due to obstructive coronary artery disease, has processed more than 15,000 of the tests through its lab.

"We clearly need to grow the CLS ranks going forward," said Levison, who also sits on the XDx board of directors.

Help wanted

People with CLS degrees are generalists and deal with more complex tests, while medical lab technicians can be trained at community colleges and process less-complex tests.

Such programs are largely self-supporting, with industry internships largely determining how many slots a program will have each year.

So if only 10 hospitals, reference labs or molecular diagnostics companies say they can support a large part of the

\$50,000 to \$100,000 cost of training a CLS student, only 10 slots will be available.

The 52-week master's-level CLS program at San Jose State enrolls 15 to 25 people each year, said Mark Butler, grant program manager for San Jose State University.

Traditionally, hospitals have provided those internship slots, with some CLS students then moving over to smaller or rural hospitals that can't afford to underwrite training. But as the molecular diagnostics industry has grown over the past five years, it has been plucking more CLS program graduates from hospitals and training them specifically to handle molecular tests.

At the same time, Butler said, cost-conscious hospitals are less able to fund CLS internships.

"When you think about the shortage in the state and that there are two programs up here, we really do have a crisis," said Lori Lindburg, director of the BayBio Institute, who has worked on job-training programs.

"The problem is, we can probably continue to poach from the hospitals," Lindburg said, "so it's probably more of a problem for the hospitals."

Jeffery O'Neal, statewide director of a biotech initiative within the California community college system's economic and workforce development program, said schools probably could offer 15 percent more classes than they are. "The demand is there," he said.

The money, however, is not. "If (CLS programs) didn't have to be wholly self-supporting, it would be easier to increase capacity," Butler said.

On top of that, the CLS workforce is aging, staying on the job in some cases because of the poor economy or because employers are offering bonuses or higher salaries, O'Neal said. The average age of a CLS worker is the late 50s.

"We risk losing the jobs because we're not training the next wave of the workforce," O'Neal said. "We may be losing jobs and losing companies."

Narrowing the problem

Help, however, may be on the way, thanks to a federal economic stimulus program grant.

BayBio, the Northern California life sciences industry trade group, is working with San Jose State to launch a program in September that will spin out a narrower set of CLS skills that are needed by molecular diagnostic labs.

"There's so much going on in the field right now that you want them to be focused," said Maryanne Weinell, a consultant working with San Jose State.

Four Bay Area diagnostics companies — XDx, Veracyte Inc. in South San Francisco, Siemens Medical Solutions Diagnostics in Berkeley and Navigics Inc. of Foster City — and San Mateo County Public Health will participate in the pilot, Weinell said.

The program is funded in part by a \$5 million federal stimulus grant that over two years is expected to train some 200 lab professionals in California. Besides San Jose State, programs will begin this fall for the specialized molecular lab scientist at California State University, Los Angeles, and Cal Poly.

"If we're successful, we can go after more Labor (Department) dollars to expand this," BayBio's Lindburg said.

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