



# Diagnostic Testing and Technology Report

Competitive Intelligence & Analysis for an Expanding Global Market

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## Cardinal Health Buys Lab-InterLink Out Of Bankruptcy; Can Its Tarnished Reputation Be Repaired?

The health-care conglomerate Cardinal Health (Dublin, OH) has agreed to acquire Lab-InterLink (Omaha, NE) out of bankruptcy for \$3.25 million. Cardinal had originally offered \$550,000 for Lab-InterLink, but during a May 5 auction, Beckman Coulter jumped into the mix. During the auction, Cardinal and Beckman made 12 separate bids, with Cardinal's last bid at \$3.25 million and Beckman's at \$3.2 million.

It looks like Cardinal is planning to make Lab-InterLink part of its flagship Pyxis division (San Diego), which sells automated medication dispensing systems to hospitals. Cardinal plans to restart Lab-InterLink's operations in Omaha and will bring the financial resources and management skills that were sorely lacking at the troubled company.

Cardinal's challenge will be repairing Lab-InterLink's tarnished reputation in the hospital marketplace. Over the past few years, the company and its distribution partners sold the Lab-InterLink automation system to 22 different health systems in the United States (with 31 lab locations). But installation was completed at only about 12 locations. Despite making initial payments and receiving promises of a quick installation, some hospitals had been waiting for more than a year to get their automation systems up and running and now have to start all over again with another vendor. In addition, Lab-InterLink's most important IVD distribution partner, Ortho-Clinical Diagnostics (OCD), has switched to Thermo Electron's lab automation products. ➔ p. 3

## IVD Execs Got An Average Of \$3 Million Each Last Year

The top executives at 25 leading American IVD companies received total compensation (including options) of \$77.3 million last year for an average of about \$3.1 million per executive, according to an analysis by DTTR of proxy reports filed with the U.S. Securities & Exchange Commission. The average salary for these executives in 2003 was \$492,314; bonuses averaged \$351,161; and "other" compensation (e.g., restricted stock awards, life insurance coverage, country club memberships, forgiven loans, etc.) was \$313,823. The biggest component of compensation was stock options, which averaged \$1.9 million in value per executive. ➔ p. 9

## BioVeris Hires Lehman To Seek Strategic Advisor

**B**ioVeris Corp. (Gaithersburg, MD) has hired Lehman Brothers as a strategic advisor to seek out new business arrangements with third parties. BioVeris became an independent company in connection with Roche's purchase of Igen in February for \$1.4 billion. BioVeris owns the patents to Igen's Origen technology for immunoassay systems and has licenses to Roche's PCR technology in most diagnostic fields. If Lehman can find a partner for BioVeris, a new competitor in the clinical immunoassay market could be created. BioVeris has a market capitalization of about \$300 million. In the nine months ended December 31, 2003, BioVeris reported a net loss of \$39.8 million on revenue of \$14.8 million; cash holding totaled \$145 million. 🏠

## U.S. Blocks Meatpacker's Request To Test For Mad Cow

*The USDA is maintaining strict control over mad-cow testing in the United States.*

**T**he U.S. Department of Agriculture (USDA) has denied Creekstone Farms' (Arkansas City, KS) request to independently test its cattle for mad-cow disease, upholding a policy that gives the government total control of screening for the brain-wasting disease. The Kansas meatpacking company had asked the USDA for permission to test all its cattle for the disease so it could restart beef sales to Japan (see *DTTR*, May 2004, p. 3).

Japan banned all import of U.S. beef after mad cow was discovered in Washington state last December. Japan tests all of its domestic cattle for slaughter and has stated that it will not buy U.S. beef until the United States does the same. Japan is the world's biggest importer of U.S. beef and had accounted for 20% of Creekstone's sales.

Creekstone has spent more than \$500,000 to build the first private mad-cow testing lab in the United States. Creekstone has all the equipment and personnel it needs, but it doesn't have the reagent kits needed to run the tests. That's because the USDA controls the sale of mad-cow tests in the United States and only allows labs in the government's testing program to buy them.

USDA officials say they sympathize with Creekstone and other meatpackers hurt by the bans imposed by Japan and other countries. But the agency claims that agreeing to the company's request would imply a consumer-safety issue with U.S. beef that is not scientifically warranted.

Separately, the USDA has cleared two more IVD vendors to sell their mad-cow tests to the USDA's main lab facility in Ames, Iowa, as well as to a network of about 24 state and university labs that are in the process of being certified to conduct mad-cow tests. Tests made by Prionics AG (distributed by Roche) and Enfer Scientific (distributed by Abbott) can now be sold to USDA-certified labs in the United States. Mad-cow tests from Bio-Rad and Idexx Laboratories had already been cleared.

The USDA has put together a plan to test as many as 250,000 animals for mad cow in the next 18 months in an effort to determine whether the disease is spreading through the U.S. herd. The program has been criticized at home and abroad as being too little, too late. 🏠

On April 6, Lab-InterLink filed for Chapter 11 bankruptcy protection listing \$2.1 million in assets and more than \$10 million in liabilities.

**▲ What Went Wrong At Lab-InterLink?, from page 1**

For perspective on the Lab-InterLink debacle, *DTTR* reviewed the company's bankruptcy filings and spoke with more than one dozen hospital customers and vendors with ties to the company. The overwhelming consensus is that Lab-InterLink had the best lab automation technology on the market. So what went wrong?

The trouble began in 2002 when Lab-InterLink raised about \$5 million from various investors and got a \$4.4 million line of credit from Security National Bank. The company then embarked on an aggressive expansion strategy.

During 2002, Lab-InterLink spent millions to expand its production facilities in Omaha and added dozens of employees to its payroll. At the company's peak in late 2002, it had a total of more than 100 employees, including roughly 20 sales reps, in the United States and Canada and was signing one or two new hospital clients each month. Lab-InterLink had its best year ever in 2002 and booked \$12.7 million of revenue. The success prompted then-president Mary Newcomb to project \$30 million of revenue for 2003 and talk of expansion into molecular diagnostics (*Midlands Business Journal*, October 11, 2002).

Then things started to fall apart for Lab-InterLink. In late 2002, a faulty computer chip supplied by a contract manufacturer began causing malfunctions in Lab-InterLink's automation systems. Most of Lab-InterLink's staff spent the next six months trying to identify and correct the problem. The glitch pushed back Lab-InterLink's time schedule for new installations and drove its top distributor, OCD, to suspend existing purchase orders and halt new sales.

With its cash running out, the company was forced to begin laying off employees, culminating in the dismissal of 42 workers in November 2003. Lab-InterLink wound up posting a net loss of \$7.7 million in 2003 on revenue of only \$2 million.

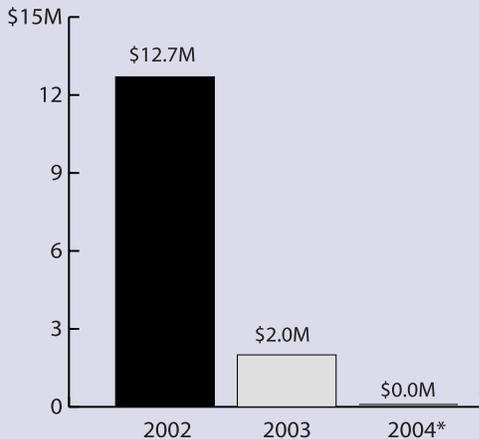
By mid-2003, Lab-InterLink's chairman and majority owner, Rodney Markin, Ph.D., M.D., determined that the company would need to raise \$12 million to \$15 million to correct all the operational problems that had resulted from the faulty chip and

renew the company's marketing efforts. So Markin began searching for investors or outright sale of the company.

Among the companies that considered buying Lab-InterLink was Beckman Coulter. Beckman's plan was to purchase Lab-InterLink and then immediately shut down its operations, thereby eliminating its main competitor in the automation market. Beckman would then hire Markin and Newcomb as consultants to help sell Beckman's automation systems. Lab-InterLink's board judged Beckman's plan as unacceptable and by late 2003 negotiations had ended.

Early this year, Cardinal stepped in with an offer to buy Lab-InterLink for \$550,000 in cash and a promise to restart operations in Omaha. This deal was all set to close until Beckman jumped into a May 5 bankruptcy court auction for Lab-InterLink and bid up to \$3.2 million before bowing out to Cardinal's \$3.25 million bid.

**Lab-InterLink Revenue**



\*Through April 2004  
Source: Lab-InterLink's bankruptcy filings

Lab-InterLink was never able to get its automation systems up and running at most of its hospital customers.

Bankruptcy court filings indicate that Cardinal plans to keep Lab-InterLink's base of operations in Omaha and hire back many former employees. Markin has been hired as a consultant and will be paid \$150,000 a year for two years and then a percentage of Lab-InterLink's revenue for three years, up to \$1.75 million. However, Cardinal plans to maintain no more than eight of Lab-InterLink's existing hospital contracts, each of which already has a Lab-InterLink system already up and running (see table below). But that leaves another 23 hospital customers, including 10 gained through a distribution agreement with OCD, that have been left hanging. 🏠

### Contracts That Cardinal Health Will Assume

Company/Hospital Name	Description of Contract
Aultman Hospital (Canton, OH)	Maintenance agreement for installed system
Carraway Methodist Medical Center (Birmingham, AL)	Maintenance agreement for installed system
Kaiser Permanente Northwest (Portland, OR)	Maintenance agreement for installed system
Kaiser Permanente (North Hollywood, CA)	Maintenance agreement for installed system*
Nebraska Health System (Omaha, NE)	Maintenance agreement for installed system
Park Nicollet Health Services (St. Louis Park, MN)	Maintenance agreement for installed system
Washington Hospital Center (Washington, DC)	Maintenance agreement for installed system*
William Beaumont Hospital (Royal Oak, MI)	Maintenance agreement for installed system

### Hospitals That Lab-Interlink Left Hanging

Company/Hospital Name	Description of Contract
ACM Medical Laboratory (Rochester, NY)	Purchase agreement for delivery of lab automation
Albert Einstein Medical Center (Philadelphia, PA)	Purchase agreement through OCD**
Clinical Laboratories of Hawaii (Ewa Beach, HI)	Purchase agreement for delivery of lab automation
Hackensack University Medical Ctr. (Hackensack, NJ)	Purchase agreement through OCD**
Health Network Laboratories (Allentown, PA)	Purchase agreement for upgrade of lab automation
Jackson-Madison County Hospital (Jackson, TN)	Purchase agreement through OCD**
Kaiser Permanente (Bellflower, CA)	Purchase agreement for delivery of lab automation
Kaiser Permanente (Berkeley, CA)	Purchase agreement for delivery of lab automation
Kaiser Permanente (Los Angeles, CA)	Purchase agreement for delivery of lab automation
Kaiser Permanente (Pasadena, CA)	Purchase agreement for delivery of lab automation
Kaiser Permanente (West Los Angeles, CA)	Purchase agreement for delivery of lab automation
Lakeland Regional Health (St. Joseph, MI)	Purchase agreement through OCD**
Long Beach Memorial Medical Ctr. (Long Beach, CA)	Purchase agreement for delivery of lab automation
Mainline Clinical Labs (Bryn Mawr, PA)	Purchase agreement for delivery of lab automation
Mainline Clinical Labs (Wynnewood, PA)	Purchase agreement for delivery of lab automation
North Memorial (Robinsdale, MN)	Purchase agreement through OCD**
Palmetto Richland Hospital (Columbia, SC)	Purchase agreement through OCD**
Rowan Regional Medical Center (Salisbury, NC)	Purchase agreement through OCD**
St. John of Detroit (Detroit, MI)	Purchase agreement through OCD**
St. Joseph's Hospital (Atlanta, GA)	Purchase agreement for delivery of lab automation
SUNY Upstate Medical University (Syracuse, NY)	Maintenance agreement
West Georgia Medical Center (LaGrange, GA)	Purchase agreement through OCD**
Wishard Health Services (Indianapolis, IN))	Purchase agreement through OCD**

\*Acquisition agreement says Cardinal will assume these contracts "if feasible"

\*\*These are contracts held by Ortho-Clinical Diagnostics that were subcontracted to Lab-InterLink for installation and maintenance

Source: DTTR from bankruptcy filings

Most of Lab-InterLink's contracts have been either cancelled, terminated by OCD, or are under litigation.

# inside the diagnostics industry

## More Than 300 U.S. Labs Now Automated

Since our last lab-automation vendor survey two years ago, 105 hospitals and independent labs have installed some form of automation, ranging from front-end only to total lab automation (TLA). Since our first survey in 2000, approximately 50 new labs per year have been adding automation systems. What's the total potential market? The consensus among vendors is that there are approximately 1,000 labs in the country that have the volumes necessary for automation to be worthwhile. That means the market is about one-third of the way toward its full potential.

The adoption of lab automation is being driven by the ever-present shortage in lab personnel combined with increasing test volumes, which *DTTR* believes are growing in the 4% to 5% range at U.S. hospitals. Vendors tell us that there is a definite trend among hospitals seeking to start up or expand existing outreach programs.

The key decision faced by labs when considering automation is whether or not it's even necessary given the advances in integrated analyzer platforms. Below we provide brief updates on the latest developments at seven leading automation vendors.

**Beckman Coulter** (Fullerton, CA) has installed its automation systems at 150 labs in the United States, according to Ron Berman, director of marketing for lab automation. New installations include the University of Oklahoma, University of California (San Francisco), Wake Medical Center (Raleigh, NC), and Elmhurst Hospital (Elmhurst, IL).

Berman contends that Beckman's automation systems are truly open and are able to connect to chemistry, immunoassay, and coagulation analyzers from other vendors. He says that 20% to 25% of Beckman's automation systems have been installed and connected to non-Beckman analyzers. He also notes that Beckman has developed its own process control software system, named PrepLink, that gives Beckman's automation systems full functionality without the need to connect to a laboratory's LIS.

Berman would not comment on Beckman's attempt to acquire Lab-InterLink.

**Bayer Diagnostics** (Tarrytown, NY) has installed its Advia WorkCell and LabCell automation systems at approximately 100 sites worldwide, including 60 sites in the United States, according to Rodney Day, marketing director for lab automation. Recent installations include Centrex Clinical Labs (New Hartford, NY), Hurley Medical Center (Flint, MI), and San Francisco General Hospital. He believes Bayer will add another 100 worldwide automation clients in the next 12 months.

### U.S. Lab Automation Installed Sites\*

Vendor	2000	2002	2004
Beckman	85	110	150
Bayer	1	32	60
Roche	31	40	55
Abbott	1	26	40
Olympus	0	0	9
Cardinal/Lab-InterLink	8	10	8
Dade	0	0	5
OCD	2	5	1
Totals	128	223	328

\*Number of installed lab customers, includes total lab automation and front-end automation

Source: *DTTR* from companies

Day says the current interest level in automation among hospitals is the highest he's ever seen. He believes automation activity is being driven by a pickup in hospital outreach testing, which is adding volume and requiring more efficient use of existing lab employees. Day says hospitals are also seeking to get more involved in molecular diagnostics, which is also straining workers' time. In addition to increasing worker efficiency, he says automation is helping hospitals reduce turnaround times, track specimens better, and provide more consistent quality test results.

He believes Bayer's quick delivery and installation time distinguish it from competitors. After a purchase has been made, Bayer can deliver and install an automation system and related analyzers within 90 days, according to Day.

**Roche Diagnostics** (Indianapolis) has installed its automation systems at 55 laboratories in the United States, according to Chris Bosler, director of marketing for central diagnostics. Recent installations include the Veteran's Administration Hospital in Dallas; St. John of Detroit Hospital; Manatee Memorial (Bradenton, FL); and the Huntsville Hospital (Huntsville, AL). He believes Roche will complete another six to eight U.S. installations by year's end.

Bosler says lab automation is now something that every large hospital laboratory is considering when it buys a new analyzer. He anticipates that a total of 1,000 labs in the United States will have some form of automation (front-end, back-end, or TLA) within the next 10 years.

Bosler believes Roche differentiates itself by its ability to develop customized packages for each hospital based on their floor space, test volume, and the level of automation they desire. Regarding the long-term commitment Roche and most other vendors require from hospital customers, Bosler says, "The technology doesn't change that rapidly. Hospitals are unlikely to want to change systems within three years, and that the decision process to buy a new system can take another one to two years."

**Abbott Diagnostics** (Abbott Park, IL) has installed its Tecan Genesis FE500 preanalytical workstation at more than 100 labs worldwide, including about 40 in the United States, according to Keith Chaitoff, group director of automated systems and clinical chemistry. The Genesis FE500 is manufactured by Tecan Group (Zurich, Switzerland) and distributed by Abbott on a nonexclusive basis. Recent installations include St. Francis Hospital (Tulsa, OK) and Johns Hopkins Hospital (Baltimore).

Chaitoff believes that a high-quality integrated analyzer with a wide menu minimizes the need for automation (especially TLA). For example, he notes that Abbott's Architect system has a menu of 90 tests in the United States, including 11 immunoassays and 10 drugs-of-abuse tests. Among the tests that will be added by year's end are total PSA, free PSA, ferritin, folate, and vitamin B12, according to Chaitoff.

"Lab automation with track systems is being pushed by those vendors that don't offer good integrated systems....What good does moving samples 10 feet

by a track system and eliminating some low-cost employees really do?" asks Chaitoff.

**Olympus America** (Melville, NY) began full commercial rollout of its OLA2500 lab-automation system in late 2002/early 2003, according to Stephen Wasserman, group vice president for diagnostic systems. He says the OLA2500 is now installed at nine sites in the United States, including Methodist Hospital (Dallas) and Life South Community Blood Centers (Gainesville, FL). And he says Olympus has installed the system at more than 100 sites in Europe.

Wasserman believes the OLA2500 is distinguished from competitors by its high throughput. The basic OLA2500 can sort and aliquot 650 specimens per hour, while the high-speed version performs 850 per hour. He also notes that both versions can handle test tubes of any size and sort them into any type of rack (*i.e.*, coagulation, hematology, immunoassay, etc.).

He believes that the market for TLA will remain small because it is too difficult for hospitals to justify its cost and because it restricts flexibility. "Who knows how fast their lab will grow or which new technologies will be developed over the next five years?" asks Wasserman. He believes the market for TLA is limited to those labs looking to showcase themselves to potential big donors or desperate to reduce headcount at any cost.

Nonetheless, Wasserman says he's eager to work with Cardinal Health. "Cardinal has been successful in other areas of automation, and Lab-Interlink is the best TLA system on the market. The industry needs an independent lab automation solution," he adds.

**Ortho-Clinical Diagnostics** (Raritan, NJ) had nonexclusive rights to market Lab-InterLink's automation system under the "enGen" trademark. OCD had sold the product to 10 hospitals in the United States (*see page 4*).

Melissa Heard, product director for lab automation at OCD, says that OCD stopped marketing Lab-InterLink's product in 2002 and signed a new contract with Thermo Electron Corp. (Waltham, MA) earlier this year. Under the terms of the agreement, OCD is the exclusive sales agent of Thermo Electron's automation systems in North America. Heard says that OCD has tried to ease the pain for its former Lab-InterLink customers by either reimbursing them for the cost of the unexpired portion of their contracts or offering replacement systems from Thermo Electron at attractive prices.

She notes that Thermo Electron has a proven track record with 20 automation systems installed and running in Europe. Heard says the Thermo Electron system can interface with OCD's Vitros analyzers as well as other manufacturer's analyzers. The system provides automated centrifugation, decapping, sorting, and aliquoting. Additional back-end functions are expected to be available within the next 18 months, according to Heard.

She says that OCD will market Thermo Electron's product under its enGen brand name. OCD's first new automation client is Jackson-Madison County

General Hospital (Jackson, TN), which had previously used a Lab-InterLink system. Jackson-Madison is expected to go live with its new automation system by the end of May.

**Dade Behring** (Deerfield, IL) began full commercial rollout of its StreamLab front-end automation system in mid-2003. StreamLab is currently installed at five sites in the United States, including Methodist Hospital (Peoria, IL), University Hospital of Cleveland, and Atlantic Health System (Summit, NJ), according to Rick Lee, corporate vice president of global marketing at Dade.

StreamLab can process up to 300 samples per hour when connected to four of Dade's Dimension RxL chemistry analyzers. Lee says StreamLab is truly integrated with RxL and can be run from a single computer monitor. StreamLab software is proprietary and Windows based. Other key features include the ability to process test tubes of any size and its small foot print. For example, a StreamLab system connected to two RxL takes up only 11 x 13.5 feet of space, according to Lee.

The StreamLab/RxL combination runs chemistry and high-volume immunoassays (e.g., cardiac, thyroid, therapeutic drug monitoring, and drugs-of-abuse). Lee says StreamLab will be capable of linking to the Immulite 2000 (made by

Diagnostic Products Corp.) by the end of the year.

### Number of Newly Certified ASCP Medical Technologists

**W**hat's driving the adoption of lab automation? Answer: The lab worker shortage and it's only going to get worse. The number of new medical technologists certified by the American Society of Clinical Pathologists (Chicago) has declined by an average of 6% annually for the past 10 years. In 2003, only 1,802 were certified, down from 3,268 in 1993. And these figures may actually understate the problem because anecdotal evidence suggests that more and more new MTs are choosing to work at pharmaceutical or biotechnology companies instead of clinical labs.



Source: American Society of Clinical Pathologists

Lee says that automation is not a panacea for hospital laboratories. Front-end automation reduces the need for lower-skilled, lower-paid workers, so the cost savings are not as significant as you might think, notes Lee. And TLA requires a substantial capital investment or a seven- to 10-year commitment to a single vendor. Lee says that many of the early adopters of TLA received government funding. "The early demand was not organic. Relying on government demonstration funds was not a sustainable business model. The fact that Lab-InterLink had to file for bankruptcy speaks of the difficulty in this market," observes Lee. Nonetheless, Lee believes there is room in the market for an open lab automation system that is not sold by an IVD manufacturer. 🏠

**▲ IVD Execs Got \$3 Million, from page 1**

The highest-paid IVD executive in 2003 was Jim Reid-Anderson, age 45, chairman and chief executive of Dade Behring (Deerfield, IL), who earned a total of \$12.9 million. Reid-Anderson's compensation included salary of \$794,215, bonus of \$1.6 million, and other compensation of \$2.6 million, including \$2.4 million worth of stock awards. Anderson also received 268,230 stock options with a potential value of \$7.9 million if Dade's stock were to appreciate 10% annually until their expiration date in October 2013. In 2003, Dade posted net income of \$48.1 million vs. a net loss of \$82.8 million in 2002; Dade's stock price rose 129% in 2003 to \$35.74 per share.

The next-highest-paid IVD executive was John Wareham, 62, chairman and chief executive of Beckman Coulter (Fullerton, CA), who earned a total of \$7.8 million, including 240,000 stock options with a grant date present value of \$4.2 million. Beckman posted net income of \$207.2 million in 2003, up from \$135.5 million; its stock price rose 72% last year.

The lowest-paid was Edward Gallup, 64, chairman and chief executive of Immucor (Norcross, GA). Gallup was paid a total of \$328,956, including a salary of \$279,616, no bonus, other compensation of \$49,340, and no stock options. Immucor earned \$14.4 million in its fiscal year ended May 31, 2003, up from \$8.8 million the previous fiscal year; its stock price was up 51% in 2003.

The only other executive that earned less than \$500,000 last year was Clint Severson, 55, chairman and chief executive, who earned a total of \$452,000, including salary of \$265,000, bonus of \$187,000, and no stock options. Abaxis recorded net income of \$1.6 million in the fiscal year ended March 31, 2003, up from \$1.2 million the previous fiscal year; its stock price was up 357%.

Meanwhile, Heino von Prondzynski, head of the diagnostics division at Roche (Basel, Switzerland), earned a total of \$1.5 million (based on an exchange rate of 1 Swiss franc=\$0.77 USD). Prondzynski's compensation included a salary of \$848,650, bonus of \$386,190, and 21,882 stock options with a grant date present value of \$275,000. ▲

**IVD Execs: Largest Option Awards In 2003**

<b>Company</b>	<b>Executive</b>	<b># Options Received</b>	<b>Value (\$ millions)</b>
Dade Behring	Jim Reid-Anderson	268,230	7.9
Biosite	Kim Blickenstaff	70,000	5.3
Gen-Probe	Henry Nordhoff	100,000	4.7
Beckman Coulter	John Wareham	240,000	4.2*
Abbott Labs	Richard Gonzalez	473,776	4.2*
Bio-Rad	Norman Schwartz	67,783	3.8
Apogent	Frank Jellinek, Jr.	140,000	3.8
Cytec	Patrick Sullivan	280,000	2.7
Becton Dickinson	Edward Ludwig	220,000	2.2*
Third Wave	Lance Fors, Ph.D.	220,000	1.5

\*Grant date present value; those without an asterisk are valued assuming 10% appreciation  
Source: DTTR from company proxies

**2003 IVD Executive Cash Compensation**

<i>Company/Executive</i>	<i>Salary</i>	<i>Bonus</i>	<i>Other Comp*</i>	<i>2003 Total Cash Comp</i>	<i>2003 Company Net Income</i>	<i>2003 Stock Price % Chg</i>
<b>Abaxis</b>						
Clinton Severson, 55, Chmn	\$265,000	\$187,000	\$0	\$452,000	\$1,636,000	357%
<b>Abbott Labs</b>						
Richard Gonzalez, 50, Pres, medical products	882,692	885,000	95,001	1,862,693	2,753,200,000	17%
<b>Apogent Technologies</b>						
Frank Jellinek, Jr., 58, Pres	776,475	0	111,136	887,611	-11,746,000	11%
<b>Beckman Coulter</b>						
John Wareham, 62, Chmn	775,000	706,880	2,124,420	3,606,300	207,200,000	72%
<b>Becton Dickinson</b>						
Edward Ludwig, 52, Chmn	887,397	800,000	6,000	1,693,397	547,056,000	34%
<b>Bio-Rad</b>						
Norman Schwartz, 54, Pres	455,414	150,082	10,000	615,496	76,171,000	49%
<b>Biosite</b>						
Kim Blickenstaff, 51, Pres	340,650	415,910	1,725	758,285	24,763,000	-15%
<b>Cholestech</b>						
Warren Pinckert, 59, Pres	334,962	82,000	9,156	426,118	4,893,000	10%
<b>Cytc</b>						
Patrick Sullivan, 52, Chmn	474,808	675,000	6,000	1,155,808	76,220,000	36%
<b>Dade Behring</b>						
Jim Reid-Anderson, 45, Chmn	794,215	1,629,342	2,615,009	5,038,566	48,100,000	129%
<b>Diagnostic Products</b>						
Michael Ziering, 47, Chmn	530,000	40,000	28,450	598,450	61,795,000	19%
<b>Digene</b>						
Evan Jones, 46, Chmn	322,708	165,000	0	487,708	-4,324,000	250%
<b>Exact Sciences</b>						
Don Hardison, 53, Pres	333,083	50,250	0	383,333	-28,340,000	-7%
<b>Gen Probe</b>						
Henry Nordhoff, 62, chairman	474,808	400,000	758,009	1,632,817	35,330,000	207%
<b>Immucor</b>						
Edward Gallup, 64, Chmn	279,616	0	49,340	328,956	14,370,000	51%
<b>Inverness Medical</b>						
Ron Zwanziger, 50, Chmn	295,553	550,000	0	845,553	11,196,000	66%
<b>Johnson &amp; Johnson</b>						
J.T. Lenehan, 55, worldwide chmn, med devices/diagnostics	1,037,308	860,000	1,658,769	3,556,077	7,197,000	-4%
<b>Luminex</b>						
Thomas Erickson, 53, Pres	509,650	0	0	509,650	-4,209,000	128%
<b>Meridian</b>						
William Motto, 62, Chmn	395,000	251,813	204,483	851,296	7,018,000	52%
<b>OraSure Technologies</b>						
Michael Gausling, 46, Pres	274,302	80,000	18,180	372,482	-1,136,000	46%
<b>Quidel</b>						
S. Wayne Kay, 53, Pres	400,000	200,005	81,327	681,332	19,651,000	211%
<b>Therasense</b>						
W. Mark Lortz, 52, Chmn	368,172	251,738	16,000	635,910	-13,058,000	142%
<b>Third Wave Technologies</b>						
Lance Fors, Ph.D., 46, Chmn	430,523	200,000	52,563	683,086	-8,116,000	69%
<b>TriPath Imaging</b>						
Paul Sohmer, MD, 55, Chmn	391,731	199,000	0	590,731	-8,538,000	191%
<b>Ventana</b>						
Christopher 54, Gleeson, Pres	278,795	0	0	278,795	5,972,000	71%
<b>Total, 25 execs</b>	<b>12,307,862</b>	<b>8,779,020</b>	<b>7,845,568</b>	<b>28,932,450</b>		
<b>Average, 25 execs</b>	<b>\$492,314</b>	<b>\$351,161</b>	<b>\$313,823</b>	<b>\$1,157,298</b>		<b>87.7%</b>

\*Other compensation includes the value of restricted stock awards, plus company contributions to retirement plans and life insurance policies, forgiven loans, and company cars, but excludes stock options. Source: DTRR from company proxies

## IVD Stocks Up 5%; Immunicon Goes Public

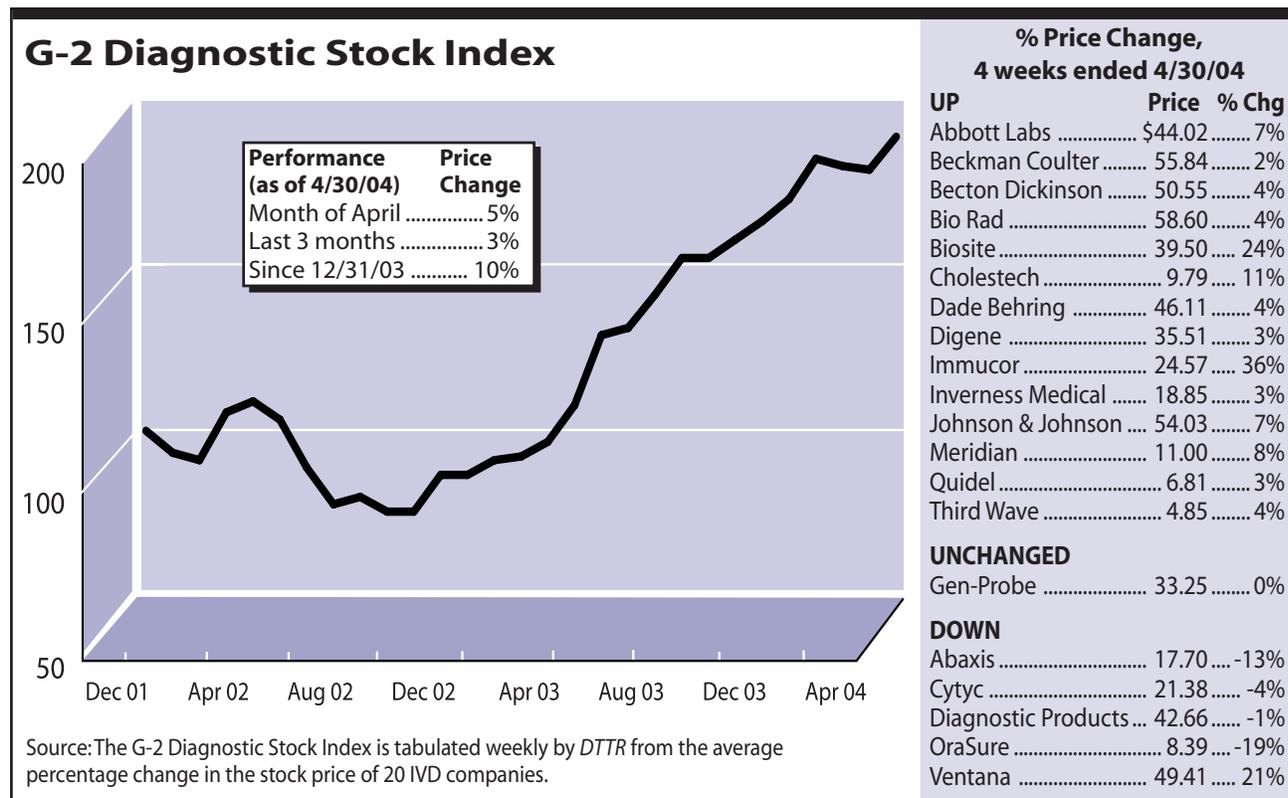
The 20 stocks in the G-2 Diagnostic Stock Index rose an unweighted average of 5% in the month of April, with 14 stocks up in price, one unchanged, and five down. Year to date, the G-2 Index is up 10%, while the S&P 500 Index is flat and the Nasdaq is down 4%.

The big news this month was the initial public offering of **Immunicon Inc.** (Huntington Valley, PA), which sold six million shares at \$8 to raise \$48 million in gross proceeds on April 22.

Immunicon had originally estimated its IPO would be priced in the range \$12 to \$14 per share, then lowered the price to a range of \$9 to \$11, before it was finally set at \$8 per share. UBS Securities, SG Cowen, Legg Mason Wood Walker, and Adams Harkness & Hill were the underwriters for the deal.

Immunicon says net proceeds from the IPO of approximately \$43 million will be used to commercialize its cell-analysis technology, which is used to count and analyze tumor cells in the blood. The company has licensed its technology to Veridex LLC (owned by Johnson & Johnson), which has developed a diagnostic system called CellSearch that is designed to help manage metastatic breast cancer and is currently available for sale for research use only.

At \$8 per share, Immunicon has a market capitalization of \$175.5 million. In 2003, the company posted a loss of \$17.6 million versus a net loss of \$18.4 million in 2002; revenue was \$3.0 million versus \$932,000. ▲



# G-2 Insider

**A**fter years of being shut out of contracts with the nation's largest commercial laboratories, TriPath Imaging (Burlington, NC) has scored a major win. TriPath has signed a long-term nonexclusive agreement to supply its SurePath mono-

layer Pap tests to Quest Diagnostics (Teterboro, NJ). As part of the agreement, Quest has received 800,000 warrants to purchase TriPath stock at \$9.25 per share. Quest has also received warrants that will allow it to purchase another 3.2 million TriPath shares at prices between \$10.18 and \$12.03 per share if certain volume goals are met. "Quest is now highly motivated to convert to SurePath," Paul Sohmer, M.D., chief executive of TriPath told analysts on a May 6 conference call.

TriPath did not release any information regarding pricing levels for the Quest contract, but *DTTR* estimates that Quest could be paying TriPath less than \$5 per SurePath test. That amount is probably \$1 to \$2 cheaper per test than Quest's current main supplier, Cytyc Corp. (Boxborough, MA).

## Company References

Abbott Labs 847-937-6100  
 Bayer Diagnostics  
 914-631-8000  
 Beckman Coulter  
 714-871-4848  
 BioVeris 301-869-9800  
 Cardinal Health 614-757-5000  
 Cytyc Corp. 978-263-8000  
 Dade Behring 847-267-5300  
 Immunicon 215-830-0777  
 Olympus America  
 631-844-5690  
 Ortho-Clinical Diagnostics  
 908-218-1300  
 Quest Diagnostics  
 201-393-5000  
 Roche Diagnostics  
 317-849-9350  
 TriPath 336-222-9707

Quest performs some 12.5 million Pap tests per year and has converted 84%, or 10.5 million, of these to the mono-layer method. Cytyc says that Quest is its largest customer and accounted for about 22%, or \$67 million, of its total revenue of \$303 million last year. This suggests that Quest currently pays roughly \$6 to \$7 for each Cytyc test it performs (\$67 million divided by 10.5 million=\$6.38).

Cytyc says it has built up strong relationships with the ob/gyns that order Pap tests and that they will be reluctant to switch to TriPath. But with the opportunity to save \$10+ million annually in pap test costs plus gain tens of millions more from the TriPath warrants, you can bet Quest is eager to make the transition to TriPath. 🏰

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