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GENOMICS/LIFE SCIENCES OUTLOOK

SECTOR VALUATION UPDATE: NEAR THE BOTTOM; SELECTIVELY BUY "BEST OF BREED"

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Industry Report

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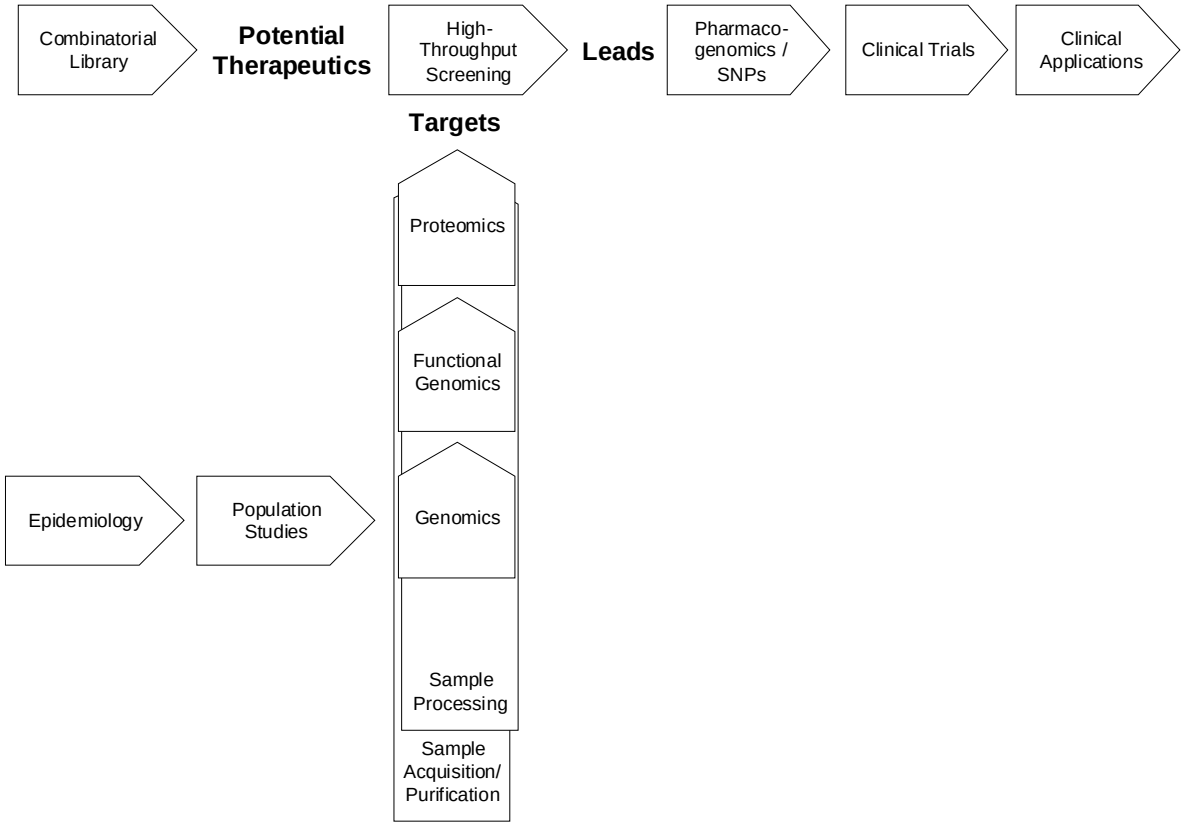

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Overall Genomics/Life Sciences Sector Valuation Update

While predicting future movements in today's economic environment is difficult, we believe that the genomics/life sciences sector likely is reaching its low—depending on moves in the broader equity markets—and that the recent slight upward trend could continue through the year-end. Currently, the sector is trading at a technology value (market capitalization minus cash) of $47 billion, a 47% increase over the year's low of $32 billion. Additionally, 19% of the sector currently is trading at less than 1.5 times cash value. Comparing the genomics/life sciences sector with the S&P 500 shows a positive correlation with a beta of greater than 2 (we use the S&P 500 as a benchmark of broad U.S. equity performance). Therefore, the broader market appears to affect this sector's performance significantly. Due to the recent weakening of the dollar, negative foreign-currency effects for recently reported third-quarter results were less significant than the previous quarter. Assuming that the dollar remains at current rates, we would expect that foreign-currency effects may improve most of next year. While we believe that short-term challenges exist for the sector, overall we view it as a compelling investment opportunity for the intermediate-to-long term (9 to 18-plus months, respectively). However, we believe that investors should be prepared to buy stocks of best-of-breed companies with positive catalysts expected over the next six months, adjusting for probability and risk, in front of the market realization of performance improvements.

Overall Sector Market Capitalization Trends Flat

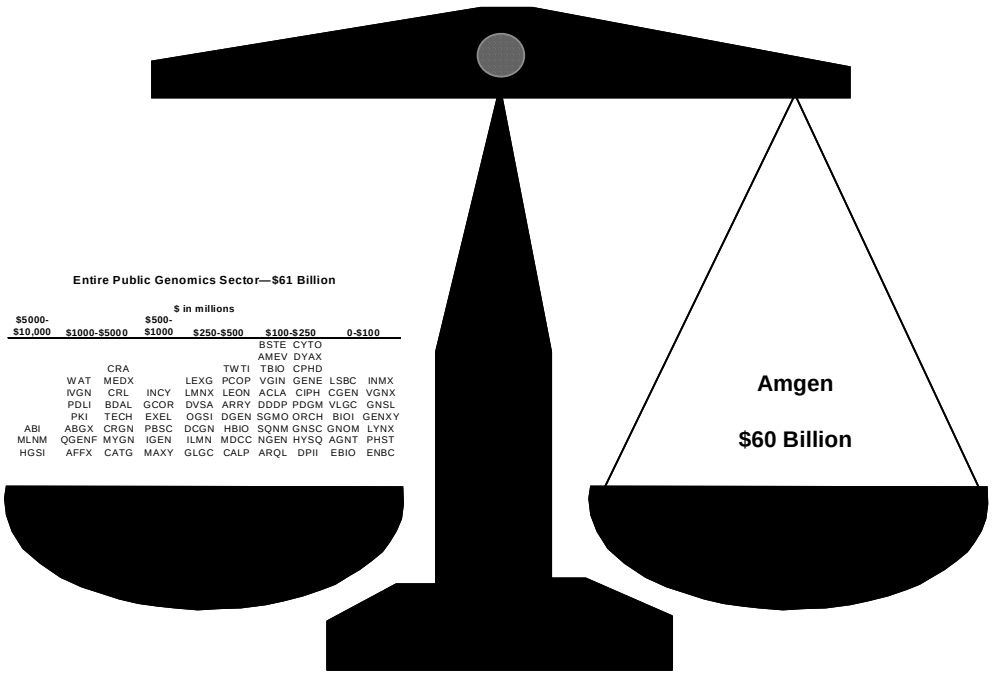
Currently, the total market capitalization for all 73 publicly traded genomics/life sciences companies is approximately $60 billion, as shown in figure 1 and the comparable company valuation tables, which is equal to the market cap of a large biotechnology firm such as Amgen ($60 billion). As shown in figure 2, on the next page, we believe that this valuation trade-off is noteworthy, since investors can purchase the entire portfolio of genomics/life sciences companies or a single biotech company for the same price.

Figure 1
Genomics/Life Sciences Outlook
2001 Market Capitalization, Technology Value, and Cash Trend

* 74 companies from 2/5 - 4/16
* 75 companies from 4/16 -7/23
* 73 companies from 7/23 - today

Source: Reuters Plus, William Blair & Company, L.L.C. estimates

Figure 2
Genomics/Life Sciences Outlook
Genomics/Life Sciences Valuation Trade-off



Source: Reuters Plus, William Blair & Company, L.L.C. estimates

As shown in figure 1, this year's high point for the total genomics/life sciences sector occurred the week ending January 26 at $109 billion. The current $60 billion market cap represents a 33% rebound from the year low of $45 billion, reached the week of September 17. The other low point this year for the sector occurred in March, at $53 billion. From that point, the entire sector climbed 61%, to a high of $85 billion in June. Following that high, we witnessed a relatively steady decline to the aforementioned $45 billion year-to-date low. Although the uncertain economic environment makes prediction difficult, we believe that a steady ramp-up in the sector could be sustained through year-end.

Table 1, facing, is a breakout by market cap, cash, and technology value of the number of companies in that segment and the respective totals. We have segmented market cap and technology value into six groups and found that about 47% of the companies are below a $250 million market cap. Similarly, we grouped the companies by cash and found that about 70% have between $50 million and $250 million. When the entire genomics/life sciences market cap was at its year-high of $109 billion, only about 25% of the companies had a market cap or tech value below $250 million, but companies with cash between $50 million and $250 million still constituted about 60%. We anticipate a relatively steady to rising valuation for the high-quality, developmental firms trading near cash value.

Table 1
Genomics/Life Sciences Sector Outlook
Breakout for Week Ending November 2

Market Cap Range ($ mil.)	Number of Companies	Cash Range ($ mil.)	Number of Companies	Tech Value Range (Market Cap less Cash) ($ mil.)	Number of Companies
5000-10000	3	1000-2000	2	5000-10000	1
1000-5000	15	250-1000	10	1000-5000	12
500-1000	6	100-250	18	500-1000	7
250-500	15	50-100	24	250-500	8
100-250	20	25-50	8	100-250	21
0-100	**14**	**0-25**	**11**	**0-100**	**21**
Total	73		73		70
Mean	$831		$184		$647
Median	$273		$84		$163

Source: Reuters, William Blair & Company, L.L.C.

Sector Shows Positive Correlation and High Beta Relative to S&P 500

As illustrated in figures 3 and 4, below and following, we also have analyzed the weekly genomics/life sciences sector compared with the weekly S&P 500 performance this year. Currently, as shown in figure 3, based on our endpoints, the S&P 500 is down 16.1% and the genomics/life sciences sector is down 35%. With more than a 60% correlation, we estimate a positive beta of 2 for the genomics/life sciences sector versus the S&P 500. Consequently, while sector and company-specific catalysts should drive stocks, we believe that expectations regarding the overall market likely will have an equal and significant impact.

Figure 3
Genomics/Life Sciences Sector Outlook
2001 Normalized Total Genomics/Life Sciences Market Cap and S&P 500

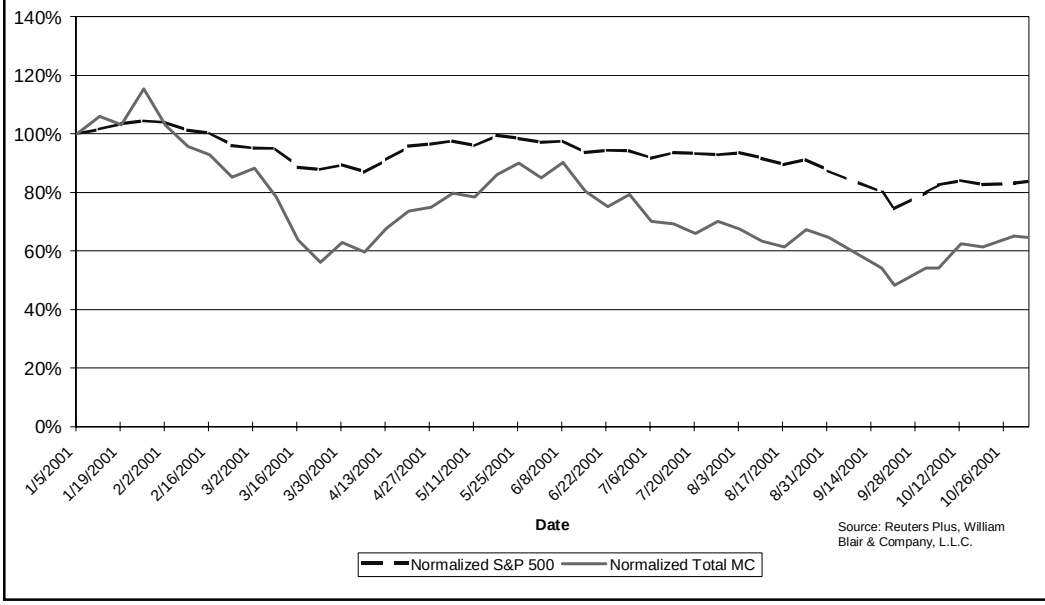
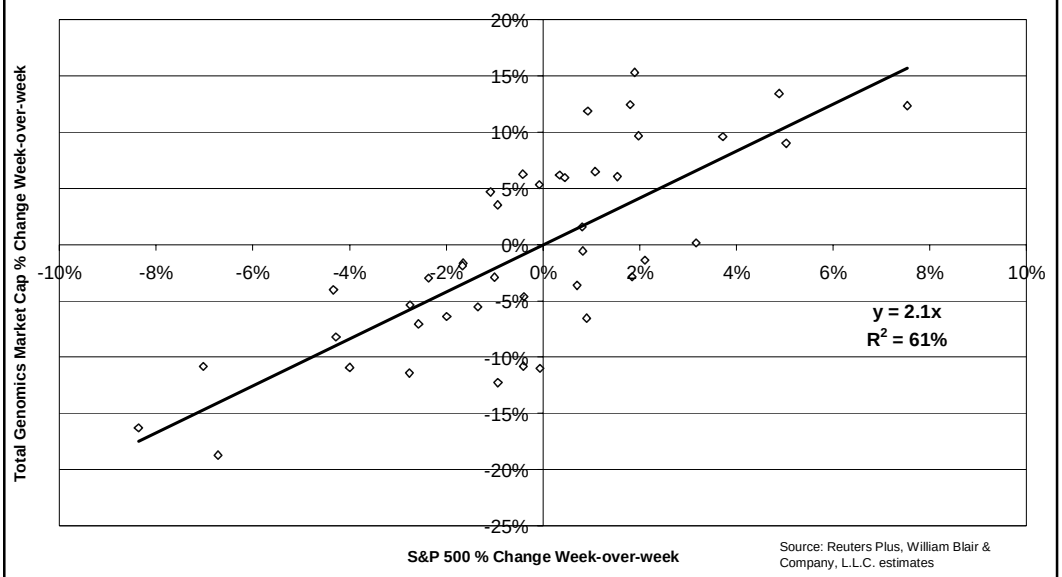


Figure 4
Genomics/Life Sciences Sector Outlook
Correlation Between S&P 500 and Total Genomics Market Cap Year-to-date



Source: Reuters Plus, William Blair & Company, L.L.C. estimates

Foreign-exchange Effects May Reverse in Fourth Quarter

Due to the high foreign-currency exposure for many of the companies in this sector, we also have analyzed the euro and the yen historically and forecast future currency effects assuming constant current rates going forward. Approximately 49% of Applied Biosystems' products are sold outside the United States, with about 26% to Europe, 15% to Japan/Asia, and 8% to the rest of the world; approximately 45% of Invitrogen's products are sold outside the United States, with about 28% to Europe, 9% to Japan, and 8% to the rest of the world. For the calendar third quarter, we witnessed milder currency effects compared with last quarter, as illustrated in figure 5 and table 2. We have forecast future rates, and the currency effects likely could be flat to modestly positive for the first two quarters in calendar 2002.

Figure 5
Genomics/Life Sciences Sector Outlook
Year-over-year Percentage Exchange Rate Change

* Forecast assumes same current rate through Sept 2002
Source: Federal Reserve Board, William Blair & Company, L.L.C.

Table 2
Genomics/Life Sciences Sector Outlook
Foreign-exchange Rate Data With Forecast Through October 2002

			Year-over-year % Change	
Date	US$/Euro	US$/100 Yen	US$/Euro	US$/100 Yen
Jan-01	0.9376	0.8571	-7.5%	-9.7%
Feb-01	0.9205	0.8604	-6.4%	-5.9%
Mar-01	0.9083	0.8230	-5.8%	-12.5%
Apr-01	0.8925	0.8080	-5.5%	-14.7%
May-01	0.8753	0.8212	-3.4%	-11.0%
Jun-01	0.8530	0.8173	-10.3%	-13.3%
Jul-01	0.8615	0.8032	-8.2%	-13.1%
Aug-01	0.9014	0.8239	-0.3%	-10.9%
Sep-01	0.9114	0.8431	4.8%	-9.9%
Oct-01	0.9050	0.8234	6.2%	-10.7%
Nov-01E	0.9050	0.8234	5.8%	-10.2%
Dec-01E	0.9050	0.8234	0.7%	-7.6%
Jan-02E	0.9050	0.8234	-3.5%	-3.9%
Feb-02E	0.9050	0.8234	-1.7%	-4.3%
Mar-02E	0.9050	0.8234	-0.4%	0.0%
Apr-02E	0.9050	0.8234	1.4%	1.9%
May-02E	0.9050	0.8234	3.4%	0.3%
Jun-02E	0.9050	0.8234	6.1%	0.7%
Jul-02E	0.9050	0.8234	5.0%	2.5%
Aug-02E	0.9050	0.8234	0.4%	-0.1%
Sep-02E	0.9050	0.8234	-0.7%	-2.3%
Oct-02E	0.9050	0.8234	0.0%	0.0%

* Forecast assumes that current exchange rates continue through October 2002
* Source: Federal Reserve Board monthly averages; William Blair & Company, L.L.C. estimates

Challenging Environment for the Market and the Genomics/Life Sciences Sector

Given the current economic environment, we believe that the key issues facing genomics/life sciences stocks are exacerbated as investors mitigate their risk tolerance until the broader market as well as sector or company-specific catalysts reinvigorate interest. We believe that one of the key issues with this sector has been its predominantly developmental nature and mostly short history in the public, capital markets, as illustrated in table 3, on the next page, from the flurry of IPOs in 2000-2001. These newly public companies make up approximately 48% of the genomics/life sciences sector. There is still the need for management and business model seasoning—for instance, companies' management were typically distracted by the IPOs. Now, they are increasing skills and focus toward business development versus only the science. They are also building capabilities to estimate recurring revenues and creating processes to increase forecast visibility. As a result of this seasoning, we believe that the timeline to profitability has been pushed out at least 9 to 18 months from earlier expectations, depending on the specific market segment and firm. From a business-model perspective, these companies also need to move to medical applications from key scientific breakthroughs. Likewise, as business models and presentations to investors evolve, it is often difficult to discern seemingly homogeneous stories, for example proteomics companies and to identify the differentiating success factors, such as for instrument/reagents versus therapeutics versus service firms. Business and technical failures likely will compound the challenge to differentiate and create successful business models in this evolving landscape of scientific knowledge and breakthroughs. For example, in the gene expression market, Incyte and Corning recently withdrew their products, and Affymetrix and Hyseq entered a business arrangement of intellectual property licensing as part of settling patent litigation.

Table 3
Genomics/Life Sciences Sector Outlook
Initial Public Offerings for 2001/2002

Sector	Company	Ticker	Pricing Date	Offering Price	Price at 11/6/2001
Technology	Third Wave Technologies	TWTI	2/9/2001	11.00	8.59
Technology	Oxford Glycosciences	OGSI	12/8/2000	18.00	7.60
Technology	Harvard Biosciences	HBIO	12/4/2000	8.00	10.60
Technology	Array Biopharmaceuticals	ARRY	11/16/2000	7.50	12.00
Technology	Ciphergen Biosystems	CIPH	9/28/2000	16.00	5.03
Technology	Dyax	DYAX	8/14/2000	15.00	8.57
Technology	Large Scale Biology	LSBC	8/9/2000	17.00	3.37
Technology	Bruker Daltonics	BDAL	8/3/2000	13.00	23.50
Technology	Deltagen	DGEN	8/2/2000	15.00	9.18
Technology	Genaissance Pharmaceuticals	GNSC	8/1/2000	13.00	5.40
Technology	Illumina	ILMN	7/27/2000	16.00	11.29
Technology	Discovery Partners	DPII	7/27/2000	18.00	4.23
Technology	Genencor	GCOR	7/27/2000	18.00	12.50
Technology	Applied Molecular Evolution	AMEV	7/26/2000	19.00	9.23
Technology	Variagenics	VGNX	7/20/2000	14.00	2.35
Technology	Transgenomic	TBIO	7/17/2000	15.00	9.90
Technology	deCODE Genetics	DCGN	7/17/2000	18.00	8.10
Technology	Cepheid	CPHD	6/21/2000	6.00	6.18
Technology	Paradigm Genetics	PDGM	5/8/2000	7.00	5.01
Technology	Genomic Solutions	GNSL	5/5/2000	8.00	2.12
Technology	Orchid BioSciences	ORCH	5/5/2000	8.00	3.80
Technology	ViroLogic	VLGC	5/2/2000	7.00	3.75
Technology	Packard BioScience	PBSC	4/19/2000	9.00	8.21
Technology	Exelixis	EXEL	4/11/2000	13.00	13.75
Technology	Lexicon Genetics	LEXG	4/7/2000	22.00	10.07
Technology	Sangamo BioSciences	SGMO	4/6/2000	15.00	8.25
Technology	Luminex	LMNX	3/30/2000	17.00	16.40
Technology	Aclara Biosciences	ACLA	3/20/2000	21.00	5.25
Technology	Diversa	DVSA	2/14/2000	24.00	12.03
Technology	Sequenom	SQNM	1/31/2000	26.00	7.44
Technology	Maxygen	MAXY	12/16/1999	16.00	14.88
Technology	Caliper	CALP	12/15/1999	16.00	10.63
Bioinformatics	Informax	INMX	10/2/2000	16.00	2.63
Bioinformatics	Genomica	GNOM	9/28/2000	19.00	3.05
Bioinformatics	Compugen	CGEN	8/10/2000	10.00	3.02
Bioinformatics	LION bioscience	LEON	8/10/2000	39.00	16.61
Bioinformatics	Pharsight	PHST	8/8/2000	10.00	1.00
Technology	Cellomics	CLMX	Previously filed		
Technology	APBiotech	APBI	Previously filed		
Technology	Combimatix	CBMX	Previously filed		
Technology	diaDexus	DDXS	Previously filed		
Technology	Zymogenetics	ZGEN	Previously filed		
Technology	Xenogen	XGEN	Previously filed		
Technology	Athersys	ATHX	Previously filed		
Bioinformatics	DoubleTwist	DBLT	Previously filed		
Bioinformatics	NetGenics	NTGC	Previously filed		

Source: Reuters, William Blair & Company, L.L.C.

Sector Undervalued, but There Should Not Be Wholesale Consolidation

Historically, deals or collaborations generated excitement, but investors now are looking for monetization from those deals or significant cash generation over the short term with substantial long-term potential. We anticipate continued deals and collaborations with large biotech and pharmaceutical firms over the next few years as opposed to many acquisitions. While we believe that the entire genomics sector is rather undervalued, we do not expect wholesale consolidation within the sector. Most companies in this sector have large cash reserves to provide a steady burn rate without profitability over the next three to five years. For instance, the median cash position in our genomics/life sciences universe is $84 million. Similarly, many acquirers' stocks are also under pressure; therefore maintaining healthy cash reserves often outweighs the potential upside from new acquisitions. In addition, we expect hostile takeovers to be unlikely in this sector because the scientific founders are still quite important and "poison pills" (shareholder-rights agreements) continue to be put in place. However, one exception is that we believe over the short to intermediate term, "content" companies may acquire bioinformatics companies. Currently, three of the five bioinformatics companies are trading at or below 1.2 times cash, as noted in table 18, page 34. Two other key issues also pressure these companies. First, many content providers already create free interfaces between their data and the customer. Second, the majority of content providers offer more comprehensive and proprietary data sets than most bioinformatics companies.

We believe there is no single reason for the few genomics/life sciences' company acquisitions recently, such as Packard Biosciences, Rosetta Inpharmatics, Gemini Genomics, and Aurora Biosciences. We believe that PerkinElmer's pending $650 million acquisition of Packard Biosciences is essentially for its liquid-handling and gene-expression biochip businesses. In our opinion, Merck's acquisition of Rosetta Inpharmatics for approximately $540 million was for Rosetta's bioinformatics and gene-expression-analysis talent, since Merck could have entered into multiple subscription agreements for 2%-5% of the cost. We believe Sequenom's stock purchase of Gemini Genomics for an estimated $230 million will enhance Sequenom's clinical and drug-development capabilities from Gemini's extensive patient sample database. Vertex Pharmaceuticals bought Aurora Biosciences in a stock transaction of approximately $590 million. Vertex rationally designs small-molecule drugs for various disease indications, and we believe it will leverage Aurora's cell-based systems for high-throughput screening.

Compelling Upside Potential for Sector

In our opinion, the genomics/life sciences sector represents an important, growing market with solid, long-term fundamentals. Genomics/life sciences has the possibility to improve economics and quality of life through its application in the important areas of pharmaceuticals, diagnostics, agriculture, and industrial applications. The goal of pharmaceutical and biotechnology companies is to create drugs to improve health, while simultaneously generating sufficient return to investors. We believe these groups are finding their current portfolios of drug-discovery tools inadequate to meet these goals, and soon many will likely be faced with a therapeutic pipeline gap. Genomics/life sciences should improve the drug-discovery process by using genetic and protein information to elucidate the molecular basis of disease. Unlike the traditional drug-discovery process, genomics/life sciences provides the most fundamental understanding of disease. In essence, genomics furnishes an understanding of disease pathology and of the various alterations and interactions that occur within and between proteins, cells, and drugs. To uncover such information, researchers first need to locate and sequence genes and then characterize gene function through techniques such as functional and comparative-computational genomics. By doing so, genomics/life sciences should generate many thousands of validated targets that subsequently can be processed using high-throughput-screening systems and other technologies to derive more-effective therapies.

We believe that the efforts in the post-genomic era should create substantial medical and economic value. We estimate the value of the genomic-based tools alone at $4.2 billion, growing 22% annually. In particular, we estimate that the utilization of these tools and the scientists and technicians to sue them constitutes about $3.0 billion within the $61 billion pharmaceutical research and development budgets in 2001, which we estimate will grow to $7 billion by 2005, as shown in table 4, below. Additionally, these estimates do not include the value of therapies themselves—currently more than $250 billion worldwide—which may also be captured in part by enabling technology suppliers.

Table 4
Genomics/Life Sciences Sector Outlook
Estimated Pharmaceutical Research and Development Spending

Total

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discovery	16.3	17.6	19.5	21.7	24.1	26.5	29.1	32.3	37.5	43.5	50.6	58.7
Development	34.7	37.4	41.5	46.1	51.2	56.3	61.9	68.7	74.6	80.9	87.6	94.6
Total R&D	$51.0	$55.0	$61.0	$67.8	$75.3	$82.8	$91.0	$101.0	$112.1	$124.5	$138.1	$153.3

Percentage of Spending

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discovery	32%	32%	32%	32%	32%	32%	32%	33%	35%	37%	38%	40%
Development	68%	68%	68%	68%	68%	68%	68%	67%	65%	63%	62%	60%
Total R&D	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Genomics

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discovery	1.6	2.0	2.4	3.0	3.8	4.7	5.7	7.1	9.3	12.1	15.7	20.4
Development	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.8	2.2	2.7	3.3
Total R&D	$2.0	$2.4	$3.0	$3.7	$4.6	$5.7	$7.0	$8.7	$11.1	$14.3	$18.4	$23.7

Penetration

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discovery	10%	11%	13%	14%	16%	18%	20%	22%	25%	28%	31%	35%
Development	1%	1%	1%	1%	2%	2%	2%	2%	2%	3%	3%	3%
Total R&D	4%	4%	5%	5%	6%	7%	8%	9%	10%	12%	13%	15%

Year-over-year Growth

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discovery		21%	24%	25%	24%	23%	23%	24%	30%	30%	30%	30%
Development		21%	24%	24%	24%	23%	23%	24%	22%	21%	21%	21%
Total R&D		21%	24%	25%	24%	23%	23%	24%	29%	29%	29%	29%

Source: Various company financials; industry interviews, William Blair & Company, L.L.C. estimates

Genomics within the pharmaceutical/biotech research and development budgets. Also as detailed in table 4, we estimate that pharmaceutical and biotech companies will spend more than $60 billion globally on research and development in 2001. Of that amount, we estimate that almost $20 billion will be spent on discovery to identify potential therapies, and more than $40 billion will be spent to develop potential therapies into drugs. In 2001, we estimate that approximately 5% of these budgets will be devoted to genomics-based projects—13% discovery budget and 1% of the development budget. We estimate that genomics-based projects are growing more than 20% annually as pharmaceutical/biotech companies are finding their historical drug-discovery tools inadequate to develop new drugs in an environment of unprecedented patent expirations, weak pipelines, and increased health care cost control. For example, Novartis spent 32% of its 2000 research budget on outside collaborations, half of which are in genomics/life sciences. This was up from 23% in 1998. As shown in table 5, facing, an analysis from William Blair & Company's drug and mass merchandising analyst in the consumer/retail sector, we believe the upcoming patent expirations for major branded prescription drugs will result in a therapeutic pipeline gap for major pharmaceutical companies. The analysis focuses on approximately 40 major branded drugs expected to come off patent between 2001 and 2005. The drugs collectively represent more than $39 billion in sales during 2000. We estimate the highest number of patent expirations in this group to be in 2002 and 2004, with 10, and 2005, with 11 major drugs coming off patent in each year.

Table 5
Genomics/Life Sciences Sector Outlook
Timeline of Patent Expirations for Major Prescription Drugs

Company	Brand	Type of Drug	Patent Expiration	2000 Revenues ($ in millions)
			2000	
Eli Lilly	Humulin	Diabetes	Dec-99	$617
Abbott Labs	Hytrin	Hypertension	Feb-00	$141
Merck	Vasotec	Hypertension	Aug-00	$705
Pfizer	Cardura	Cancer	Oct-00	$309
Subtotal				**$1,772**
			2001E	
Pfizer	Procardia XL	Hypertension	Feb-01	$311
Bristol-Myers Squibb	Buspar	Anxiety	Mar-01	$677
Merck	Pepcid	Gastrointestinal	Apr-01	$775
Merck	Mevacor	High Cholesterol	Dec-01	$425
Eli Lilly	Prozac	Depression	Aug-01	$2,218
Subtotal				**$4,406**
			2002E	
Bristol-Myers Squibb	Glucophage	Diabetes	Jan-02	$1,712
Pfizer	Neurontin	Epilepsy	Mar-02	$1,175
GlaxoSmithKline	Ceftin	Infection	Apr-02	$310
Merck	Prinivil	Hypertension	Jun-02	$965
AstraZeneca	Prilosec	Gastrointestinal	Jun-02	$4,234
AstraZeneca	Zestril	Hypertension	Jun-02	$693
Schering-Plough	Intron A**	Leukemia	Jun-02	$650
Merck	Primaxin**	Infection	Jun-02	$575
Hoffman-LaRoche	Accutane*	Acne	Aug-02	$705
Eli Lilly	Axid	Gastrointestinal	Oct-02	$216
Subtotal				**$11,235**
			2003E	
GlaxoSmithKline	Augmentin	Infection	Jun-03	$1,102
GlaxoSmithKline	Relafen	Arthritis	Jun-03	$278
Pfizer	Cardura**	Prostate	Jun-03	$794
Schering-Plough	Claritin	Allergy	Jun-03	$2,591
Merck	Singulair	Asthma	Aug-03	$670
Subtotal				**$5,435**
			2004E	
GlaxoSmithKline	Flovent	Asthma	May-04	$629
GlaxoSmithKline	Flonase	Allergy	May-04	$447
Bayer	Cipro	Infection	Jun-04	NA
GlaxoSmithKline	Wellbutrin	Depression	Jun-04	$666
Johnson & Johnson	Procrit**	Anemia	Jun-04	$1,505
GlaxoSmithKline	Engerix-B**	Hepatitis B	Jun-04	$540
Pfizer	Diflucan	Antifungal	Jul-04	$506
Novartis	Lamisil	Antifungal	Jul-04	$363
Bristol-Myers Squib	Paraplatin*	Ovarian Cancer	Oct-04	$600
Roche	Xenical	Obesity	Dec-04	NA
Subtotal				**$5,256**
			2005E	
Tap Pharmaceutical	Lupron*	Prostate	Apr-05	$730
Aventis	Lovenox*	Thrombosis	May-05	$760
Abbott Labs	Biaxin	Infection	May-05	$578
GlaxoSmithKline	Zofran*	Nausea	Jun-05	$794
Tap Pharmaceutical	Prevacid	Ulcer	Jul-05	$2,700
GlaxoSmithKline	Combivir	HIV	Sep-05	$524
Pfizer	Zithromax	Infection	Oct-05	$1,037
Bristol-Myers Squibb	Pravachol	High Cholesterol	Oct-05	$1,127
AstraZeneca	Zoladex*	Cancer Pain	Dec-05	$686
Novartis	Aredia*	Hypercalcemia	Dec-05	$588
Merck	Zocor	High Cholesterol	Dec-05	$3,410
Pfizer	Zoloft	Depression	Dec-05	$1,746
GlaxoSmithKline	Paxil	Depression	Dec-05	$1,606
Subtotal				**$14,796**
Total				$42,901

* Sales are from 1999
** Patent month not available, only the year
Source: Pharmaceutical companies, IMS Health, NACDS, Drug Store News, FDA Orange Book, and William Blair & Company, L.L.C. estimates

Most recently, Eli Lilly's antidepressant Prozac came off patent in August, and within the first two weeks, the generic substitution achieved a 60% substitution rate, reaching 80% penetration by the end of September. Moreover, the severe market-share erosion for this drug forced the company to cut EPS expectations for the fourth quarter by 7%-10%. At year end, Merck's original cholesterol-reducing statin, Mevacor, also goes off patent after a six-month extension. We believe high incentives among the managed care organizations to reduce expenses may accelerate the conversion process to generics from prescription drugs upon patent expiration. In addition to the genomics/life sciences potential in the estimated 2001 $60 billion pharmaceutical/biotech research-and-development budgets, we estimate $40 billion will be spent this year on government and philanthropically funded basic life sciences research, diagnostics and agricultural R&D, and forensics.

In addition to the large and profitable market potential of the pharmaceutical industry, we believe that the barriers to entry are high. For instance, patent protection and intellectual property estates create barriers, as do expensive, complex, and time consuming regulatory processes. In addition, innovations should grow primary market demand, rather than just shift market shares, with more-effective drugs or new drugs for new indications. We also believe that the underlying noble purpose of improving human health care will continue, and government budgets allocated to institutions such as the National Cancer Institute (NCI) of the National Institutes of Health (NIH) should continue to grow.

Investor sentiment. We continue to believe in the intermediate-to-long-term fundamentals of the genomics/life sciences market. By focusing on best-of-breed companies in the sector, we believe that investors can benefit from this large, growing market. Recently, many investors have primarily focused on profitable life sciences platforms such as Applied Biosystems and Invitrogen, and secondarily on biotech drugs expected to emerge from the clinical-trial pipeline. Over the intermediate term, we foresee investors' reexamining companies earlier in the clinical development process as products, medical discoveries, and revenues progress. Over the short term, institutional demand appears narrowly focused in funds specific to health care, biotech, or in some cases value, as opposed to broader growth funds. However, as investors hunt for bargains in this sector, they typically create a floor for the stock price near the cash value.

As mentioned, most companies in the genomics/life sciences sector have relatively high cash balances and low cash burn rates to sustain operations without profitability for at least three to five years. Lastly, as said earlier, this sector is highly correlated to the S&P 500, making broader market movements key factors in the direction and magnitude of change to the genomics/life sciences sector valuation. However, we believe that company-specific catalysts still will contribute significantly to driving stock prices going forward. For companies under coverage, we note these catalysts in the following section.

Expectations for Our Genomics/Life Sciences Coverage List

Below, we segment our companies based on the time frame over which we expect investors to buy the stock. We define the short term as over the next few quarters, intermediate term as over the next year, and long term as over the next 18-plus months.

Short Term

Invitrogen (IVGN)

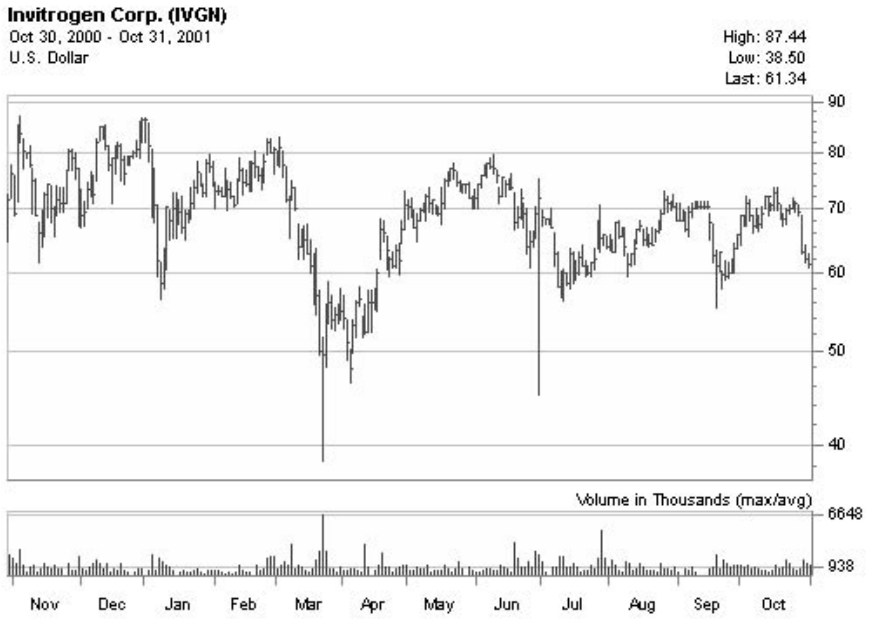
Best of breed: high-value disposable kits and reagents, especially high-throughput, full-length gene cloning

- We believe demand from both industry and academic life sciences researchers remains strong, and that there is no slowdown in business due to the slowing economy or capital budget constraints of some large pharmaceutical and biotech partners.

- We believe revenue growth should accelerate in the next few years, from approximately 16% in 2002 to 19% in 2003 and 2004 due to Invitrogen's ability to launch a number of new or improved kit-based products that are easy to use and save time in the lab, by reducing or eliminating processing steps. The company achieves this through a combination of in-house R&D, licensing of key technologies, as well as select product acquisitions.

- Integration of Life Technologies continues to progress ahead of plan, as evidenced by third quarter 2001 gross margin of 56.2%, which was 150 basis points higher than second quarter 2001 gross margin of 54.7%. We believe gross margin will continue to increase in 2002. Furthermore, we believe there is potentially $0.15 upside to our 2002 earnings estimates of $2.00 due to higher-than-expected revenue growth from the cell culture media business, and an estimated $8 million reduction R&D expenditures.

- We recommend purchase of Invitrogen shares at current valuations.



Source: FactSet

Celera Genomics (CRA)

Best of breed: Unparalleled provider of proprietary genomics/life sciences information seamlessly integrated with public data into user-friendly interfaces. Now leveraging proprietary knowledge to generate therapeutic candidates.

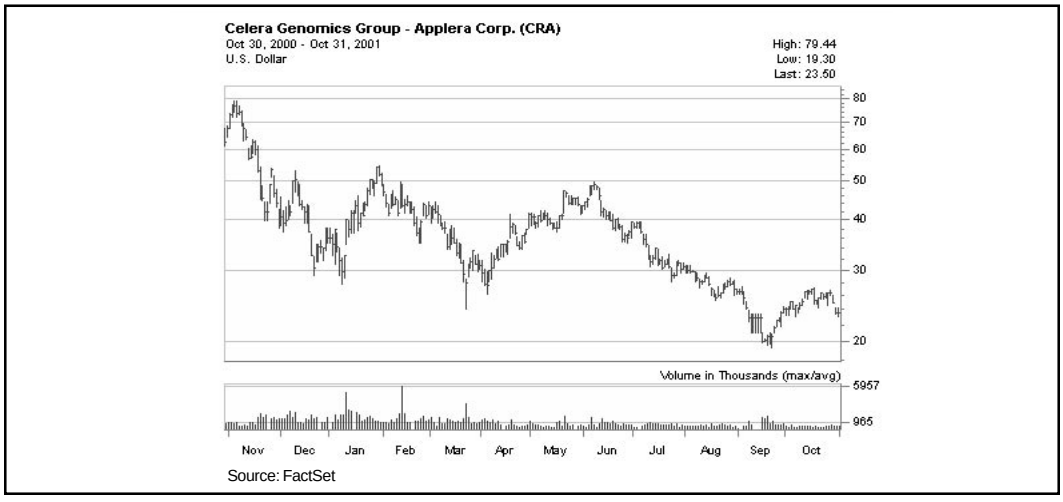
- Celera's acquisition of Axys Pharmaceuticals is expected to close by mid-November. Axys' capabilities move Celera Genomics further down the drug-discovery chain by coupling Celera Genomics' targets with Axys' medicinal chemistry and high-throughput screening capabilities to identify small molecules (lead-drug compounds). Upon closing, we strongly expect the company to announce and begin screening its own proprietary drug targets, a positive catalyst in our opinion. Celera Genomics will have the capacity to move up through the IND phase, after which we expect it to out-license drug candidates. Celera Genomics also intends to leverage the current Axys collaborations, such as with Merck, Aventis, and Bayer, into broader agreements.

- We expect the online CDS business to be at least breakeven this fiscal year. Currently, the company has 47 subscribers, including 31 academic and 16 commercial. We anticipate additional subscribers over the near and long terms. We also believe there is upside from its new direct-to-scientist program for subscriptions to the CDS via the Internet.

- We expect upward of five enhancements to CDS by year end: 1) all genes will have been hand-curated; 2) there will be a link to Invitrogen for customers to buy full-length clones based on CDS; 3) the public SAGE tags will be mapped to Celera Genomics' proprietary human genome assembly; 4) certain regulatory regions will be mapped to the human assembly by comparing with the company's proprietary mouse assembly; and 5) the SNP consortium's dbSNP database will be mapped to Celera Genomics' human assembly.

- As a part of Applera's initiative to commercialize medical diagnostics and life sciences assays, Celera Genomics will determine the sequence of the regulatory regions and genes of DNA from 40 to 50 individuals over the next 12-18 months. By year-end, Celera Genomics estimates that it will be able to sequence the regulatory regions in any individual for under $1 million within one week. Celera Genomics will leverage this data both for the internal drug-discovery efforts and eventually as a separate human genetic variation product offering through CDS.

- We also believe that the upside from Celera Diagnostics, the joint venture between Celera Genomics and Applied Biosystems, has not been factored into the stock price yet. We estimate that the current molecular diagnostics market is $750 million to $1 billion worldwide, growing 30% to 40% per year.



Intermediate Term

Applied Biosystems (ABI)

Best of breed: Produces systems combining instruments with disposables, including DNA sequencers, sequence-detection systems, and high-throughput mass spec for proteomics

- We expect Applied Biosystems to increase revenues at a modest 11% for fiscal 2002. We anticipate revenue will contract in first quarter 2002, reaching double digits in the last half of 2002, and accelerating in the second half of 2003.

- Despite the recent slowdown in ABI's business because of the factors below, we believe that buying ABI in the mid-$20s is warranted given its overall high-quality growth franchise, industry leadership, and the upside of the Celera Diagnostics initiative.

- We attribute the slowdown to negative foreign-exchange rates, reduced capital equipment spending, and product life cycle changes. While we anticipate foreign currency will affect the overall market, capital equipment spending should affect companies selling high-end instrumentation, greater than $50,000, within the life sciences industry, and product life cycle issues are ABI specific. Although foreign-exchange rates are not easily predictable, the recent weakness in the dollar may prove beneficial to ABI's business. We anticipate rejuvenated capital equipment spending next year as reorganized research departments from recent pharmaceutical mergers and acquisitions establish new budgets. In addition, there has been growing demand for the API 4000 mass spectrometer and continued strong demand for the API 3000 and API 2000; we believe that Applied Biosystems is on track to reach full production scale by the end of calendar 2001.

Source: FactSet

Biosite (BSTE)

Best of breed: High-margin, diagnostics platform for the rapid commercialization of novel protein biomarkers. Biosite Discovery develops high-affinity, high-specificity, and low-cost antibodies for life-science and medical-diagnostic applications

- The short-term outlook for Biosite's stock remains cloudy due to the company's current legal dispute with XOMA. We do not expect an out-of-court settlement and we will not have a further update on the timing of the trial until the case management hearing later this year. We believe that almost any resolution of this dispute would be a positive catalyst for the stock.

- The stock has also been under pressure recently due to linear growth of Triage Cardiac, rather than the expected geometric or exponential growth. Although we have made substantial cuts to our Cardiac sales forecast, we believe upside exists to the company's BNP estimates. We now expect Cardiac sales in 2002 to increase 21% to almost $22 million, compared to our previous estimate of greater than 50% growth. However, based on the potential of BNP, we expect 2003 sales of approximately $54 million to be split equally between Cardiac and BNP, compared to a split of 86% Cardiac and 14% BNP in 2001.

- Other positive catalysts for Biosite would be FDA approval of Triage Tox, a quantitative version of DOA, which we expect late this year or early next year, additional labeling approvals for Triage BNP such as screening or prognostic capabilities, which may occur as soon as late next year, and updates on the progress and commercialization of a novel diagnostic for stroke, in the second half of 2003.

- While we remain very bullish on the long-term prospects for Biosite's diagnostic business, we believe that the unresolved XOMA dispute continues to pressure the stock and potentially removes much of the upside for Discovery. For more risk-tolerant investors, we would buy the stock at current valuations, with the expectation that the XOMA dispute could continue well into 2003.

Large Scale Biology (LSBC)

Best of breed: High-throughput, reproducible analysis of protein expression leading in part to proprietary Human Protein Index of top thousand most abundant proteins across 158 human tissue types.

- The key issue for LSBC remains business development. The Dow collaboration has ended, and although all milestones were met, the deal has not yet been renewed, nor has any replacement deal been signed. The Dow deal has accounted for roughly 90% of LSBC's revenues thus far.

- Any type of collaboration likely would be a positive catalyst for the stock. The company currently is engaged in numerous business-development discussions with a variety of potential collaborators, including large pharmaceutical, biotech, and smaller privately held genomics companies. We expect some deals to be signed by year-end, although the initial deals signed may be small.

- For risk-tolerant investors with at least a 9-18-month time frame, we continue to recommend purchase of the stock at current valuations.

Source: FactSet

Long Term

Sangamo Biosciences (SGMO)

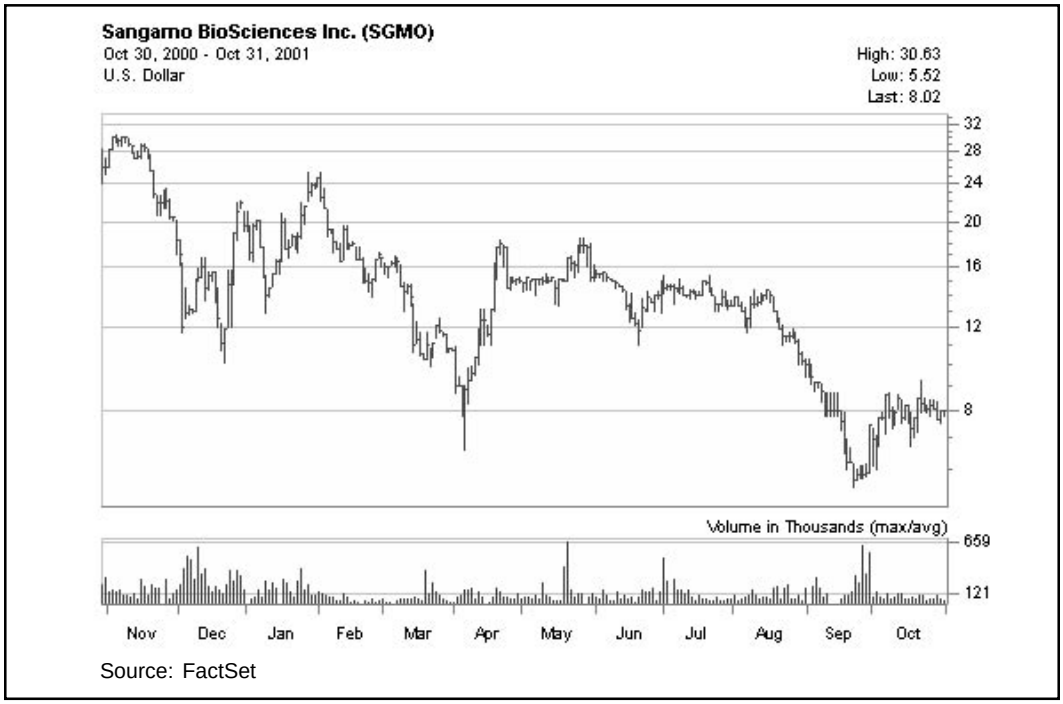
Best of breed: Ability to up- and down-regulate native genes for functional genomics and gene therapy.

- Sangamo recently delivered its first ZFP therapeutic product candidate to Edwards Lifesciences. Over the next few months, we expect the Yale researchers working on the Sangamo/Edward Lifesciences partnership to determine the method of ZFP delivery, the course of therapy, and the indication (cardiovascular versus peripheral vascular). Once these steps are established, we anticipate initiation of ADMET (adsorption, distribution, metabolism, elimination, toxicology) studies and preclinical trials leading to an eventual investigational new drug (IND) submission.

- We believe that Sangamo will leverage its off-the-shelf catalogue of ZFPs for new or expanded GeneTools Agreements over the next few quarters. Sangamo can now up-regulate more than 700 endogenous human genes using its ZFP technology. This catalogue includes ZFPs for 17 diverse, drugable targets, such as GPCRs, ion channels, nuclear hormone receptors, kinases, and phosphotases.

- Over the next 9 to 12 months, we anticipate a trigger payment from Charles River Laboratories, Sangamo's multiyear collaborator, to produce genetically engineered rat animal models. Under terms of the collaboration, Charles River uses Sangamo's ZFPs through a nonexclusive license agreement to create transgenic rats. Initial focus will be cancer; we could see other indications such as heart disease and diabetes in the future, as well as toxicology for which the rat is the model organism of choice.

- Although the stock has been relatively weak, we believe the fundamentals remain strong for Sangamo. For risk-tolerant investors with at least an 18-month time frame, we would continue to be a buyer of the stock at current valuations.



ACLARA Biosciences (ACLA)

Best of breed: Designer and manufacturer of disposable, plastic, microfluidic circuits, as well as its proprietary eTag multiplexing reagents for genomics/life sciences applications such as high-throughput screening.

- Introduced late last year, we anticipate somewhat stronger demand for Arteas during 2002 for two main reasons: a recent global marketing and distribution agreement with Roche and the availability of nanovolume dispensers. Under the global sales and distribution collaboration with the Roche Applied Science business unit, Roche will introduce the Arteas device to its existing customer base and new customers. Also, Companies such as Zymark and Tecan have commercialized a number of nano-volume dispensers that can handle 96, 384, and 1,536-well devices.

- ACLARA has delivered its first-generation GeneMate system to the R.W. Johnson Pharmaceutical Research Institute (PRI) of Johnson & Johnson, and we anticipate additional beta-site pharmaceutical or large biotech customers through the first half of 2002. GeneMate is a bench-top reader for detection and analysis to increase the throughput of eTags and is used for medium-to-high-throughput gene expression analysis and SNP detection.

- PRI has also extended its technology access program to include eTags. We believe that ACLARA will enter additional collaborations with pharmaceutical and biotech companies to create sets of customized eTags for the collaborators' screening needs. We anticipate a couple of gene-expression collaborations to be established over the next few quarters. Early next year, we would expect to see ACLARA establish a few collaborations for eTag applications in proteomics. As eTags are validated for multiplexing as drug discovery tools, we could see ACLARA commercializing kits in the future, such as kinase or cytokine kits that would include all the peptides on a chip, proprietary eTags, and necessary reagents.

- As ACLARA focuses on key products and executes its business model, we are guardedly optimistic on the long-term prospects for the company. For risk-tolerant investors seeking diversification in high-quality, developmental-stage genomic/life sciences companies with at least a two-year time horizon, we would recommend purchase of the stock at current valuations.

Source: FactSet

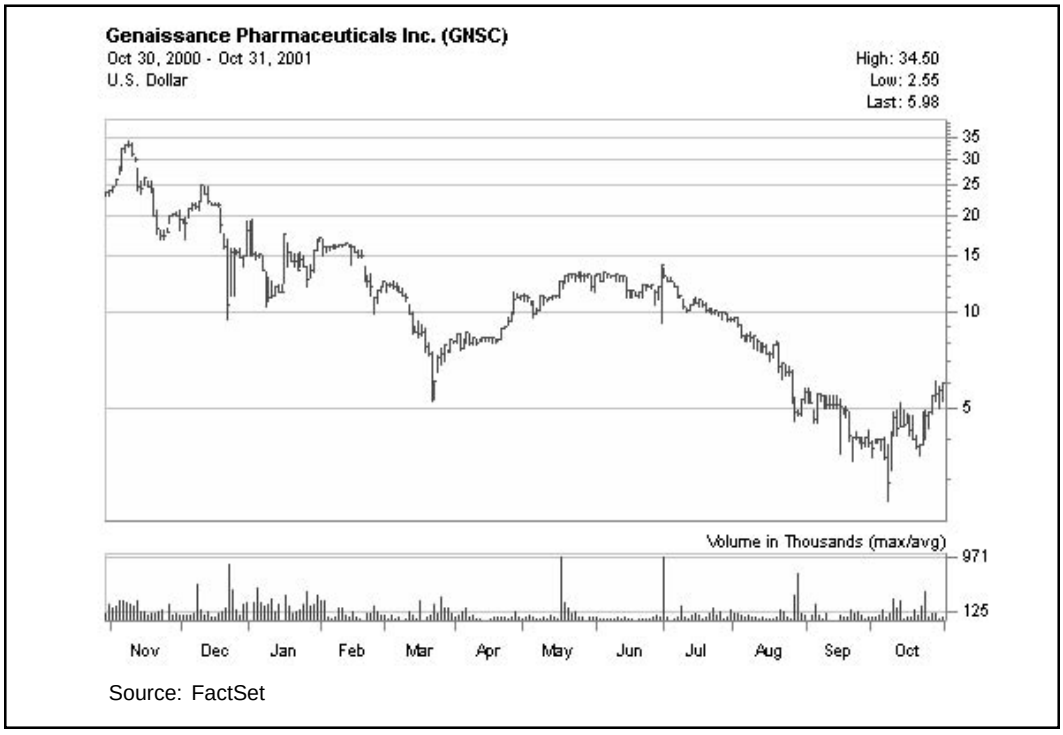
Genaissance Pharmaceuticals (GNSC)

Best of breed: Leading investigator, provider, and user of gene variation for pharmacogenomics, drug discovery, and diagnostics

- Potential stock catalysts include the analysis of data from the STRENGTH trial by end of first quarter 2002, any potential Mednostics collaborations that may result from the completion of STRENGTH or the recent initiation of STRENGTH II. Also, by year-end we expect either a company-specific Mednostic or HAP Technology collaboration.

- In our opinion, Genaissance currently is "two levels" ahead of the competition in the race to correlate haplotypes to disease and drug response. We would describe the first level as the development and implementation of an operation to discover and identify haplotypes in a high-throughput manner leading to intellectual property filings for variation on thousands of genes. The second level would be applying this information to specific diseases and drug response through clinical trials. On the basis of its HAP Technology collaborations with Johnson & Johnson and Pfizer, its first Mednostics trial for statin drugs, and its intellectual property filings, Genaissance has been successful at both levels.

- In our opinion, Genaissance is creating substantial medical and economic value through its proprietary technology and intellectual property. While Genaissance's $80 million in cash should sustain it for at least two years, we believe that the recently signed HAP Technology deal with Pfizer should create upside potential. Thus, for more risk-tolerant investors with a 6- to 18-month time frame, in which company-specific and sector catalysts likely occur, we recommend purchase.



Source: FactSet

Additional information is available upon request.

The full text of this report is available in electronic form to registered users via R*Docs™ at www.rdocs.com or www.williamblair.com.

DJIA:	9554.37
S&P 500:	1115.80
NASDAQ:	1837.53

William Blair & Company, L.L.C. maintains a market in the common shares of ACLARA BioSciences, Inc., Biosite Diagnostics Incorporated, Genaissance Pharmaceuticals, Inc., Invitrogen Corporation, Large Scale Biology Corporation, and Sangamo BioSciences, Inc.

William Blair & Company, L.L.C. was manager or co-manager of a public offering within the last three years for Large Scale Biology Corporation and Sangamo BioSciences, Inc.

The prices of the common stock of other public companies mentioned in this report follow:

Dow Chemical	$35.93
Edwards Lifesciences	$25.05
Eli Lilly	$80.15
Genentech	$54.50
GlaxoSmithKline	$55.27
Johnson & Johnson	$58.75
Novartis	$38.20
Onyx Pharmaceuticals	$5.06
Pfizer	$42.14
Procter & Gamble	$78.11
XOMA	$7.04

Table 6
Genomics/Life Sciences Outlook
Comparable Company Valuation Analysis
Companies With Market Cap Above $250 Million

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/8/2001	Percentage of 52-Wk High	52-Wk High	52 Wk-Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Roche Holding Ltd	RHHBY.P	67.50	55%	122.00	84.00	$47,520	$12,743	$34,777	$18,781	3.7	2.5	3.35	3.14	3.42	1%	14%	21.5	19.7	19.0	1.4	
Motorola	MOT	16.80	65%	26.00	10.50	$37,177	$5,643	$31,534	$32,760	6.6	1.1	0.84	(0.32)	0.16	-56%	13%	NM	105.0	NM	8.1	
Agilent Technologies	A	23.30	34%	68.00	18.00	$10,733	$999	$9,734	$10,108	10.7	1.1	1.83	(1.04)	(0.60)	NM	20%	NM	NM	NM	NM	
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
Millennium Pharmaceuticals	MLNM	25.03	28%	89.81	15.63	$5,541	$1,528	$4,013	$244	3.6	22.7	(0.39)	(0.55)	(0.75)	NM	26%	NM	NM	NM	NM	
Human Genome Science	HGSI	42.19	42%	100.25	26.41	$5,381	$1,688	$3,693	$13	3.2	419.7	(0.91)	(0.73)	(1.19)	NM	30%	NM	NM	NM	NM	
Waters Corporation	WAT	35.65	42%	85.38	22.33	$4,650	$164	$4,486	$836	28.3	5.6	1.16	1.27	1.48	13%	20%	28.1	24.1	1.9	1.2	
Invitrogen	IVGN	62.44	72%	87.13	38.50	$3,259	$573	$2,686	$619	5.7	5.3	1.40	1.73	2.00	20%	25%	36.1	31.2	1.6	1.2	2
Protein Design Labs	PDLI	34.79	48%	72.69	16.25	$3,050	$648	$2,402	$44	4.7	68.8	0.01	0.02	0.06	145%	20%	1739.5	579.8	4.0	29.0	
PerkinElmer	PKI	27.20	46%	59.75	21.28	$2,765	$128	$2,637	$1,431	21.5	1.9	2.65	1.29	1.42	-27%	19%	21.1	19.2	NM	1.0	
Qiagen	QGENF	17.80	43%	41.88	10.25	$2,494	$35	$2,459	$248	72.1	10.0	0.17	0.24	0.38	50%	45%	74.2	46.8	0.9	1.0	
Abgenix	ABGX	28.08	30%	93.69	15.31	$2,419	$540	$1,879	$30	4.5	80.3	(0.11)	(0.74)	(1.00)	NM	27%	NM	NM	NM	NM	
Affymetrix	AFFX	30.04	33%	92.00	13.98	$1,730	$367	$1,363	$220	4.7	7.9	(0.24)	(0.29)	0.08	NM	40%	NM	375.5	NM	9.4	
Medarex	MEDX	19.56	26%	75.00	11.75	$1,420	$491	$929	$34	2.9	41.3	(0.21)	(0.02)	(0.14)	NM	37%	NM	NM	NM	NM	
Celera Genomics	CRA	23.61	30%	79.25	19.50	$1,401	$996	$405	$89	1.4	15.7	(1.72)	(1.69)	(1.78)	NM	33%	NM	NM	NM	NM	1
Charles River	CRL	32.10	82%	39.15	17.19	$1,288	$78	$1,210	$421	16.4	3.1	0.63	0.91	1.09	32%	25%	35.3	29.4	0.9	1.2	
Bruker Daltonic	BDAL	23.50	56%	42.25	8.31	$1,287	$83	$1,204	$89	15.5	14.5	0.04	0.07	0.12	73%	30%	335.7	195.8	2.7	6.5	
Techne	TECH	30.61	53%	58.19	19.38	$1,269	$101	$1,168	$117	12.5	10.8	0.72	0.87	0.99	NM	19%	35.2	30.9	NM	1.6	
Curagen	CRGN	22.72	34%	66.00	14.80	$1,073	$525	$548	$23	2.0	46.3	(0.70)	(0.89)	(1.17)	NM	50%	NM	NM	NM	NM	
Myriad Genomics	MYGN	44.40	32%	138.00	24.75	$1,045	$127	$918	$45	8.2	23.1	(0.36)	(0.41)	(0.63)	NM	50%	NM	NM	NM	NM	
Cambridge Antibody	CATG	28.50	75%	38.00	12.95	$1,009	$246	$763	$15	4.1	65.9	(0.27)	(0.61)	(0.81)	NM	NA	NM	NM	NM	NM	
Incyte Genomics	INCY	14.25	37%	38.38	10.40	$937	$518	$419	$220	1.8	4.3	(0.47)	(0.91)	(0.48)	NM	15%	NM	NM	NM	NM	
Genencor	GCOR	12.50	48%	26.00	6.75	$749	$201	$548	$316	3.7	2.4	0.25	0.15	0.24	-2%	37%	83.3	52.1	NM	1.4	
Exelixis	EXEL	13.75	50%	27.38	6.00	$676	$123	$553	$29	5.5	22.9	(0.61)	(1.09)	(0.93)	NM	NA	NM	NM	NM	NM	
Packard Biosciences	PBSC	8.21	46%	17.75	3.94	$559	$84	$475	$200	6.6	2.8	0.04	0.16	0.26	155%	18%	51.3	31.6	0.2	1.8	
Igen	IGEN	31.00	93%	33.30	9.69	$558	$27	$531	$32	20.4	17.4	(1.98)	(2.40)	(1.26)	NM	NA	NM	NM	NM	NM	
Maxygen	MAXY	14.88	32%	46.63	9.75	$501	$177	$324	$28	2.8	18.2	(0.37)	(0.94)	(1.20)	NM	NA	NM	NM	NM	NM	
Lexicon Genetics	LEXG	10.07	40%	25.38	5.41	$488	$184	$304	$15	2.7	31.8	(0.24)	(0.57)	(0.71)	NM	NA	NM	NM	NM	NM	
Luminex	LMNX	16.40	45%	36.19	11.95	$461	$56	$405	$18	8.2	25.3	(0.48)	(0.58)	(0.05)	NM	50%	NM	NM	NM	NM	
Diversa	DVSA	12.03	41%	29.25	7.85	$427	$205	$222	$35	2.1	12.2	(0.24)	(0.45)	(0.40)	NM	NA	NM	NM	NM	NM	
Oxford Glycosciences	OGSI	7.60	33%	23.13	5.45	$380	$276	$104	$18	1.4	20.6	(0.54)	(0.32)	(0.23)	NM	NA	NM	NM	NM	NM	
Decode Genetics	DCGN	8.10	34%	24.00	5.28	$365	$155	$210	$24	2.4	15.0	(0.85)	(1.10)	(0.90)	NM	NA	NM	NM	NM	NM	
Illumina	ILMN	11.29	27%	42.00	4.80	$361	$110	$251	$2	3.3	201.7	(0.86)	(0.76)	(0.77)	NM	NA	NM	NM	NM	NM	
Gene Logic	GLGC	13.64	51%	26.90	10.85	$354	$193	$161	$39	1.8	9.1	(0.90)	(1.26)	(0.92)	NM	41%	NM	NM	NM	NM	
Third Wave Technologies	TWTI	8.59	74%	11.65	4.20	$329	$84	$245	$35	3.9	9.5	(2.83)	(0.72)	(0.38)	NM	NA	NM	NM	NM	NM	
Pharmacopeia	PCOP	13.78	46%	30.00	10.95	$322	$164	$158	$124	2.0	2.6	0.70	0.39	0.17	-51%	60%	35.3	81.1	NM	1.4	
Lion Bioscience	LEON	16.61	18%	90.75	6.79	$292	$159	$285	$25	1.8	11.7	(1.76)	(1.42)	(1.41)	NM	NA	NM	NM	NM	NM	
Array	ARRY	12.00	92%	13.00	4.17	$275	$48	$227	$17	5.8	16.2	-	(0.21)	(0.06)	NM	64%	NM	NM	NM	NM	
Deltagen	DGEN	9.18	57%	16.00	4.00	$273	$102	$171	$7	2.7	40.7	(1.21)	(1.57)	(1.63)	NM	NA	NM	NM	NM	NM	
Harvard Bioscience	HBIO	10.60	73%	14.50	5.88	$273	$31	$242	$37	8.8	7.3	0.13	0.18	0.28	47%	30%	58.9	37.9	0.8	1.3	
Molecular Devices	MDCC	16.50	18%	90.00	14.63	$273	$63	$210	$94	4.3	2.9	0.62	0.44	0.61	-1%	31%	37.5	27.0	NM	0.9	
Caliper	CALP	10.63	17%	62.50	8.40	$254	$91	$163	$27	2.8	9.5	(1.06)	(0.94)	(0.77)	NM	58%	NM	NM	NM	NM	
Total Genomics	73					$60,684	$13,455	$47,229	$8,130	4.5	7.5										
Mean			36%			$831	$184	$647	$111	6.3	24.3				34%	41%	157.8	91.3	1.6	3.6	
Median			32%			$273	$84	$163	$25	2.9	9.3				20%	37%	35.3	31.1	1.1	1.3	

Table 7
Genomics/Life Sciences Outlook
Comparable Company Valuation Analysis
Companies With Market Cap Below $250 Million

		Stock Price					Market Cap. to:			Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Biosite	BSTE	15.45	26%	58.48	12.43	$219	$52	$167	$63	4.2	3.5	0.41	0.50	0.62	23%	40%	30.9	24.9	1.1	0.6	1
Applied Molecular Evolution	AMEV	9.23	35%	26.38	5.75	$218	$86	$132	$3	2.5	80.4	(0.76)	(0.69)	(0.72)	NM	NA	18.5	14.9	NM	NM	
Tansgenomic	TBIO	9.90	51%	19.25	5.19	$210	$47	$163	$35	4.5	6.0	(0.59)	(0.26)	(0.03)	NM	35%	NM	NM	NM	NM	
Visible Genetics	VGIN	14.03	36%	39.00	12.16	$207	$51	$156	$14	4.1	15.3	(2.42)	(2.40)	(1.30)	NM	50%	NM	NM	NM	NM	
Aclara	ACLA	5.25	27%	19.50	4.31	$187	$140	$47	$3	1.3	54.0	(0.48)	(0.56)	(0.51)	NM	40%	NM	NM	NM	NM	2
3-Dimensional Pharmaceutical	DDDP	8.60	38%	22.38	5.01	$185	$101	$84	$22	1.8	8.4	(0.63)	(0.52)	(1.21)	NM	NA	NM	NM	NM	NM	
Sangamo	SGMO	8.25	27%	30.38	5.52	$184	$63	$121	$4	2.9	47.7	(0.18)	(0.37)	(0.23)	NM	40%	NM	NM	NM	NM	1
Sequenom	SQNM	7.44	24%	31.44	5.65	$181	$160	$21	$25	1.1	7.2	(1.41)	(1.53)	(1.33)	NM	115%	NM	NM	NM	NM	
Nanogen	NGEN	8.57	46%	18.56	3.00	$180	$75	$105	$12	2.4	14.7	(1.92)	(1.31)	(1.37)	NM	NA	NM	NM	NM	NM	
Arqule	ARQL	8.75	25%	35.00	7.55	$178	$86	$92	$56	2.1	3.2	0.25	(0.50)	(0.43)	NM	NA	NM	NM	NM	NM	
Cytogen	CYTO	2.26	34%	6.56	1.90	$175	$19	$156	$11	9.4	15.6	(0.13)	(0.17)	(0.16)	NM	NA	NM	NM	NM	NM	
Dyax	DYAX	8.57	21%	40.25	6.05	$164	$60	$104	$33	2.7	5.0	(1.07)	(0.90)	(0.03)	NM	NA	NM	NM	NM	NM	
Cepheid	CPHD	6.18	54%	11.48	1.48	$163	$30	$133	$11	5.5	15.1	(0.57)	(0.62)	(0.64)	NM	NA	NM	NM	NM	NM	
Genome Therapeutics	GENE	6.65	38%	17.63	4.01	$148	$55	$93	$26	2.7	5.6	(0.19)	(0.24)	NA	NM	NA	NM	NM	NM	NM	
Ciphergen	CIPH	5.03	13%	37.56	2.06	$135	$91	$44	$15	1.5	9.2	(1.75)	(0.98)	(0.90)	NM	NA	NM	NM	NM	NM	
Paradigm	PDGM	5.01	31%	16.06	3.52	$132	$24	$108	$20	5.5	6.7	(0.89)	(0.56)	(0.20)	NM	176%	NM	NM	NM	NM	
Orchid	ORCH	3.80	15%	25.00	1.50	$126	$70	$56	$23	1.8	5.6	(1.03)	(1.35)	(1.04)	NM	NA	NM	NM	NM	NM	
Genaissance	GNSC	5.40	16%	34.50	2.55	$117	$69	$48	$4	1.7	31.5	(1.91)	(2.15)	(1.58)	NM	40%	NM	NM	NM	NM	2
Hyseq	HYSQ	8.01	28%	28.11	5.20	$110	$17	$93	$22	6.7	5.0	(1.65)	NA	NA	NM	NA	NM	NM	NM	NM	
Discovery Partners	DPII	4.23	24%	17.63	2.75	$101	$79	$22	$42.1	1.3	2.4	(0.80)	(0.47)	(0.18)	NM	NA	NM	NM	NM	NM	
Large Scale Biology	LSBC	3.37	14%	23.75	2.63	$83	$58	$25	$23	1.4	3.6	(0.54)	(0.73)	(0.61)	NM	40%	NM	NM	NM	NM	1
Compugen	CGEN	3.02	29%	10.38	2.60	$76	$26	$50	$12	2.9	6.6	(1.23)	(0.61)	(0.81)	NM	NA	NM	NM	NM	NM	
Virologic	VLGC	3.75	26%	14.38	1.00	$75	$13	$62	$13	5.7	6.0	(1.32)	(1.13)	(0.54)	NM	NA	NM	NM	NM	NM	
Biosource	BIOI	6.98	30%	22.94	4.88	$73	$11	$62	$34	6.7	2.2	0.31	0.26	0.45	20%	25%	26.8	15.5	0.8	0.6	
Genomica	GNOM	3.05	22%	14.13	2.22	$69	$58	$11	$2	1.2	38.8	(0.60)	(0.72)	(0.76)	NM	NA	NM	NM	NM	NM	
Argonaut	AGNT	3.42	16%	21.00	2.60	$65	$58	$7	$17	1.1	3.9	(0.50)	(0.74)	(0.58)	NM	NA	NM	NM	NM	NM	
Epoch	EBIO	2.35	21%	11.25	1.14	$58	$8	$50	$6	6.9	9.3	(0.20)	(0.19)	(0.03)	NM	NA	NM	NM	NM	NM	
Informax	INMX	2.63	8%	31.75	2.25	$54	$66	-$12	$25	0.8	2.2	(0.94)	(0.74)	(0.25)	NM	50%	NM	NM	NM	NM	
Variagenics	VGNX	2.35	11%	21.56	2.20	$54	$85	-$31	$4	0.6	13.5	(0.85)	(0.78)	(0.80)	NM	NA	NM	NM	NM	NM	
Genomic Solutions	GNSL	2.12	16%	13.31	1.50	$51	$19	$32	$18	2.7	2.8	(0.45)	(0.42)	(0.31)	NM	NA	NM	NM	NM	NM	
Genset	GENXY	1.69	8%	20.63	0.60	$40	$30	$10	$19.7	1.3	2.0	(1.36)	(1.46)	(1.21)	NM	NA	NM	NM	NM	NM	
Lynx	LYNX	2.40	11%	21.25	2.05	$32	$11	$21	$17	2.9	1.9	(1.44)	(1.34)	(1.11)	NM	NA	NM	NM	NM	NM	
Pharsight	PHST	1.00	13%	7.88	0.75	$18	$15	$3	$13	1.2	1.4	-	(1.17)	(0.68)	NM	NA	NM	NM	NM	NM	
Enchira	ENBC	0.53	7%	7.50	0.33	$5	$10	-$5	$1	0.5	5.0	(1.10)	NA	NA	NM	NA	NM	NM	NM	NM	
Enchira	ENBC	0.60	8%	7.63	0.33	$5	$10	-$5	$1	0.5	5.0	(1.10)	NA	NA	NM	NA	NM	NM	NM	NM	
Pharsight	PHST	1.00	13%	7.88	0.75	$18	$17	$1	$12	1.0	1.5	-	(1.19)	(0.68)	NM	NA	NM	NM	NM	NM	
Genset	GENXY	1.69	8%	20.63	0.60	$40	$36	$4	$20	1.1	2.0	(1.36)	(1.51)	(1.33)	NM	NA	NM	NM	NM	NM	
Enchira	ENBC	0.53	7%	7.50	0.33	$5	$12	-$7	$1.0	0.4	5.0	(1.10)	NA	NA	NM	NA	NM	NM	NM	NM	
Total Genomics	73					$60,684	$13,455	$47,229	$8,130	4.5	7.5										
Mean			36%			$831	$184	$647	$111	6.3	24.3				34%	41%	157.8	91.3	1.6	3.6	
Median			32%			$273	$84	$163	$25	2.9	9.3				20%	37%	35.3	31.1	1.1	1.3	

Table 8
Genomics/Life Sciences Outlook
Population Studies

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Myriad Genetics	MYGN	44.40	32%	138.00	24.75	$1,045	$127	$918	$45	8.2	23.1	(0.36)	(0.41)	(0.63)	NM	50%	NM	NM	NM	NM	
Decode	DCGN	8.10	34%	24.00	5.28	$365	$79	$286	$24	4.6	15.0	(0.85)	(1.10)	(0.90)	NM	NA	NM	NM	NM	NM	
Mean			33%			$705	$103	$602	$35	6.4	19.1				NM	50%	NM	NM	NM	NM	
Median			33%			$705	$103	$602	$35	6.4	19.1				NM	50%	NM	NM	NM	NM	

Sample Acquisition/Purification

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Roche Holding Ltd	RHHBY.PK	67.50	55%	122.00	84.00	$47,520	$12,743	$34,777	$18,781	3.7	2.5	3.35	3.14	3.42	1%	14%	21.5	19.7	19.0	1.4	
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
Qiagen	QGENF	17.80	43%	41.88	10.25	$2,494	$35	$2,459	$248	72.1	10.0	0.17	0.24	0.38	50%	45%	74.2	46.8	0.9	1.0	
Aclara	ACLA	5.25	27%	19.50	4.31	$187	$140	$47	$3	1.3	54.0	(0.48)	(0.56)	(0.51)	NM	40%	NM	NM	NM	NM	2
Cepheid	CPHD	6.18	54%	11.48	1.48	$163	$30	$133	$11	5.5	15.1	(0.57)	(0.62)	(0.64)	NM	NA	NM	NM	NM	NM	
Mean			37%			$2,317	$149	$2,167	$471	23.8	20.8				30%	34%	54.5	36.6	1.8	1.3	
Median			35%			$1,341	$87	$1,296	$130	10.9	12.6				30%	40%	54.5	36.6	1.8	1.3	

Sample Processing/Molecular Biochemicals

		Stock Price								Market Cap to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Invitrogen	IVGN	62.44	72%	87.13	38.50	$3,259	$573	$2,686	$619	5.7	5.3	1.40	1.73	2.00	20%	25%	36.1	31.2	1.6	1.2	2
Qiagen	QGENF	17.80	43%	41.88	10.25	$2,494	$35	$2,459	$248	72.1	10.0	0.17	0.24	0.38	50%	45%	74.2	46.8	0.9	1.0	
Charles River Labs	CRL	32.10	82%	39.15	17.19	$1,288	$78	$1,210	$421	16.4	3.1	0.63	0.91	1.09	32%	25%	35.3	29.4	0.9	1.2	
Techne	TECH	30.61	53%	58.19	19.38	$1,269	$101	$1,168	$117	12.5	10.8	0.72	0.87	0.99	NM	19%	35.2	30.9	NM	1.6	
Harvard Bioscience	HBIO	10.60	73%	14.50	5.88	$273	$30	$243	$37	9.1	7.3	0.13	0.18	0.28	47%	30%	58.9	37.9	0.8	1.3	
Biosource International	BIOI	6.98	30%	22.94	4.88	$73	$11	$62	$34	6.7	2.2	0.31	0.26	0.45	20%	25%	26.8	15.5	0.8	0.6	
Mean			59%			$1,443	$138	$1,305	$246	20.4	6.4				34%	25%	40.3	28.1	0.8	1.2	
Median			62%			$1,279	$56	$1,189	$183	10.8	6.3				32%	25%	35.7	31.1	0.9	1.2	

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Table 9
Genomics/Life Sciences Outlook
Genomics: Sequencing - Products

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
PerkinElmer	PKI	27.20	46%	59.75	21.28	$2,765	$128	$2,637	$1,431	21.5	1.9	2.65	1.29	1.42	-27%	19%	21.1	19.2	NM	1.0	
Aclara	ACLA	5.25	27%	19.50	4.31	$187	$140	$47	$3	1.3	54.0	(0.48)	(0.56)	(0.51)	NM	40%	NM	NM	NM	NM	2
Lynx Therapeutics	LYNX	2.40	11%	21.25	2.05	$32	$11	$21	$17	2.9	1.9	(1.44)	(1.34)	(1.11)	NM	NA	NM	NM	NM	NM	
Mean			27%			$2,352	$168	$2,184	$769	10.5	15.5				-8%	26%	28.0	22.8	2.6	1.2	
Median			25%			$1,476	$134	$1,342	$724	9.6	2.9				-8%	19%	28.0	22.8	2.6	1.2	

Genomics: Sequencing - Services

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Millennium	MLNM	25.03	28%	89.81	15.63	$5,541	$1,528	$4,013	$244	3.6	22.7	(0.39)	(0.55)	(0.75)	NM	26%	NM	NM	NM	NM	
Human Genome Sciences	HGSI	42.19	42%	100.25	26.41	$5,381	$1,688	$3,693	$13	3.2	419.7	(0.91)	(0.73)	(1.19)	NM	30%	NM	NM	NM	NM	
Celera	CRA	23.61	30%	79.25	19.50	$1,401	$996	$405	$98	1.4	14.2	(1.72)	(1.69)	(1.78)	NM	33%	NM	NM	NM	NM	1
Incyte	INCY	14.25	37%	38.38	10.40	$937	$518	$419	$220	1.8	4.3	(0.47)	(0.91)	(0.48)	NM	15%	NM	NM	NM	NM	
Genome Therapeutics	GENE	6.65	38%	17.63	4.01	$148	$55	$93	$26	2.7	5.6	(0.19)	(0.24)	NA	NM	NA	NM	NM	NM	NM	
Mean			35%			$2,682	$957	$1,725	$120	2.5	93.3				NM	26%	NM	NM	NM	NM	
Median			37%			$1,401	$996	$419	$98	2.7	14.2				NM	28%	NM	NM	NM	NM	

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Table 10
Genomics/Life Sciences Outlook
Genomics: Expression - Products

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Motorola	MOT	16.80	65%	26.00	10.50	$37,177	$5,643	$31,534	$32,760	6.6	1.1	0.84	(0.32)	0.16	-56%	13%	NM	105.0	NM	8.1	
Agilent	A	23.30	34%	68.00	18.00	$10,733	$999	$9,734	$10,108	10.7	1.1	1.83	(1.04)	(0.60)	NM	20%	NM	NM	NM	NM	
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
PerkinElmer	PKI	27.20	46%	59.75	21.28	$2,765	$128	$2,637	$1,431	21.5	1.9	2.65	1.29	1.42	-27%	19%	21.1	19.2	NM	1.0	
Affymetrix	AFFX	30.04	33%	92.00	13.98	$1,730	$367	$1,363	$219	4.7	7.9	(0.24)	(0.29)	0.08	NM	40%	NM	375.5	NM	9.4	
Packard Bioscience	PBSC	8.21	46%	17.75	3.94	$559	$84	$475	$200	6.6	2.8	0.04	0.16	0.26	155%	18%	51.3	31.6	0.2	1.8	
Luminex	LMNX	16.40	45%	36.19	11.95	$461	$56	$405	$18	8.2	25.3	(0.48)	(0.58)	(0.05)	NM	50%	NM	NM	NM	NM	
Illumina	ILMN	11.29	27%	42.00	4.80	$361	$110	$251	$2	3.3	201.7	(0.86)	(0.76)	(0.77)	NM	NA	NM	NM	NM	NM	
Third Wave	TWTI	8.59	74%	11.65	4.20	$337	$84	$253	$35	4.0	9.7	(2.83)	(0.72)	(0.38)	NM	NA	NM	NM	NM	NM	
Aclara	ACLA	5.25	27%	19.50	4.31	$187	$140	$47	$3	1.3	54.0	(0.48)	(0.56)	(0.51)	NM	40%	NM	NM	NM	NM	2
Nanogen	NGEN	8.57	46%	18.56	3.00	$180	$75	$105	$12	2.4	14.7	(1.92)	(1.32)	(1.37)	NM	NA	NM	NM	NM	NM	
Hyseq	HYSQ	8.01	28%	28.11	5.20	$110	$17	$93	$22	6.7	5.0	(1.65)	NA	NA	NM	NA	NM	NM	NM	NM	
Genomic Solutions	GNSL	2.12	16%	13.31	1.50	$51	$19	$32	$18	2.7	2.8	(0.45)	(0.42)	(0.31)	NM	NA	NM	NM	NM	NM	
Epoch Biosciences	EBIO	2.35	21%	11.25	1.14	$58	$8	$50	$6.2	6.9	9.3	(0.20)	(0.19)	(0.03)	NM	NA	NM	NM	NM	NM	
Mean			36%			$1,102	$123	$978	$299	7.1	28.3				46%	31%	35.8	113.2	1.4	3.4	
Median			31%			$349	$84	$252	$20	5.7	8.6				10%	30%	34.9	29.0	1.4	1.6	

Genomics: Expression - Services

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Curagen	CRGN	22.72	34%	66.00	14.80	$1,073	$525	$548	$23	2.0	46.3	(0.70)	(0.89)	(1.17)	NM	50%	NM	NM	NM	NM	
Gene Logic	GLGC	13.64	51%	26.90	10.85	$354	$193	$161	$39	1.8	9.1	(0.90)	(1.26)	(0.92)	NM	41%	NM	NM	NM	NM	
Mean			43%			$714	$359	$355	$31	1.9	27.7				NM	46%	NM	NM	NM	NM	
Median			43%			$714	$359	$355	$31	1.9	27.7				NM	46%	NM	NM	NM	NM	

Table 11
Genomics/Life Sciences Outlook
Functional Genomics

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Exelixis	EXEL	13.75	50%	27.38	6.00	$676	$123	$553	$29	5.5	22.9	(0.61)	(1.09)	(0.93)	NM	NA	NM	NM	NM	NM	
Lexicon	LEXG	10.07	40%	25.38	5.41	$488	$184	$304	$15	2.7	31.8	(0.24)	(0.57)	(0.71)	NM	NA	NM	NM	NM	NM	
Deltagen	DGEN	9.18	57%	16.00	4.00	$273	$102	$171	$7	2.7	40.7	(1.21)	(1.57)	(1.63)	NM	NA	NM	NM	NM	NM	
Sangamo	SGMO	8.25	27%	30.38	5.52	$184	$63	$121	$4	2.9	48.7	(0.18)	(0.37)	(0.23)	NM	40%	NM	NM	NM	NM	1
Paradigm	PDGM	5.01	31%	16.06	3.52	$132	$24	$108	$20	5.5	6.7	(0.89)	(0.56)	(0.20)	NM	176%	NM	NM	NM	NM	
Mean			41%			$351	$99	$251	$15	3.9	30.2				NM	108%	NM	NM	NM	NM	
Median			40%			$273	$102	$171	$15	2.9	31.8				NM	108%	NM	NM	NM	NM	

Table 12
Genomics/Life Sciences Outlook
Proteomics: Products

Company Name	Ticker	Stock Price: Price	Stock Price: Percentage of 52-Wk High	Stock Price: 52-Wk High	Stock Price: 52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Market Cap. to: Cash	Market Cap. to: LTM Revenue	Calendar EPS Estimates: 2000A	2001	2002	2-Year CAGR	Secular Growth	PE Ratio: 2001	PE Ratio: 2002	2002E PEG: 2-Year CAGR	2002E PEG: Secular Growth	William Blair Rating
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
Waters	WAT	35.65	42%	85.38	22.33	$4,650	$164	$4,486	$836	28.3	5.6	1.16	1.27	1.48	13%	20%	28.1	24.1	1.9	1.2	
Bruker Daltonics	BDAL	23.50	56%	42.25	8.31	$1,287	$83	$1,204	$89	15.5	14.5	0.04	0.07	0.12	73%	30%	335.7	195.8	2.7	6.5	
Ciphergen	CIPH	5.03	13%	37.56	2.06	$135	$91	$44	$15	1.5	9.2	(1.75)	(0.98)	(0.90)	NM	NA	NM	NM	NM	NM	
Mean			34%			$3,124	$183	$2,941	$640	15.4	8.3				32%	23%	132.9	82.1	2.4	3.1	
Median			33%			$2,969	$127	$2,845	$462	15.9	7.4				13%	20%	34.9	26.4	2.6	1.5	

Proteomics: Expression

Company Name	Ticker	Stock Price: 11/6/2001	Stock Price: Percentage of 52-Wk High	Stock Price: 52-Wk High	Stock Price: 52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Market Cap. to: Cash	Market Cap. to: LTM Revenue	Calendar EPS Estimates: 2000A	2001	2002	2-Year CAGR	Secular Growth	PE Ratio: 2001	PE Ratio: 2002	2002E PEG: 2-Year CAGR	2002E PEG: Secular Growth	William Blair Rating
Celera	CRA	23.61	30%	79.25	19.50	$1,401	$996	$405	$98	1.4	14.2	(1.72)	(1.69)	(1.78)	NM	33%	NM	NM	NM	NM	1
Oxford Glycosciences	OGSI	7.60	33%	23.13	5.45	$380	$276	$104	$18	1.4	20.6	(0.54)	(0.32)	(0.23)	NM	NA	NM	NM	NM	NM	
Large Scale Biology	LSBC	3.37	14%	23.75	2.63	$83	$58	$25	$23	1.4	3.6	(0.54)	(0.73)	(0.61)	NM	40%	NM	NM	NM	NM	1
Mean			26%			$621	$443	$178	$47	1.4	12.8				NM	37%	NM	NM	NM	NM	
Median			30%			$380	$276	$104	$23	1.4	14.2				NM	37%	NM	NM	NM	NM	

Proteomics: Pathways

Company Name	Ticker	Stock Price: 11/6/2001	Stock Price: Percentage of 52-Wk High	Stock Price: 52-Wk High	Stock Price: 52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Market Cap. to: Cash	Market Cap. to: LTM Revenue	Calendar EPS Estimates: 2000A	2001	2002	2-Year CAGR	Secular Growth	PE Ratio: 2001	PE Ratio: 2002	2002E PEG: 2-Year CAGR	2002E PEG: Secular Growth	William Blair Rating
Curagen	CRGN	22.72	34%	66.00	14.80	$1,073	$525	$548	$23	2.0	46.3	(0.70)	(0.89)	(1.17)	NM	50%	NM	NM	NM	NM	
Myriad	MYGN	44.40	32%	138.00	24.75	$1,045	$127	$918	$45	8.2	23.1	(0.36)	(0.41)	(0.63)	NM	50%	NM	NM	NM	NM	
Cytogen	CYTO	2.26	34%	6.56	1.90	$175	$19	$156	$11	9.4	16.2	(0.13)	(0.17)	(0.16)	NM	NA	NM	NM	NM	NM	
Mean			34%			$764	$224	$541	$26	6.5	28.5				NM	0.5	NM	NM	NM	NM	
Median			34%			$1,045	$127	$548	$23	8.2	23.1				NM	0.5	NM	NM	NM	NM	

Table 13
Genomics/Life Sciences Outlook
Combinatorial Libraries

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Small Chemical Entities																					
Pharmacopeia	PCOP	13.78	46%	30.00	10.95	$322	$164	$158	$124	2.0	2.6	0.70	0.39	0.17	-51%	60%	35.3	81.1	NM	1.4	
Array	ARRY	12.00	92%	13.00	4.17	$275	$48	$227	$17	5.8	16.2	-	(0.21)	(0.06)	NM	64%	NM	NM	NM	NM	
3-Dimensional Pharm	DDDP	8.60	38%	22.38	5.01	$185	$101	$84	$22	1.8	8.4	(0.63)	(0.52)	(1.21)	NM	NA	NM	NM	NM	NM	
Arqule	ARQL	8.75	25%	35.00	7.55	$178	$86	$92	$55	2.1	3.2	0.25	(0.50)	(0.43)	NM	NA	NM	NM	NM	NM	
Discovery Partners	DPII	4.23	24%	17.63	2.75	$101	$79	$22	$42	1.3	2.4	(0.80)	(0.47)	(0.18)	NM	NA	NM	NM	NM	NM	
Argonaut	AGNT	3.42	16%	21.00	2.60	$65	$58	$7	$17	1.1	3.9	(0.50)	(0.74)	(0.58)	NM	NA	NM	NM	NM	NM	
Mean			40%			$188	$89	$98	$46	2.3	6.1				-51%	62%	35.3	81.1	NM	1.4	
Median			32%			$182	$83	$88	$32	1.9	3.5				-51%	62%	35.3	81.1	NM	1.4	
Proteins/Peptides																					
Genencor	GCOR	12.50	48%	26.00	6.75	$749	$201	$548	$316	3.7	2.4	0.25	0.15	0.24	-2%	37%	83.3	52.1	NM	1.4	
Maxygen	MAXY	14.88	32%	46.63	9.75	$501	$177	$324	$28	2.8	18.2	(0.37)	(0.94)	(1.20)	NM	NA	NM	NM	NM	NM	
Diversa	DVSA	12.03	41%	29.25	7.85	$427	$205	$222	$35	2.1	12.2	(0.24)	(0.45)	(0.40)	NM	NA	NM	NM	NM	NM	
Applied Molecular	AMEV	9.23	35%	26.38	5.75	$218	$86	$132	$3	2.5	80.4	(0.76)	(0.69)	(0.72)	NM	NA	NM	NM	NM	NM	
Dyax	DYAX	8.57	21%	40.25	6.05	$164	$60	$104	$33	2.7	5.0	(1.07)	(0.90)	(1.08)	NM	NA	NM	NM	NM	NM	
Enchira	ENBC	0.53	7%	7.50	0.33	$5	$10	-$5	$1.0	0.5	5.0	(1.10)	NA	NA	NM	NA	NM	NM	NM	NM	
Mean			31%			$344	$123	$221	$69	2.4	20.5				-2%	37%	83.3	52.1	NM	1.4	
Median			33%			$323	$132	$177	$30	2.6	8.6				-2%	37%	83.3	52.1	NM	1.4	
Antibodies																					
Protein Design Labs	PDLI	34.79	48%	72.69	16.25	$3,050	$648	$2,402	$44	4.7	68.8	0.01	0.02	0.06	145%	20%	1739.5	579.8	4.0	29.0	
Abgenix	ABGX	28.08	30%	93.69	15.31	$2,419	$540	$1,879	$30	4.5	80.3	(0.11)	(0.74)	(1.00)	NM	27%	NM	NM	NM	NM	
Medarex	MEDX	19.56	26%	75.00	11.75	$1,420	$491	$929	$34	2.9	41.3	(0.21)	(0.02)	(0.14)	NM	37%	NM	NM	NM	NM	
Cambridge Antibody	CATG	28.50	75%	38.00	12.95	$1,009	$246	$763	$15	4.1	65.9	(0.27)	(0.36)	(0.34)	NM	NA	NM	NM	NM	NM	
Mean			45%			$1,974	$481	$1,493	$31	4.0	64.1				145%	28%	NM	NM	4.0	29.0	
Median			39%			$1,920	$516	$1,404	$32	4.3	67.4				145%	27%	NM	NM	4.0	29.0	
Total																					
Mean			38%			$693	$200	$493	$51	2.8	26.0				31%	41%	619.4	237.7	4	10.6	
Median			33%			$298	$132	$190	$32	2.6	10.3				-2%	37%	83.3	81.1	4	1.4	

Table 14
Genomics/Life Sciences Outlook
High-throughput Screening

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
Packard Bioscience	PBSC	8.21	46%	17.75	3.94	$559	$84	$475	$200	6.6	2.8	0.04	0.16	0.26	155%	18%	51.3	31.6	0.2	1.8	
Igen	IGEN	31.00	93%	33.30	9.69	$558	$27	$531	$32	20.4	17.4	(1.98)	(2.40)	(1.26)	NM	NA	NM	NM	NM	NM	
Luminex	LMNX	16.40	45%	36.19	11.95	$461	$56	$405	$18	8.2	25.3	(0.48)	(0.58)	(0.05)	NM	50%	NM	NM	NM	NM	
Molecular Devices	MDCC	16.50	18%	90.00	14.63	$273	$63	$210	$94	4.3	2.9	0.62	0.44	0.61	-1%	31%	37.5	27.0	NM	0.9	
Caliper	CALP	10.63	17%	62.50	8.40	$254	$91	$163	$26	2.8	9.9	(1.06)	(0.94)	(0.77)	NM	58%	NM	NM	NM	NM	
Aclara	ACLA	5.25	27%	19.50	4.31	$187	$140	$47	$3	1.3	54.0	(0.48)	(0.56)	(0.51)	NM	40%	NM	NM	NM	NM	2
3-Dimensional Pharm	DDDP	8.60	38%	22.38	5.01	$185	$101	$84	$22	1.8	8.4	(0.63)	(0.52)	(1.21)	NM	NA	NM	NM	NM	NM	
Genomic Solutions	GNSL	2.12	16%	13.31	1.50	$51	$19	$32	$18	2.7	2.8	(0.45)	(0.42)	(0.31)	NM	NA	NM	NM	NM	NM	
Mean			36%			$995	$108	$886	$226	7.2	14.2				55%	36%	41.2	28.3	1.4	1.4	
Median			27%			$273	$84	$210	$26	4.3	8.4				10%	36%	37.5	27.0	1.4	1.5	

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Table 15
Genomics/Life Sciences Outlook
Pharmacogenomics/SNPs: Products

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
Luminex	LMNX	16.40	45%	36.19	11.95	$461	$56	$405	$18	8.2	25.3	(0.48)	(0.58)	(0.05)	NM	50%	NM	NM	NM	NM	
Illumina	ILMN	11.29	27%	42.00	4.80	$361	$110	$251	$2	3.3	201.7	(0.86)	(0.76)	(0.77)	NM	NA	NM	NM	NM	NM	
Third Wave	TWTI	8.59	74%	11.65	4.20	$337	$84	$253	$34.5	4.0	9.7	(2.83)	(0.72)	(0.38)	NM	NA	NM	NM	NM	NM	
Transgenomic	TBIO	9.90	51%	19.25	5.19	$210	$47	$163	$35	4.5	6.0	(0.59)	(0.26)	(0.03)	NM	35%	NM	NM	NM	NM	
Aclara	ACLA	5.25	27%	19.50	4.31	$187	$140	$47	$3	1.3	54.0	(0.48)	(0.56)	(0.51)	NM	40%	NM	NM	NM	NM	2
Sequenom	SQNM	7.44	24%	31.44	5.65	$181	$160	$21	$25	1.1	7.2	(1.41)	(1.53)	(1.33)	NM	115%	NM	NM	NM	NM	
Nanogen	NGEN	8.57	46%	18.56	3.00	$180	$75	$105	$12	2.4	14.7	(1.92)	(1.32)	(1.37)	NM	NA	NM	NM	NM	NM	
Orchid	ORCH	3.80	15%	25.00	1.50	$126	$70	$56	$23	1.8	5.6	(1.03)	(1.35)	(1.04)	NM	NA	NM	NM	NM	NM	
Epoch	EBIO	2.35	21%	11.25	1.14	$58	$8	$50	$6.2	6.9	9.3	(0.20)	(0.19)	(0.03)	NM	NA	NM	NM	NM	NM	
Mean			35%			$852	$114	$738	$178	5.0	33.8				10%	52%	34.9	26.4	2.6	1.5	
Median			27%			$199	$79	$134	$20	3.7	9.5				10%	40%	34.9	26.4	2.6	1.5	

Pharmacogenomics/SNPs: Services

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Qiagen	QGENF	17.80	43%	41.88	10.25	$2,494	$35	$2,459	$248	72.1	10.0	0.17	0.24	0.38	50%	45%	74.2	46.8	0.9	1.0	
Celera	CRA	23.61	30%	79.25	19.50	$1,401	$996	$405	$98	1.4	14.2	(1.72)	(1.69)	(1.78)	NM	33%	NM	NM	NM	NM	1
Myriad	MYGN	44.40	32%	138.00	24.75	$1,045	$127	$918	$45	8.2	23.1	(0.36)	(0.41)	(0.63)	NM	50%	NM	NM	NM	NM	
Incyte	INCY	14.25	37%	38.38	10.40	$937	$518	$419	$220	1.8	4.3	(0.47)	(0.91)	(0.48)	NM	15%	NM	NM	NM	NM	
Sequenom	SQNM	7.44	24%	31.44	5.65	$181	$160	$21	$25	1.1	7.2	(1.41)	(1.53)	(1.33)	NM	115%	NM	NM	NM	NM	
Orchid	ORCH	3.80	15%	25.00	1.50	$126	$70	$56	$23	1.8	5.6	(1.03)	(1.35)	(1.04)	NM	NA	NM	NM	NM	NM	
Genaissance	GNSC	5.40	16%	34.50	2.55	$117	$69	$48	$3.7	1.7	31.5	(1.91)	(2.15)	(1.58)	NM	40%	NM	NM	NM	NM	2
Variagenics	VGNX	2.35	11%	21.56	2.20	$54	$51	$3	$14	1.1	4.0	(0.85)	(0.78)	(0.80)	NM	NA	NM	NM	NM	NM	
Mean			26%			$794	$253	$541	$85	11.2	12.5				50%	50%	74.2	46.8	0.9	1.0	
Median			27%			$559	$99	$231	$35	1.7	8.6				50%	43%	74.2	46.8	0.9	1.0	

Table 16
Genomics/Life Sciences Outlook
Clinical Trials: Products

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Agilent	A	23.30	34%	68.00	18.00	$10,733	$999	$9,734	$10,108	10.7	1.1	1.83	(1.04)	(0.60)	NM	20%	NM	NM	NM	NM	
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	**2**
Waters	WAT	35.65	42%	85.38	22.33	$4,650	$164	$4,486	$836	28.3	5.6	1.16	1.27	1.48	13%	20%	28.1	24.1	1.9	1.2	
PerkinElmer	PKI	27.20	46%	59.75	21.28	$2,765	$128	$2,637	$1,431	21.5	1.9	2.65	1.29	1.42	-27%	19%	21.1	19.2	NM	1.0	
Mean			37%			$4,613	$228	$4,384	$1,297	22.1	3.8				-1%	19%	28.0	23.2	2.2	1.2	
Median			42%			$4,650	$164	$4,486	$1,431	21.5	4.0				10%	19%	28.1	24.1	2.2	1.2	

Clinical Trials: Services

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Large Scale Biology	LSBC	3.37	14%	23.75	2.63	$83	$58	$25	$23	1.4	3.6	(0.54)	(0.73)	(0.61)	NM	40%	NM	NM	NM	NM	**1**
Variagenics	VGNX	2.35	11%	21.56	2.20	$54	$51	$3	$14	1.1	4.0	(0.85)	(0.78)	(0.80)	NM	NA	NM	NM	NM	NM	
Mean			13%			$69	$55	$14	$18	1.2	3.8				NM	40%	NM	NM	NM	NM	
Median			13%			$69	$55	$14	$18	1.2	3.8				NM	40%	NM	NM	NM	NM	

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Table 17
Genomics/Life Sciences Outlook
Clinical Applications: Diagnostics

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/6/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Roche Holding Ltd	RHHBY.P	67.50	55%	122.00	84.00	$47,520	$12,743	$34,777	$18,781	3.7	2.5	3.35	3.14	3.42	1%	14%	21.5	19.7	19.0	1.4	
Applied Biosystems	ABI	30.35	24%	127.63	18.50	$6,423	$392	$6,031	$1,623	16.4	4.0	0.95	0.87	1.15	10%	18%	34.9	26.4	2.6	1.5	2
Myriad	MYGN	44.40	32%	138.00	24.75	$1,045	$127	$918	$45	8.2	23.1	(0.36)	(0.41)	(0.63)	NM	50%	NM	NM	NM	NM	
Illumina	ILMN	11.29	27%	42.00	4.80	$361	$110	$251	$2	3.3	201.7	(0.86)	(0.76)	(0.77)	NM	NA	NM	NM	NM	NM	
Third Wave Technologies	TWTI	8.59	74%	11.65	4.20	$337	$84	$253	$35	4.0	9.7	(2.83)	(0.72)	(0.38)	NM	NA	NM	NM	NM	NM	
Biosite	BSTE	15.45	26%	58.48	12.43	$219	$52	$167	$63	4.2	3.5	0.41	0.50	0.62	23%	40%	30.9	24.9	1.1	0.6	1
Visible Genetic	VGIN	14.03	36%	39.00	12.16	$207	$51	$156	$14	4.1	15.3	(2.42)	(2.40)	(1.30)	NM	50%	NM	NM	NM	NM	
Nanogen	NGEN	8.57	46%	18.56	3.00	$180	$75	$105	$12	2.4	14.7	(1.92)	(1.32)	(1.37)	NM	NA	NM	NM	NM	NM	
Cepheid	CPHD	6.18	54%	11.48	1.48	$163	$30	$133	$11	5.5	15.1	(0.57)	(0.62)	(0.64)	NM	NA	NM	NM	NM	NM	
Virologic	VLGC	3.75	26%	14.38	1.00	$75	$13	$62	$13	5.7	6.0	(1.32)	(1.13)	(0.54)	NM	NA	NM	NM	NM	NM	
Epoch	EBIO	2.35	21%	11.25	1.14	$58	$8	$50	$6.2	6.9	9.3	(0.20)	(0.19)	(0.03)	NM	NA	NM	NM	NM	NM	
Mean			37%			$907	$94	$812	$182	6.1	30.2				16%	40%	32.9	25.7	1.9	1.0	
Median			30%			$213	$64	$161	$13	4.8	12.2				16%	45%	32.9	25.7	1.9	1.0	

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Table 18
Genomics/Life Sciences Outlook
Bioinformatics

		Stock Price								Market Cap. to:		Calendar EPS Estimates					PE Ratio		2002E PEG		
Company Name	Ticker	11/8/2001	Percentage of 52-Wk High	52-Wk High	52-Wk Low	Market Cap.	Cash	Tech Value	LTM Revenue	Cash	LTM Revenue	2000A	2001	2002	2-Year CAGR	Secular Growth	2001	2002	2-Year CAGR	Secular Growth	William Blair Rating
Lion Bioscience	LEON	16.61	18%	90.75	6.79	$292	$159	$133	$25	1.8	11.7	(1.76)	(1.42)	(1.41)	NM	NA	NM	NM	NM	NM	
Compugen	CGEN	3.02	29%	10.38	2.60	$76	$26	$50	$12	2.9	6.6	(1.23)	(0.61)	(0.81)	NM	NA	NM	NM	NM	NM	
Genomica	GNOM	3.05	22%	14.13	2.22	$69	$58	$11	$2	1.2	38.8	(0.60)	(0.72)	(0.76)	NM	NA	NM	NM	NM	NM	
Informax	INMX	2.63	8%	31.75	2.25	$54	$66	-$12	$25	0.8	2.2	(0.94)	(0.74)	(0.25)	NM	50%	NM	NM	NM	NM	
Pharsight	PHST	1.00	13%	7.88	0.75	$18	$15	$3	$13	1.2	1.4	-	(1.17)	(0.68)	NM	NA	NM	NM	NM	NM	
Mean			18%			$102	$65	$37	$15	1.6	12.1				NM	50%	NM	NM	NM	NM	
Median			18%			$69	$58	$11	$13	1.2	6.6				NM	50%	NM	NM	NM	NM	

Notes for Tables 6-18

Source: Company financials; FactSet; First Call; Reuters Plus; William Blair & Company, L.L.C. estimates

* All stock price and market capitalization information from ReutersPlus at close of November 2, 2001
* Unless noted otherwise, all cash, LTM (last 12 months) revenue reported from FactSet as most recent fully reported quarter as of November 5, 2001
* Unless noted otherwise, all EPS estimates reported by First Call as of November 5, 2001
* EPS estimates for Enchira (ENBC) and Oxford Glycosciences (OGSI) from Hoover's Business Network
* Agilent (A), Motorola (MOT), and Roche (RHHBY) comprise multiple and diverse business units and therefore are excluded from average and median calculations
* All highlighted companies covered by William Blair & Company, L.L.C.; EPS estimates from William Blair & Company, L.L.C.
* 2000 EPS for IVGN is a pro forma estimate, incorporating Life Technologies acquisition

Table 19
Genomics/Life Sciences Outlook
Upcoming Medical/Scientific Conferences of Interest

DATE	NAME	KNOWN AS	LOCATION	WEB SITE	RELEVANT COMPANIES
November 3-8	American Electrophoresis Society		Reno, NV		LSBC
November 11-14	American Heart Association	AHA	Anaheim, CA	www.americanheart.org	BSTE, SGMO
December 7-11	American Society of Hematology	ASH	Orlando, FL	www.hematology.org	LSBC
December 8-12	American Society of Cell Biology	ASCB	Washington, D.C.	www.ascb.org	ABI, IVGN
December 16-19	Interscience Conference on Antimicrobial Agents and Chemotherapy	ICAAC	Chicago, IL	www.icaac.org	Misc.
January 12-16	Plant and Animal Genome Conference	PAG	San Diego, CA	www.intl-pag.org	IVGN, CRA, ABI

Source: William Blair & Company, L.L.C.

ACLARA Biosciences, Inc. (ACLA)

Price: $4.94 **Rating:** 2
Market Capitalization: $176 million **Long-term EPS Growth Rate:** 40%

ACLARA BioSciences is a leading developer of disposable, microfluidic chips for the growing genomics and life science research markets. ACLARA's technology integrates processes such as capillary electrophoresis with miniaturization and plastic chip technology, creating products that increase throughput while decreasing time and total cost. ACLARA's LabCard products are targeted initially for applications in pharmaceutical drug screening, DNA sequencing, gene expression analysis, and SNP genotyping. These represent attractive market subsegments that we estimate to total $2.5 billion in 2001, and growing 24% compounded annually.

ACLARA is a leading, well-positioned microfluidics company with access to a wide range of technology and intellectual property. Dating back to 1990, ACLARA's patent portfolio covers core microfluidics, plastic microfluidic devices and production methods, biochemical analysis methods, sample transfer to microfluidic platforms, and separation media. The company's microfluidics approach reduces time due to faster reaction speeds and decreases cost due to lower sample and reagent volumes. ACLARA's strategy of initially introducing simple, microfluidic circuits usable on other firms' instruments should result in rapid adoption from the large installed base of customers, in our view. Higher throughput also could be achieved with eTag chemistry (eTags), a library of fluorescent reporters that permit multiplexing.

Strong relationships to leverage installed base, sales, marketing, distribution, and manufacturing expertise. ACLARA has established relationships with leading companies that bring complementary technology, expertise, and Intellectual Property, as well as related products and worldwide marketing and distribution capabilities. Current partners include Applied Biosystems; Roche; R.W. Johnson Pharmaceutical Research Institute (PRI), a subsidiary of Johnson & Johnson; Third Wave Technologies; and Cellomics. Johnson & Johnson is on the cutting edge of high-throughput screening. Third Wave has an established Invader platform for DNA and RNA analysis. Cellomics is an emerging leader in supplying cellular-based assays for high-throughput screening.

Robust product pipeline should generate recurring, high revenue stream. ACLARA commercialized its first product, Arteas, in December 2000. Geared to pharmaceutical drug-screening applications, this product leverages the current generation and installed base of instruments. Through its recently established global marketing and distribution agreement with Roche, we anticipate a more rapid adoption of this product into the marketplace. ACLARA also recently introduced eTags, with the intent of entering into collaborations with pharmaceutical and biotech companies to create sets of customized eTag sets. Its first collaboration is with Third Wave to develop and commercialize eTags with Third Wave's Invader platform for genotyping and gene expression applications on the current generation and installed base of capillary electrophoresis instruments Its first eTags early access agreement is with PRI. Other products include the GeneMate system (first half 2002), a $60,000-$80,000 reader for increasing throughput of eTags for high-throughput gene expression analysis and SNP detection. ACLARA has placed its first GeneMate at PRI, and we believe that ACLARA will place about 8-10 of these with pharmaceutical or large biotech companies and implement feedback into the development of its next-generation, integrated, and higher-throughput nMAS system. We anticipate initial beta test site placements for the nMAS to occur at the end of 2002.

Table 20
ACLARA BioSciences, Inc. (ACLA)
Earnings Model
($ in thousands)

FYE Dec. 31	Q1 00	Q2 00	Q3 00	Q4 00	2000	Q1 01	Q2 01	Q3 01E	Q4 01E	2001E	2002E	2003E
Total Revenue	840	950	946	733	3,469	934	849	507	**1,352**	**3,642**	**10,112**	**20,642**
Research and Development	2,661	3,913	3,329	5,199	15,102	5,214	5,474	5,787	**6,192**	**22,667**	**25,394**	**27,766**
Sales, General, and Administrative	1,103	1,662	1,022	1,200	4,987	2,689	2,362	2,190	**2,409**	**9,650**	**10,639**	**12,380**
Litigation Expense	1,167	1,740	3,713	3,000	9,620	-	-	(600)	**-**	**(600)**	**-**	**-**
Total Operating Expense	4,931	7,315	8,064	9,399	29,709	7,903	7,836	7,377	**8,601**	**31,717**	**36,033**	**40,146**
Income (Loss) From Operations	(4,091)	(6,365)	(7,118)	(8,666)	(26,240)	(6,969)	(6,987)	(6,870)	**(7,249)**	**(28,075)**	**(25,921)**	**(19,504)**
Interest Income (Net)	(195)	3,457	3,357	3,316	9,935	2,662	2,001	1,737	**1,934**	**8,334**	**7,357**	**6,616**
Net Income Before Taxes	(4,286)	(2,908)	(3,761)	(5,350)	(16,305)	(4,307)	(4,986)	(5,133)	**(5,315)**	**(19,741)**	**(18,564)**	**(12,888)**
Provision for Taxes	-	-	-	-	-	-	-	-	**-**	**-**	**-**	**-**
Net income	(4,286)	(2,908)	(3,761)	(5,350)	(16,305)	(4,307)	(4,986)	(5,133)	**(5,315)**	**(19,741)**	**(18,564)**	**(12,888)**
EPS	(0.17)	(0.09)	(0.11)	(0.16)	(0.48)	(0.13)	(0.14)	(0.14)	**(0.15)**	**(0.56)**	**(0.51)**	**(0.34)**
Shares Outstanding	24,816	33,445	33,783	33,926	33,704	34,449	35,360	35,525	**35,703**	**35,259**	**36,151**	**37,807**
Year-over-year Growth												
Total Revenue	126%	23%	1%	-14%	18%	11%	-11%	-46%	**84%**	**5%**	**178%**	**104%**
Research and Development	71%	230%	102%	153%	135%	96%	40%	74%	**19%**	**50%**	**12%**	**9%**
100% Income Statement												
Total Revenue	100%	100%	100%	100%	100%	100%	100%	100%	**100%**	**100%**	**100%**	**100%**
Research and Development	317%	412%	352%	709%	435%	558%	645%	1141%	**458%**	**622%**	**251%**	**135%**
Sales, General, and Administrative	131%	175%	108%	164%	144%	288%	278%	432%	**178%**	**265%**	**105%**	**60%**
Litigation Expense	139%	183%	392%	409%	277%	0%	0%	-118%	**0%**	**-16%**	**0%**	**0%**
Total Operating Expense	587%	770%	852%	1282%	856%	846%	923%	1455%	**636%**	**871%**	**356%**	**194%**
Income (Loss) From Operations	-487%	-670%	-752%	-1182%	-756%	-746%	-823%	-1355%	**-536%**	**-771%**	**-256%**	**-94%**
Interest Income (net)	-23%	364%	355%	452%	286%	285%	236%	343%	**143%**	**229%**	**73%**	**32%**
Net Income Before Taxes	-510%	-306%	-398%	-730%	-470%	-461%	-587%	-1012%	**-393%**	**-542%**	**-184%**	**-62%**
Provision for Taxes	0%	0%	0%	0%	0%	0%	0%	0%	**0%**	**0%**	**0%**	**0%**
Net Income	-510%	-306%	-398%	-730%	-470%	-461%	-587%	-1012%	**-393%**	**-542%**	**-184%**	**-62%**

Applied Biosystems Group (ABI)

Price: $31.60 **Rating:** 2
Market Capitalization: $6.7 billion **Long-term EPS Growth Rate:** 18%

Applied Biosystems Group is the overwhelming leader in the production of enabling technology products for genomics and molecular biology research and applications. We estimate that the company participates in a $4.2 billion market worldwide that is growing 22% annually. The company's pioneering tools are used by scientists to conduct research, ranging from the study of DNA and proteins in academic institutions and sophisticated drug screening systems used in pharmaceutical product development to applications in agriculture. Applied Biosystems Group maintains a large, diverse customer base and product-line service by an unmatched field sales and support organization. In our opinion, the company's position and development process will continue to create substantial value in the future. We believe that Applied Biosystems Group is a core holding in medical technology and genomics/ life sciences and recommend purchase of the stock.

We believe that the market for life science instruments and systems is highly attractive. The market's size and growth is based on the pervasiveness of genomics and molecular biology-based research throughout the basic, clinical research, and forensic markets, as well as its increasing role in the development of pharmaceuticals and agriculture. The progression of any disease is based on some form of genetic foundation. As technology evolves through innovators such as Applied Biosystems Group, life science researchers are given the ability to ask ever-more-complicated questions to understand biology and diseases at the molecular level. This understanding then can be applied in numerous areas including pharmaceuticals, agriculture, and forensics, requiring additional products that facilitate the continuation of this cycle.

Applied Biosystems Group is the leading company. Applied Biosystems Group's successful record of developing, selling, and servicing flexible, useful research tools have enabled it to capture an overall 45% market share, across several diverse subsegments of the life science market. The company maintains an incredibly broad customer base, comprising more than 50,000 customers in more than 100 countries. The company serves these customers by developing standard-setting instruments and targeted reagent and software applications that cater to specific segments of the market. The company's ABI Prism 377, now superseded by the newly introduced ABI Prism 3100, set the standard for DNA sequencing and genetic analysis with more than 6,000 placements since its introduction. "Shrink-wrapped" reagent and software packages make these instruments rather flexible and targeted tools. The ABI Prism 3700 DNA sequencer continued this tradition, by offering researchers the ability to work on an industrial scale with minimal labor. These advances have allowed for the undertaking of high-throughput, factory operations such as Celera Genomics Group, which sequenced the entire human genome by June 2000. Applied Biosystems Group's extensive field-support organization is unmatched in the industry with more than 2,500 highly skilled and educated scientists and professionals who function in sales, marketing, service, and application support roles worldwide.

The company is well positioned for continued successful new product development and future instrument placements. In our opinion, Applied Biosystems Group will continue to follow its successful formula of introducing flexible, upgradable products that evolve to meet the changing needs of it diverse customer base. By maintaining close contact with customers, the company is able to harness a feedback loop that spurs the continuous development of existing and future products. Examples include the recently introduced ABI Prism 3100 midrange sequencer, the new ABI Prism 7900 HT Sequence Detection System, the API 4000 triple quad mass spectrometer, as well as the forthcoming Voyager TOF/TOF mass spectrometry instrument for industrial-scale proteomics. A substantial research and development budget, which constitutes approximately 11% of revenue, enables these efforts. Also, Applied Biosystems Group formerly established itself in the medical diagnostic business in which its products already have been used for research.

Table 21
Applied Biosystems Group (ABI)
Earnings Model
($ in thousands)

FYE June 30	1Q01	2Q01	3Q01	4Q01	2001	1Q02	2Q02E	3Q02E	4Q02E	2002E	2003E
Net Revenues	$363,572	$411,021	$439,781	$405,100	$1,619,474	$366,600	**$442,655**	**$489,143**	**$497,509**	**$1,795,908**	**$2,052,903**
Cost of Sales	169,625	197,843	208,595	198,400	774,463	179,400	**211,924**	**235,776**	**234,183**	**861,283**	**966,696**
Gross Profit	193,947	213,178	231,186	206,700	845,011	187,200	**230,732**	**253,367**	**263,326**	**934,625**	**1,086,207**
SG&A	89,975	94,819	104,142	91,700	380,636	91,800	**103,951**	**112,070**	**110,776**	**418,597**	**470,395**
Research and Development	46,115	42,010	47,467	48,900	184,492	52,300	**55,668**	**60,669**	**60,104**	**228,740**	**229,054**
Operating Expenses	136,090	136,829	151,609	140,600	565,128	144,100	**159,618**	**172,739**	**170,880**	**647,337**	**699,449**
Operating Income	57,857	76,349	79,577	66,100	279,883	43,100	**71,113**	**80,628**	**92,446**	**287,288**	**386,758**
Interest Expense	-	(294)	(288)	-	(582)	-	**-**	**-**	**-**	**-**	**-**
Interest Income	4,100	4,208	4,028	3,700	16,036	3,300	**3,809**	**3,709**	**3,630**	**14,448**	**14,610**
Other Income, Net	(2,900)	(239)	(933)	(1,800)	(5,872)	(1,000)	**(993)**	**(1,182)**	**(1,244)**	**(4,418)**	**(4,561)**
Earnings Before Taxes	59,057	80,024	82,384	68,000	289,465	45,400	**73,929**	**83,156**	**94,832**	**297,318**	**396,807**
Provision for Income Taxes	17,757	24,024	24,715	20,400	86,896	13,200	**22,770**	**25,612**	**29,208**	**90,791**	**122,432**
Net income	41,300	56,000	57,669	47,600	202,569	32,200	**51,159**	**57,544**	**65,624**	**$206,527**	**$274,375**
EPS	$0.19	$0.25	$0.26	$0.22	$0.92	$0.15	**$0.24**	**$0.27**	**$0.30**	**$0.96**	**$1.27**
Average Shares Outstanding	221,173	222,690	221,495	217,406	220,476	215,213	**215,428**	**215,644**	**215,859**	**215,536**	**216,399**
Year-over-year Growth	**1Q01**	**2Q01**	**3Q01**	**4Q01**	**2001**	**1Q02**	**2Q02E**	**3Q02E**	**4Q02E**	**2002E**	**2003E**
Revenue	24.4%	22.3%	19.5%	3.4%	16.7%	0.8%	**7.7%**	**11.2%**	**22.8%**	**10.9%**	**14.3%**
Gross Profit	25.3%	17.9%	14.3%	-2.8%	12.6%	-3.5%	**8.2%**	**9.6%**	**27.4%**	**10.6%**	**16.2%**
Operating Income	28.6%	17.2%	9.8%	-14.9%	7.5%	-25.5%	**-6.9%**	**1.3%**	**39.9%**	**2.6%**	**34.6%**
Net Income	39.0%	27.9%	2.9%	-15.9%	8.8%	-22.0%	**-8.6%**	**-0.2%**	**37.9%**	**2.0%**	**32.9%**
EPS	32.7%	23.5%	1.7%	-14.4%	6.9%	-19.9%	**-5.6%**	**2.5%**	**38.9%**	**4.3%**	**32.3%**
100% Income Statement	**1Q01**	**2Q01**	**3Q01E**	**4Q01E**	**2001E**	**1Q02**	**2Q02**	**3Q02**	**4Q02**	**2002E**	**2003E**
Net Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Cost of Sales	46.7%	48.1%	47.4%	49.0%	47.8%	48.9%	**47.9%**	**48.2%**	**47.1%**	**48.0%**	**47.1%**
Gross Profit	53.3%	51.9%	52.6%	51.0%	52.2%	51.1%	**52.1%**	**51.8%**	**52.9%**	**52.0%**	**52.9%**
SG&A	24.7%	23.1%	23.7%	22.6%	23.5%	25.0%	**23.5%**	**22.9%**	**22.3%**	**23.3%**	**22.9%**
Research and Development	12.7%	10.2%	10.8%	12.1%	11.4%	14.3%	**12.6%**	**12.4%**	**12.1%**	**12.7%**	**11.2%**
Operating Expenses	37.4%	33.3%	34.5%	34.7%	34.9%	39.3%	**36.1%**	**35.3%**	**34.3%**	**36.0%**	**34.1%**
Operating Income	15.9%	18.6%	18.1%	16.3%	17.3%	11.8%	**16.1%**	**16.5%**	**18.6%**	**16.0%**	**18.8%**
Gain (Loss) on Investment	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Interest Expense	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Interest Income (Net for 2Q00)	1.1%	1.0%	0.9%	0.9%	1.0%	0.9%	**0.9%**	**0.8%**	**0.7%**	**0.8%**	**0.7%**
Other Income, Net	-0.8%	-0.1%	-0.2%	-0.4%	-0.4%	-0.3%	**-0.2%**	**-0.2%**	**-0.2%**	**-0.2%**	**-0.2%**
Earnings Before Taxes	16.2%	19.5%	18.7%	16.8%	17.9%	12.4%	**16.7%**	**17.0%**	**19.1%**	**16.6%**	**19.3%**
Provision for Income Taxes (% of EBT)	30.1%	30.0%	30.0%	30.0%	30.0%	29.1%	**30.8%**	**30.8%**	**30.8%**	**30.5%**	**30.9%**
Net Income	11.4%	13.6%	13.1%	11.8%	12.5%	8.8%	**11.6%**	**11.8%**	**13.2%**	**11.5%**	**13.4%**

Biosite Incorporated (BSTE)

Price: $15.83 **Rating:** 1
Market Capitalization: $224 million **Long-term EPS Growth Rate:** 40%

Biosite is a leading company supplying rapid assays to the $20 billion in vitro diagnostic market. Although we believe the long-term prospects for Biosite are promising, the company is currently facing two significant issues that could slow its short-term, and potentially long-term growth. First, Biosite is engaged in a legal dispute with XOMA involving the licensing rights to certain technology used to manufacture antibodies. We do not expect a settlement, and the case may not be resolved until the second half of 2003. In addition to putting Biosite's Discovery business at risk, the dispute makes shorter-term earnings upside more difficult due to the substantial legal expenses. Second, based on third quarter 2001 results, sales growth of Triage Cardiac products was sequentially lower by 9%. We have reduced our growth expectations of Cardiac; however, we expect Triage BNP to exceed current company growth targets, likely equaling Triage Cardiac sales in the second half of 2003. Despite these two prominent issues that have pressured the stock price recently, we believe Biosite presents a significant investment opportunity at current valuations.

Competitive products address large, attractive markets. In our opinion, Biosite's products are accurate (often better than central lab analyzers), easy to use, and offer rapid, clinically relevant information. They also are designed to afford the company high gross margins. We believe new products, based on the same flexible and low-cost technology platforms and using the company's competency in immunodiagnostic development, should allow Biosite to quickly address new market opportunities. We estimate the total potential market for Biosite's products to be $1.5 billion globally, with $730 million in the United States. The DOA market is valued at $580 million globally, $360 million in the United States. The market for cardiac markers is currently $150 million worldwide, and is expected to grow 40% annually, reaching $720 million by 2003.

No reason for a continued slowdown in 2002. We believe Biosite has three major growth engines: Triage™ Cardiac, the company's rapid, quantitative diagnostic test for heart attacks; Triage BNP, a rapid, diagnostic test for congestive heart failure; and Biosite Discovery, a functional genomics collaborator to develop therapeutic antibodies. These products complement Biosite's Triage Drugs of Abuse (DOA), a panel that is used by 45% of acute care hospitals in the United States, and maintains a gross margin of almost 80%. For 2002, expect Cardiac growth of 20%, BNP growth of 300%, and DOA sales to remain constant at roughly $9 million per quarter. Despite the recent sales slowdown in Cardiac, we remain confident on the prospects of Biosite's core diagnostic business.

XOMA litigation causes negative pressure on the stock price. Biosite and XOMA currently are involved in a legal dispute concerning the license rights of patented technology used in the bacterial expression of antibodies. While we would prefer a settlement as soon as possible, we believe Biosite has a strong case based on our field research of current Discovery collaborators. Unfortunately, the XOMA litigation worst-case scenario puts Biosite roughly two years behind our model pre-XOMA litigation, as we believed the company would exceed $1.00 EPS in 2002. Our current estimates assume approximately $2.8 million per year in legal expenses, and minimal growth in Discovery revenues. We estimate EPS at $0.50, $0.62, and $0.84 in 2001, 2002, and 2003, respectively. We believe our 2002 estimate is based on a worst- case scenario involving XOMA. Assuming the resumption of the Discovery collaboration with Large Scale Biology and the elimination of legal expenses, there is approximately $0.20 upside to our estimate should the XOMA situation improve. We believe final resolution of this dispute may come as late as mid-2003.

Collaboration With Large Scale Biology to develop antibody arrays suspended. Large Scale Biology was under contract to provide Biosite with approximately 2,000-5,000 protein targets, or potential markers of disease, that have been identified in its Human Protein Index. Biosite Discovery was to use its proprietary Omniclonal Antibody technology to generate high-specificity, high-affinity (strong binding) antibodies for each protein target. Protein chips, or antibody arrays, should have applications in diagnostics, drug discovery, toxicology, and clinical research. Unfortunately, this promising collaboration has been suspended pending resolution of the XOMA dispute. We believe the relationship between the two companies remains on good terms, and the collaboration would resume if XOMA were resolved. In the meantime, we expect specific diagnostic projects involving the two companies to continue once legal responsibilities have been solidified.

Triage BNP should ameliorate Cardiology product line growth. Triage Cardiac sales growth has slowed for a variety of reasons: a new, relatively inexperienced salesforce, the "distraction" of selling BNP by newer reps, and longer selling cycles to larger, higher volume hospitals. We also underestimated the difficulty of closing point-of-care sales at tertiary hospitals (estimated $100,000-$150,000 in sales per hospital per year) as opposed to the hospital labs of smaller hospitals that Biosite focused on in the past (estimated $30,000-$40,000 in sales per hospital per year). Although we have made substantial cuts to our Cardiac sales forecast, we believe upside exists to the company's BNP estimates. We now expect Cardiac sales in 2002 to increase 21% to almost $22 million, compared to our previous estimate of greater than 50% growth. However, based on the potential of BNP, we expect 2003 sales of approximately $54 million to be split equally between Cardiac and BNP, compared to a split of 86% Cardiac and 14% BNP in 2001. For 2001, Biosite is ahead of schedule for BNP. There are currently 130 hospitals evaluating Triage BNP, up from 100 earlier this summer. Of the 130, 54 are active, reordering customers. Due to the strong initial response, Biosite expects to have 150-175 reordering customers by year-end for BNP, up from 100 that were expected at the beginning of the year. Recent BNP customers include Brigham and Women's Hospital, University of Michigan, and Baylor University, as well as the Lahey, Ochsner, and Cleveland Clinics.

Core diagnostic growth likely for the foreseeable future. In 2002, we expect Biosite to continue to build momentum with its diagnostic business through the newly launched proprietary BNP test for heart failure, which can be cross-sold with Triage Cardiac test for heart attacks. We also expect progress on new diagnostic panels for stroke and acute coronary syndrome (ACS), and a quantitative drugs of abuse (DOA) test. Pending resolution of the legal dispute with XOMA, Biosite Discovery should continue to add collaborations, increasing the upside potential, in our opinion.

Table 22
Biosite, Inc. (BSTE)
Earnings Model
($ in thousands)

FYE Dec. 31	1Q00	2Q00	3Q00	4Q00	2000	1Q01	2Q01	3Q01	4Q01	2001E	1Q02	2Q02	3Q02	4Q02	2002E	2003E
Net Sales	$ 12,913	$ 13,444	$ 14,382	$ 14,246	$ 54,985	$ 15,151	$ 16,216	$ 17,007	$ 17,190	$ 65,564	$ 18,024	$ 19,092	$ 20,184	$ 21,127	$ 78,425	$ 100,496
Diagnostics	12,198	13,134	13,330	13,005	51,667	14,197	15,339	15,941	16,340	61,817	17,149	18,217	19,309	20,252	74,925	94,860
Discovery	715	310	1,052	1,241	3,318	954	877	1,066	850	3,747	875	875	875	875	3,500	5,636
COGS	3,837	3,553	3,936	4,290	15,616	4,340	4,347	4,144	4,517	17,348	4,749	4,923	5,294	5,527	20,494	26,216
Gross Profit	9,076	9,891	10,446	9,956	39,369	10,811	11,869	12,863	12,673	48,216	13,274	14,169	14,889	15,599	57,932	74,281
SG&A	4,385	4,852	4,057	4,776	18,070	5,605	5,569	5,333	5,631	22,138	5,885	6,126	6,400	7,039	25,450	31,812
R&D	3,165	3,328	3,656	3,154	13,303	3,284	3,332	3,573	3,585	13,774	3,741	3,998	4,288	4,481	16,508	20,635
Other (Legal, ETC)	-	-	-	400	400	-	473	1,185	700	2,358	700	700	700	700	2,800	1,400
Total Operating Expense	7,550	8,180	7,713	8,330	31,773	8,889	9,374	10,091	9,916	38,270	10,326	10,824	11,387	12,220	44,758	53,847
Income From Operations	1,526	1,711	2,733	1,626	7,596	1,922	2,495	2,772	2,757	9,946	2,948	3,344	3,502	3,379	13,174	20,434
Interest and Other Income	500	520	589	298	1,907	575	669	677	684	2,605	697	711	726	740	2,875	3,035
Non-operating Income (Expense)	500	520	589	298	1,907	575	669	677	684	2,605	697	711	726	740	2,875	3,035
Earnings Before Income Taxes	2,026	2,231	3,322	1,924	9,503	2,497	3,164	3,449	3,441	12,551	3,646	4,056	4,228	4,120	16,049	23,469
Provision (Benefit) for Income Taxes	702	875	1,300	462	3,339	968	1,247	1,319	1,311	4,845	1,385	1,541	1,606	1,565	6,099	9,622
Net Income	$1,324	$1,356	$2,022	$1,462	$6,164	$1,529	$1,917	$2,130	$2,130	$7,706	$2,260	$2,515	$2,621	$2,554	$9,950	$13,847
Net Income Per Share Diluted	$0.09	$0.09	$0.13	$0.10	$0.41	$0.10	$0.12	$0.14	$0.14	$0.50	$0.14	$0.16	$0.16	$0.16	$0.62	$0.84
Weighted Average Shares Outstanding	14,840	15,019	15,620	15,206	15,207	15,317	15,751	15,463	15,538	15,517	15,776	16,004	16,142	16,275	16,049	16,545
Year-over-year Growth																
Total Revenue	37%	27%	27%	22%	28%	17%	21%	18%	21%	19%	19%	18%	19%	23%	20%	28%
Diagnostic Revenue	29%	24%	18%	12%	20%	16%	17%	20%	26%	20%	21%	19%	21%	24%	21%	27%
Gross Profit	59%	35%	28%	21%	34%	19%	20%	23%	27%	22%	23%	19%	16%	23%	20%	28%
Income From Operations			297%	170%		26%	46%	1%	70%	31%	53%	34%	26%	23%	32%	55%
Net Income		1298%	141%	19%	457%	15%	41%	5%	46%	25%	48%	31%	23%	20%	29%	39%
EPS		1168%	109%	9%	395%	12%	35%	6%	43%	23%	44%	29%	18%	14%	25%	35%
100% Income Statement	**1Q00**	**2Q00**	**3Q00**	**4Q00**	**2000E**	**1Q01**	**2Q01**	**3Q01**	**4Q01**	**2001E**	**1Q02**	**2Q02**	**3Q02**	**4Q02**	**2002E**	**2002E**
Net Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Diagnostics	94.5%	97.7%	92.7%	91.3%	94.0%	93.7%	94.6%	93.7%	95.1%	94.3%	95.1%	95.4%	95.7%	95.9%	95.5%	94.4%
Discovery	5.5%	2.3%	7.3%	8.7%	6.0%	6.3%	5.4%	6.3%	4.9%	5.7%	4.9%	4.6%	4.3%	4.1%	4.5%	5.6%
COGS (% of Diagnostics)	31.5%	27.1%	29.5%	33.0%	30.2%	30.6%	28.3%	26.0%	27.6%	28.1%	27.7%	27.0%	27.4%	27.3%	27.4%	27.6%
Gross Margin (% of Diagnostics)	68.5%	72.9%	70.5%	67.0%	69.8%	69.4%	71.7%	74.0%	72.4%	71.9%	72.3%	73.0%	72.6%	72.7%	72.6%	72.4%
SG&A	34.0%	36.1%	28.2%	33.5%	32.9%	37.0%	34.3%	31.4%	32.8%	33.8%	32.7%	32.1%	31.7%	33.3%	32.5%	31.7%
R&D	24.5%	24.8%	25.4%	22.1%	24.2%	21.7%	20.5%	21.0%	20.9%	21.0%	20.8%	20.9%	21.2%	21.2%	21.0%	20.5%
Other (Legal, ETC)	0.0%	0.0%	0.0%	2.8%	0.7%	0.0%	2.9%	7.0%	4.1%	3.6%	3.9%	3.7%	3.5%	3.3%	3.6%	1.4%
Total Operating Expense	58.5%	60.8%	53.6%	58.5%	57.8%	58.7%	57.8%	59.3%	57.7%	58.4%	57.3%	56.7%	56.4%	57.8%	57.1%	53.6%
Income From Operations	11.8%	12.7%	19.0%	11.4%	13.8%	12.7%	15.4%	16.3%	16.0%	15.2%	16.4%	17.5%	17.4%	16.0%	16.8%	20.3%
Interest and Other Income	3.9%	3.9%	4.1%	2.1%	3.5%	3.8%	4.1%	4.0%	4.0%	4.0%	3.9%	3.7%	3.6%	3.5%	3.7%	3.0%
Non-operating Income (Expense)	3.9%	3.9%	4.1%	2.1%	3.5%	3.8%	4.1%	4.0%	4.0%	4.0%	3.9%	3.7%	3.6%	3.5%	3.7%	3.0%
Earnings Before Income Taxes	15.7%	16.6%	23.1%	13.5%	17.3%	16.5%	19.5%	20.3%	20.0%	19.1%	20.2%	21.2%	20.9%	19.5%	20.5%	23.4%
Provision (Benefit) for Income Taxes	34.6%	39.2%	39.1%	24.0%	35.1%	38.8%	39.4%	38.2%	38.1%	38.6%	38.0%	38.0%	38.0%	38.0%	38.0%	41.0%
Net Income	10.3%	10.1%	14.1%	10.3%	11.2%	10.1%	11.8%	12.5%	12.4%	11.8%	12.5%	13.2%	13.0%	12.1%	12.7%	13.8%

Celera Genomics Group (CRA)

Price: $25.23 **Rating:** 1
Market Capitalization: $1.5 billion **Long-term EPS Growth Rate:** 33%

We believe that Celera is working ardently to narrow the gap between medicine and science. As Celera now resequences all human genes from 40-50 individuals, we expect that it is making dramatic diagnostic and drug-target discoveries, in addition to gaining useful understanding of evolutionary gene structure. We believe this understanding is being captured in clade, haplotype, and SNP maps to link overall gene variation and stratification among populations to specific disease indications. Furthermore, Celera's chromatography-based proteomics approach should increase the number of novel therapeutic targets for antibodies, vaccines, and small molecules, as well as discover novel proteins and peptides that can be used as therapies themselves. We believe Celera already has discovered a number of likely therapeutic and diagnostic targets in-house from its genomic and preliminary proteomic research efforts. Its recent acquisition of Axys Pharmaceuticals moves it further down the drug-discovery chain by coupling Celera's targets with Axys' medicinal chemistry and high-throughput screening capabilities. Potential diseases could include, but are not limited to colon, lung, pancreatic, prostate, breast cancers, and diabetes. We believe that the company fundamentally has changed the business of molecular-biology-based medical discovery. This leapfrog approach has many inherent risks, but we believe that this is the best approach to capture the potentially substantial rewards.

In our opinion, Celera has established unparalleled facilities to create, analyze and distribute both genomic and proteomic knowledge. Celera is using its industrial-scale proteomics facility for the study of proteins using the Voyager TOF/TOF mass spectrometry systems from Applied Biosystems Group. In addition to these state of the art instruments, it is also working to create novel, upfront sample separation technologies to directly feed the TOF/TOFs. Although the sequencing goals of Celera seemed daunting, the company assembled the critical pieces that ensured success thus far in its efforts to sequence the human, fruit fly, and three strains of the mouse genome. The company has built an industrial-scale gene-sequencing factory around the successful technology of the ABI Prism 3700. The capacity of this facility far exceeds that of any competitors, private or public.

Celera's "Sequencing Capacity Task Force." Celera put together a Sequencing Capacity Task Force to sort through the numerous possible opportunities to pursue once it had sequenced a number of significant genomes. Its collaboration with Diversa seemed to be one of the first outcomes of this endeavor. So far, Celera and Diversa have sequenced the entire genomes of both Pyrolobus fumarii and Streptomyces diversa. We expect this collaboration to yield both knowledge regarding biochemical pathways useful in understanding and treating disease, as well as novel proteins for industrial applications. Other opportunities for the task force include resequencing human genes to understand variability and relationship to disease, first illustrated by the company's work with the City of Hope Hospital resequencing the estrogen receptor to understand the receptors' role in breast cancer; identifying and resequencing genes of other organisms, as in its collaboration with ViaLactia for milk production in cows; sequencing the rat genome, which is of particular interest to pharmaceutical companies, due to its significant role in areas such as toxicology.

We believe that Celera Diagnostics represents a promising opportunity. To create Celera Diagnostics, Applera has brought together three proprietary, high-value components that we believe are needed for success: state-of-the-art instruments, proprietary molecular diagnostic tests (content), and superior management capable of addressing the clinical diagnostic market. Through its internal discovery efforts, we strongly believe Celera continues to identify powerful, medically relevant associations between gene variations and disease. In our opinion, understanding and using the complete variations of a gene is

significantly more powerful than using single-letter (base-pair) changes (SNPs) in isolation. We expect that this deep understanding of gene variation and structure will be supplemented with proteomics analysis. We estimate that the current molecular diagnostics market is $750 million to $1 billion, growing 30% to 40% per year. In the future, as the completed human genome data is analyzed, we anticipate a number of new diagnostic indications arising, including cancer screening and predisposition testing, as well as pharmacogenetic tests to identify differences in drug metabolism and efficacy.

Applera Initiative to monetize each of the three business units. The Applera Initiative is a joint effort between the three Applera businesses—Celera Genomics, Applied Biosystems, and Celera Diagnostics—for which Applera plans to invest approximately $75 million over the next 12 to 15 months. Specifically for Celera, it will record $20 million-$25 million in R&D expenses as a result of this initiative. Overall, the program has outlined the following four goals: 1) discover genetic variations through haplotypes and SNPs; 2) identify disease-related gene associations; 3) develop genotyping (SNP) assays; and 4) monitor gene expression. As part of this initiative, Celera Genomics will resequence only the genes and regulatory regions for the DNA from 40 to 50 individuals over the next 12-18 months. By the end of this year, Celera estimates that it will be able to sequence all the genes and regulatory regions in any individual in less than a week for under $1 million. Also as part of this initiative, the project will help determine which genes, as predicted by the initial Celera Genomics sequencing efforts, encode for proteins.

Celera's Discovery System (CDS) remains strong. We believe Celera's online subscription-based business, CDS, remains strong. Celera now boasts 16 commercial and 31 academic subscribers; most recent subscribers include Genentech, Immusol, Sagres Discovery, Yamanouchi Pharmaceuticals, DNA Sciences, The Johns Hopkins University, and The Jackson Laboratory. We also believe that the rat genome will be incorporated into CDS, providing the third mammalian genome, greatly enhancing the annotation of the human genome, in addition to its stand-alone value.

Table 23
Celera Genomics Group (CRA)
Earnings Model
($ in thousands)

FYE June 30	Q1 01	Q2 01	Q3 01	Q4 01	FY 2001	Q1 02	Q2 02E	Q3 02E	Q4 02E	FY 2002E	FY 2003E
Revenues	$ 18,253	$ 20,319	$ 23,375	$ 27,400	$ 89,347	$ 27,300	$ 34,562	$ 36,122	$ 40,309	$ 138,293	$ 209,352
COS	5,800	10,400	12,000	14,800	43,000	11,900	17,292	15,487	17,936	62,615	87,542
Gross Margin	12,453	9,919	11,375	12,600	46,347	15,400	17,270	20,636	22,373	75,679	121,810
R&D	41,000	42,300	40,200	41,200	164,700	27,800	33,005	51,485	53,545	165,835	180,451
SG&A	13,030	14,362	15,146	15,800	58,338	12,600	13,825	14,680	17,101	58,206	61,895
Amortization	11,100	10,968	10,916	10,900	43,884	500	500	500	500	2,000	2,000
Total Costs and Expenses	65,130	67,630	66,262	67,900	266,922	40,900	47,330	66,665	71,146	226,041	244,346
Operating Loss	(52,677)	(57,711)	(54,887)	(55,300)	(220,575)	(25,500)	(30,060)	(46,029)	(48,773)	(150,362)	(122,535)
Interest Income	17,400	17,081	15,258	13,000	62,739	10,900	8,900	7,900	6,900	34,600	20,100
Other Income (Expense)	11	(15)	(242)	(600)	(846)	(700)	(514)	(605)	(606)	(2,425)	(1,775)
Loss From Celera Diagnostics				(5,000)	(5,000)	(9,400)	(17,500)	(17,500)	(17,500)	(61,900)	(30,000)
Loss Before Income Taxes	(35,266)	(40,645)	(39,871)	(47,900)	(163,682)	(24,700)	(39,174)	(56,234)	(59,979)	(180,087)	(134,210)
Benefit for Income Taxes	9,502	10,986	10,758	13,400	44,646	9,100	13,536	19,507	20,818	62,960	46,475
Net Loss	(25,764)	(29,659)	(29,113)	(34,500)	(119,036)	(15,600)	(25,638)	(36,727)	(39,161)	(117,127)	(87,735)
EPS	$ (0.43)	$ (0.49)	$ (0.48)	$ (0.56)	$ (1.96)	$ (0.25)	$ (0.40)	$ (0.54)	$ (0.58)	$ (1.79)	$ (1.28)
Shares Outstanding	59,709	60,645	61,071	61,426	60,718	61,792	64,601	67,424	67,761	65,395	68,612
Year-over-year Growth											
Revenue	120%	143%	112%	82%	109%	50%	70%	55%	47%	55%	51%
Total Costs and Expenses	72%	55%	31%	14%	39%	-37%	-30%	1%	5%	-15%	8%
Net Loss	33%	22%	21%	67%	34%	-39%	-14%	26%	14%	-2%	-25%
100% Income Statement	**Q1 01**	**Q2 01**	**Q3 01**	**Q4 01**	**FY 2001**	**Q1 02**	**Q2 02**	**Q3 02**	**Q4 02**	**FY 2002**	**FY 2002**
Net Revenues	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
COS	32%	51%	51%	54%	48%	44%	50%	43%	44%	45%	42%
Gross Margin	68%	49%	49%	46%	52%	56%	50%	57%	56%	55%	58%
R&D	225%	208%	172%	150%	184%	102%	95%	143%	133%	120%	86%
SG&A	71%	71%	65%	58%	65%	46%	40%	41%	42%	42%	30%
Amortization	61%	54%	47%	40%	49%	2%	1%	1%	1%	1%	1%
Total Costs and Expenses	357%	333%	283%	248%	299%	150%	137%	185%	177%	163%	117%
Operating Loss	-289%	-284%	-235%	-202%	-247%	-93%	-87%	-127%	-121%	-109%	-59%
Interest Income	95%	84%	65%	47%	70%	40%	26%	22%	17%	25%	10%
Loss Before Income Taxes	-193%	-200%	-171%	-175%	-183%	-90%	-113%	-156%	-149%	-130%	-64%
Benefit for Income Taxes	-27%	-27%	-27%	-28%	-27%	-37%	-35%	-35%	-35%	-35%	-35%
Net Loss	-141%	-146%	-125%	-126%	-133%	-57%	-74%	-102%	-97%	-85%	-42%

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Genaissance Pharmaceuticals, Inc. (GNSC)

Price: $5 **Rating:** 2
Market Capitalization: $109 million **Long-term EPS Growth Rate:** 40%

Genaissance Pharmaceuticals is a developmental-stage leader in pharmacogenomics, which we believe is one of the most promising market segments in the genomics-driven drug discovery value chain. GNSC uses its proprietary algorithms and high-throughput sequencing capacity to determine genetic haplotypes, which are specific patterns of single nucleotide polymorphisms (SNPs) of a gene that determine individual traits and characteristics. Using HAP™ markers, as well as its DecoGen bioinformatics software, the company plans to improve clinical trials and drug development, as well as identify ideal patient populations for current drugs already on the market. Thus far, GNSC has signed two significant collaborations involving the discovery and development of HAP Technology: a multiyear deal with the Janssen Research Foundation, a division of Johnson & Johnson, and a one-year agreement with Pfizer. GNSC also has initiated its first Mednostics trial, STRENGTH, to identify haplotypes and determine individual patient response to four of the most popular statins (cholesterol lowering drugs) on the market. We view GNSC as having substantial, potential medical and economic value as a result of its proprietary technology.

Genaissance brings technology to improve drug discovery, development, and marketing. Our view is that GNSC's technology can be applied across multiple parts of the drug development and pharmaceutical marketing process. In light of the natural, significant genetic variation of patients in conjunction with the economic drivers of drug development, pricing and marketing, GNSC expects to help rationally develop drugs with the highest efficacy and fewest side effects for the broadest market. We believe that the company's upstream HAP Technology program, with its first partners Johnson & Johnson and Pfizer, will be effective in drug discovery by helping to select drug targets based on genetic variability and screen drug candidates based on their interaction with the genetic variability of the target and metabolic pathways. Understanding and wisely using information on genetic variation may lead to a broader and more defensible market position for a new drug. In our opinion, the company's downstream Mednostics program, for drugs already marketed or in human clinical trials, will better match specific drugs to specific patient groups. This should allow for more effective marketing of currently sold drugs, and help determine, which drugs in clinical trials can be best positioned to gain the most market share and highest reimbursement.

Strong focus on comprehensive understanding of gene variation. GNSC uses proprietary algorithms and high-throughput sequencing to determine comprehensive, genetic haplotypes or HAP markers, which are specific patterns of gene variation comprised of a number of differences in letters of DNA (base pairs) within a specific gene. We believe that this approach is more valid than using only single-letter changes (single nucleotide polymorphisms, or SNPs) in isolation, since data indicates and evolution would predict that genes in equilibrium exist in discrete packages (alleles). The company has determined nearly 80,000 HAP markers for approximately 5,000 genes, and we believe the company currently is haplotyping 200 genes per month. For more than half these genes, the company already has filed patent applications. GNSC has validated its approach by identifying HAP markers that predict responses to albuterol to relieve symptoms of asthma and statins to lower cholesterol.

Two distinct types of powerful collaborations. From its HAP Technology collaboration with Johnson & Johnson, we believe GNSC will collect $3 million-$5 million in revenues per year over three years, as well as future milestone payments and royalties. For Mednostics, GNSC launched its first, self-funded trial, known as STRENGTH, which we believe is the largest pharmacogenomics clinical trial ever conducted, involving 600 patients at 60 centers nationwide to determine HAP markers and their prognostic value for four currently marketed statins: Lipitor, Pravachol, Baycol, and Zocor. We expect preliminary results by first quarter

2002. GNSC has also initiated STRENGTH II—a new arm of its current trial that will investigate the effect of genetic variation on the safety and efficacy of Merck's Mevacor (lovastatin), another statin used to lower cholesterol. Additional potential Mednostics trials include four asthma drugs, five schizophrenia drugs, four diabetes drugs, and two obesity drugs. These 15 drugs collectively account for more than $9 billion in sales and include 3 of the top 10 drugs based on total sales.

Business model highly scalable. We expect GNSC to earn license fees, milestone payments, and royalties from both its HAP2000 and Mednostics businesses. In addition, we believe GNSC will generate significant intellectual property in the "land grab" for both therapeutic and diagnostic uses for genetic variability and its correlation to drug response and disease. We believe operating expenses will remain constant at current levels, providing GNSC with substantial operating leverage. While we would not focus too closely on the details of financial results in these early quarters for developmental-stage companies such as GNSC, we estimate that annual revenues will be approximately $4.9 million in 2001, $14.6 million in 2002, and $28.6 million in 2003.

Table 24
Genaissance Pharmaceuticals Corporation (GNSC)
Earnings Model
($ in thousands)

FYE Dec. 31	Q1 00	Q2 00	Q3 00	Q4 00	2000	Q1 01	Q2 01	Q3 01	Q4 01E	2001E	Q1 02E	Q2 02E	Q3 02E	Q4 02E	2002E	2003E
Total Revenues	$ 63	$ 57	$ 67	$ 566	$ 753	$ 997	$1,069	$1,083	**$1,706**	**$4,855**	**$3,422**	**$3,568**	**$3,714**	**$3,859**	**$14,563**	**$28,647**
Licenses	63	57	67	491	678	997	1,069	1,083	**1,706**	**4,855**	**3,422**	**3,568**	**3,714**	**3,859**	**14,563**	**28,647**
Grants	-	-	-	75	75	-	-	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
R&D	2,991	4,840	7,813	10,035	25,679	9,877	11,514	12,627	**12,753**	**46,771**	**12,346**	**10,132**	**8,839**	**8,927**	**40,245**	**35,983**
SG&A	1,346	1,909	2,451	3,131	8,837	2,946	3,059	2,896	**2,954**	**11,855**	**3,013**	**3,073**	**3,135**	**3,197**	**12,418**	**13,442**
Sublicense royalty obligations	514	1	-	15	530	10	8	10	**10**	**38**	**10**	**10**	**10**	**10**	**40**	**40**
Stock-based compensation	3,632	715	754	155	5,256	125	160	96	**97**	**478**	**98**	**99**	**100**	**101**	**398**	**414**
Total Operating Expenses	8,483	7,465	11,018	13,336	40,302	12,958	14,741	15,629	**15,814**	**59,142**	**15,467**	**13,314**	**12,084**	**12,236**	**53,101**	**49,879**
Operating Income	(8,420)	(7,408)	(10,951)	(12,770)	(39,549)	(11,961)	(13,672)	(14,546)	**(14,108)**	**(54,287)**	**(12,045)**	**(9,747)**	**(8,370)**	**(8,376)**	**(38,538)**	**(21,232)**
Interest Income	328	829	1,520	1,946	4,623	1,538	1,105	780	**764**	**4,187**	**749**	**734**	**719**	**705**	**2,908**	**2,682**
Interest Expense	(557)	(400)	(374)	(509)	(1,840)	(769)	(642)	(609)	**(594)**	**(2,614)**	**(579)**	**(564)**	**(550)**	**(537)**	**(2,230)**	**(2,016)**
Income Tax Benefit								2,574	**1,000**	**3,574**	**-**	**-**	**-**	**-**	**-**	**-**
Net Income*	(8,649)	(6,979)	(9,805)	(11,333)	(36,766)	(11,192)	(13,209)	(11,801)	**(12,937)**	**(49,139)**	**(11,875)**	**(9,577)**	**(8,201)**	**(8,208)**	**(37,860)**	**(20,565)**
Earnings Per Share	NM	NM	(0.49)	(0.50)	(1.91)	(0.49)	(0.58)	(0.52)	**(0.56)**	**(2.15)**	**(0.51)**	**(0.40)**	**(0.34)**	**(0.33)**	**(1.58)**	**(0.81)**
Diluted Shares	NM	NM	19,877	22,666	21,272	22,707	22,758	22,773	**23,115**	**22,838**	**23,461**	**23,813**	**24,170**	**24,533**	**23,994**	**25,467**
** Does not include preferred stock dividends and conversion of stock*																
Year-over-year Growth																
Total Revenues		-79%	12%	784%	11%	1483%	1775%	1516%	**201%**	**545%**	**243%**	**234%**	**243%**	**126%**	**200%**	**97%**
Licenses		90%	123%	809%	451%	1483%	1775%	1516%	**247%**	**616%**	**243%**	**234%**	**243%**	**126%**	**200%**	**97%**
Grants		-100%	-100%	650%	-87%	0%	0%	0%	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
R&D		326%	384%	317%	310%	230%	138%	62%	**27%**	**82%**	**25%**	**-12%**	**-30%**	**-30%**	**-14%**	**-11%**
SG&A		213%	210%	270%	226%	119%	60%	18%	**-6%**	**34%**	**2%**	**0%**	**8%**	**8%**	**5%**	**8%**
Total Operating Expenses		308%	272%	300%	313%	53%	97%	42%	**19%**	**47%**	**19%**	**-10%**	**-23%**	**-23%**	**-10%**	**-6%**
Operating Income		375%	277%	290%	336%	42%	-85%	-33%	**-10%**	**-37%**	**-1%**	**29%**	**42%**	**41%**	**29%**	**45%**
Interest Income		6808%	2392%	3792%	1631%	369%	33%	-49%	**-61%**	**-9%**	**-51%**	**-34%**	**-8%**	**-8%**	**-31%**	**-8%**
Interest Expense		242%	149%	93%	189%	38%	61%	63%	**17%**	**42%**	**-25%**	**-12%**	**-10%**	**-10%**	**-15%**	**-10%**
Net Income		343%	224%	183%	709%	-81%	31%	3%	**14%**	**-47%**	**6%**	**27%**	**31%**	**37%**	**23%**	**46%**
Earnings Per Share		315%	-42%	-65%	102%	NM	NM	-5%	**-12%**	**-13%**	**-3%**	**31%**	**35%**	**40%**	**27%**	**49%**
100% Income Statement	Q1 00	Q2 00	Q3 00	Q4 00	2000	Q1 01	Q2 01	Q3 01	**Q4 01E**	**2001E**	**Q1 02E**	**Q2 02E**	**Q3 02E**	**Q4 02E**	**2002E**	**2003E**
Total Revenues	100%	100%	100%	100%	100%	100%	100%	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Licenses	100%	100%	100%	87%	90%	100%	100%	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Grants	0%	0%	0%	13%	10%	0%	0%	0%	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
R&D	4748%	8491%	11661%	1773%	3410%	991%	1077%	1166%	**747%**	**963%**	**361%**	**284%**	**238%**	**231%**	**276%**	**126%**
SG&A	2137%	3349%	3658%	553%	1174%	295%	286%	267%	**173%**	**244%**	**88%**	**86%**	**84%**	**83%**	**85%**	**47%**
Sublicense royalty obligations	816%	2%	0%	3%	70%	1%	1%	1%	**1%**	**1%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
Stock-based compensation	5765%	1254%	1125%	27%	698%	13%	15%	9%	**6%**	**10%**	**3%**	**3%**	**3%**	**3%**	**3%**	**1%**
Total Operating Expenses	13465%	13096%	16445%	2356%	5352%	1300%	1379%	1443%	**927%**	**1218%**	**452%**	**373%**	**325%**	**317%**	**365%**	**174%**
Operating Income	-13365%	-12996%	-16345%	-2256%	-5252%	-1200%	-1279%	-1343%	**-827%**	**-1118%**	**-352%**	**-273%**	**-225%**	**-217%**	**-265%**	**-74%**
Interest Income	521%	1454%	2269%	344%	614%	154%	103%	72%	**45%**	**86%**	**22%**	**21%**	**19%**	**18%**	**20%**	**9%**
Interest Expense	-884%	-702%	-558%	-90%	-244%	-77%	-60%	-56%	**-35%**	**-54%**	**-17%**	**-16%**	**-15%**	**-14%**	**-15%**	**-7%**
Net Income	-13729%	-12244%	-14634%	-2002%	-4883%	-1123%	-1236%	-1090%	**-758%**	**-1012%**	**-347%**	**-268%**	**-221%**	**-213%**	**-260%**	**-72%**

Invitrogen Corporation (IVGN)

Price: $62 **Rating:** 2
Market Capitalization: $3.2 billion **Long-term EPS Growth Rate:** 25%

Invitrogen Corporation is a leading supplier of research biochemical kits, products, and services to the growing genomics, proteomics, and broader life-science markets, which we currently value at $4.2 billion and estimate to be growing 22% compounded annually. Invitrogen specializes in developing and supplying proprietary, easy-to-use, platform-independent molecular biology kits and tools that allow researchers more rapidly and reproducibly to conduct gene extraction, cloning (copying) and expression experiments, as well as protein analysis--all critical elements of functional genomics and proteomics research. This represents an attractive market subsegment that we estimate to be $525 million in 2001 and growing 23% compounded annually. Invitrogen's innovative product line, global presence, and infrastructure should help to produce at least 20% revenue growth excluding acquisitions and service revenue, leading to roughly 25% EPS growth. Revenue and earnings upside exist as a result of expected complementary and accretive acquisitions, such as the acquisitions of NOVEX, the leading supplier of precast electrophoresis gels and tools, Research Genetics, a leading supplier of genomic discovery tools and services, and most recently, Life Technologies, a leading supplier of molecular biology and cell culture tools used in life science, genomics, and proteomics research.

We believe that the reagents market for use in the life science market is highly attractive. Genomics, the applied study of genetic information, focuses on improving the manner in which drugs are discovered and developed, improving agricultural practices and results, and ensuring greater security with forensic applications. Genomics accomplishes this by deriving fundamental genetic information that can serve to direct research into gene function, such as functional genomics and proteomics.

Invitrogen is a leading company and well positioned to participate in this important, growing market. Invitrogen's broad product offering, complementary to other genomic technologies provided by companies such as Applied Biosystems and Celera Genomics Group, caters to most of the critical processes related to functional genomics and proteomics research. The company's core competencies lie in developing proprietary, technology-focused kit-based reagents that enable tremendous efficiencies and are easy to use. The company employs an aggressive technology licensing and development program to acquire, integrate, and leverage a large technology portfolio, yielding a tremendous array of differentiable, value-added, niche-filling products. A multipronged distribution strategy and an experienced management team round out Invitrogen's strengths.

Life Technologies acquisition greatly expands market presence. The sizable acquisition of Life Technologies by Invitrogen establishes the company as a genomics reagent supply giant, with an estimated pro forma $571 million in sales in 2000, roughly 5 times our original estimate for Invitrogen alone, at $116 million. We estimate total revenues will be approximately $630 million in 2001. The complementary nature of Life Technologies' products is anchored by a market-leading position in cell culture media, which accounted for $208 million, and molecular biology reagents, which accounted for $202 million of the company's revenues in 1999. While the growth media market is large and represents a substantial cash cow, historical revenue growth of 4-6% has been slower than the 25% growth of Invitrogen's molecular biology products. However, Invitrogen now expects the cell culture media business to grow 10% year over year, due to the company's ability to package proprietary reagents into kit form.

We expect the company to achieve nearly 20% EPS growth for the near term. With the conservative cost and revenue upside that we believe is likely, Invitrogen should be able to achieve sustainable cash EPS growth of 16% in 2002 and more than 20% in 2003. We expect annual revenue growth of 16% in 2002 to accelerate to 19% in 2003. We expect this revenue growth to be driven by three major product segments--gene cloning, gene identification, and gene product analysis.

Table 25
Invitrogen Corporation (IVGN)
Earnings Model
($ in thousands)

FYE Dec. 31	Q1 00	Q2 00	Q3 00	Q4 00	2000	Q1 01	Q2 01	Q3 01	Q4 01E	2001E	Q1 02E	Q2 02E	Q3 02E	Q4 02E	2002E	2003E
Net sales	$27,286	$27,692	$47,989	$143,200	$246,167	$160,702	$159,327	$156,005	**$152,784**	**$628,818**	**$188,031**	**$184,794**	**$181,043**	**$177,462**	**$731,331**	**$866,667**
Molecular Biology	NA	NA	NA	$92,800	NA	$107,191	$103,213	$101,612	**$100,360**	**$412,376**	**$131,309**	**$126,436**	**$124,475**	**$122,941**	**$505,161**	**$631,451**
Cell Culture Media	NA	NA	NA	$50,400	NA	$53,511	$56,114	$54,393	**$52,424**	**$216,442**	**$56,722**	**$58,359**	**$56,569**	**$54,521**	**$226,170**	**$235,217**
Cost of Sales	9,090	8,864	19,550	66,856	104,360	73,275	72,179	68,382	**69,067**	**282,903**	**80,364**	**79,608**	**77,847**	**76,084**	**313,903**	**357,804**
Gross Profit	18,196	18,828	28,439	76,344	141,807	87,427	87,148	87,623	**83,717**	**345,915**	**107,667**	**105,186**	**103,197**	**101,378**	**417,427**	**508,863**
Sales and Marketing	4,778	5,512	8,727	27,247	46,264	29,235	26,654	27,393	**27,807**	**111,089**	**36,666**	**36,035**	**35,303**	**34,605**	**142,609**	**169,000**
General and administrative	3,595	3,482	4,827	14,680	26,584	15,075	15,226	19,416	**17,745**	**67,462**	**18,914**	**18,600**	**18,236**	**17,889**	**73,639**	**84,067**
Research and development	3,521	3,772	5,244	10,925	23,462	10,189	9,825	9,081	**9,650**	**38,745**	**12,598**	**12,381**	**12,130**	**11,890**	**48,999**	**60,667**
Total operating expense	11,894	12,766	18,798	52,852	96,310	54,499	51,705	55,890	**55,202**	**217,296**	**68,178**	**67,016**	**65,670**	**64,384**	**265,248**	**313,734**
Operating Income	6,302	6,062	9,641	23,492	45,497	32,928	35,443	31,733	**28,515**	**128,619**	**39,489**	**38,170**	**37,527**	**36,994**	**152,180**	**195,129**
Other income (expense)	-	-	-	-												
Gain on foreign currency transactions	(157)	171	(370)	-	(356)	-	-	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest expense	(1,036)	(2,633)	(2,683)	(2,619)	(8,971)	(2,641)	(2,727)	(2,625)	**(2,664)**	**(10,657)**	**(2,672)**	**(2,654)**	**(2,663)**	**(2,663)**	**(10,652)**	**(10,646)**
Interest and other income	2,005	4,131	5,428	10,525	22,089	6,832	6,876	5,654	**6,208**	**25,570**	**6,808**	**6,808**	**6,808**	**6,808**	**27,233**	**24,000**
Total other income (expense)	812	1,669	2,375	7,906	12,762	4,191	4,149	3,029	**3,544**	**14,913**	**4,136**	**4,155**	**4,145**	**4,145**	**16,581**	**13,354**
Earnings before taxes	7,114	7,731	12,016	31,398	58,259	37,119	39,592	34,762	**32,059**	**143,532**	**43,625**	**42,325**	**41,672**	**41,139**	**168,761**	**208,484**
Provision for income taxes (benefit)	2,611	2,880	4,123	8,684	18,298	12,797	13,613	11,886	**11,060**	**49,356**	**15,051**	**14,602**	**14,377**	**14,193**	**58,222**	**71,927**
Net income before minority interest	4,503	4,851	7,893	22,714	39,961	24,322	25,979	22,876	**20,999**	**94,176**	**28,574**	**27,723**	**27,295**	**26,946**	**110,538**	**136,557**
Minority interest			60	244	304	312	443	225	**250**	**1,230**	**250**	**250**	**250**	**250**	**1,000**	**1,000**
Net Income	4,503	4,851	7,833	22,470	$39,657	24,010	25,536	22,651	**20,749**	**$92,946**	**28,324**	**27,473**	**27,045**	**26,696**	**$109,538**	**$135,557**
Diluted EPS	$0.18	$0.19	$0.26	$0.42	$1.18	$0.45	$0.47	$0.42	**$0.38**	**$1.73**	**$0.52**	**$0.50**	**$0.49**	**$0.48**	**$2.00**	**$2.43**
Shares outstanding diluted	25,250	25,282	30,612	53,399	33,636	53,701	53,812	53,804	**54,073**	**53,848**	**54,343**	**54,615**	**54,888**	**55,163**	**54,752**	**55,856**
Year-over-year Growth																
Net sales	NM	NM	NM	7%	NM	489%	475%	225%	**6.7%**	**155%**	**17.0%**	**16.0%**	**16.0%**	**16.2%**	**16%**	**19%**
Gross Profit	NM	NM	NM	9%	NM	380%	363%	208%	**9.7%**	**144%**	**23.2%**	**20.7%**	**17.8%**	**21.1%**	**21%**	**22%**
Operating income	NM	NM	NM	-276%	NM	423%	485%	229%	**21.4%**	**183%**	**19.9%**	**7.7%**	**18.3%**	**29.7%**	**18%**	**28%**
Net income	NM	NM	NM	-208%	NM	433%	426%	189%	**-7.7%**	**134%**	**18.0%**	**6.7%**	**19.3%**	**28.3%**	**18%**	**24%**
EPS	NM	NM	NM	NM	NM	151%	147%	65%	**-8.8%**	**46%**	**16.6%**	**6.0%**	**17.0%**	**26.1%**	**16%**	**21%**
100% Income Statement	Q1 00	Q2 00	Q3 00	Q4 00	2000	Q1 01	Q2 01	Q3 01	**Q4 01E**	**2001E**	**Q1 02E**	**Q2 02E**	**Q3 02E**	**Q4 02E**	**2002E**	**2003E**
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Cost of Sales	33.3%	32.0%	40.7%	46.7%	42.4%	45.6%	45.3%	43.8%	**45.2%**	**45.0%**	**42.7%**	**43.1%**	**43.0%**	**42.9%**	**42.9%**	**41.3%**
Gross Profit	66.7%	68.0%	59.3%	53.3%	57.6%	54.4%	54.7%	56.2%	**54.8%**	**55.0%**	**57.3%**	**56.9%**	**57.0%**	**57.1%**	**57.1%**	**58.7%**
Sales and Marketing	17.5%	19.9%	18.2%	19.0%	18.8%	18.2%	16.7%	17.6%	**18.2%**	**17.7%**	**19.5%**	**19.5%**	**19.5%**	**19.5%**	**19.5%**	**19.5%**
General and administrative	13.2%	12.6%	10.1%	10.3%	10.8%	9.4%	9.6%	12.4%	**11.6%**	**10.7%**	**10.1%**	**10.1%**	**10.1%**	**10.1%**	**10.1%**	**9.7%**
Research and development	12.9%	13.6%	10.9%	7.6%	9.5%	6.3%	6.2%	5.8%	**6.3%**	**6.2%**	**6.7%**	**6.7%**	**6.7%**	**6.7%**	**6.7%**	**7.0%**
Total operating expense	43.6%	46.1%	39.2%	36.9%	39.1%	33.9%	32.5%	35.8%	**36.1%**	**34.6%**	**36.3%**	**36.3%**	**36.3%**	**36.3%**	**36.3%**	**36.2%**
Operating Income	23.1%	21.9%	20.1%	16.4%	18.5%	20.5%	22.2%	20.3%	**18.7%**	**20.5%**	**21.0%**	**20.7%**	**20.7%**	**20.8%**	**20.8%**	**22.5%**
Other income (expense)																
Gain on foreign currency transactions	-0.6%	0.6%	-0.8%	0.0%	-0.1%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Interest expense	-3.8%	-9.5%	-5.6%	-1.8%	-3.6%	-1.6%	-1.7%	-1.7%	**-1.7%**	**-1.7%**	**-1.4%**	**-1.4%**	**-1.5%**	**-1.5%**	**-1.5%**	**-1.2%**
Interest and other income	7.3%	14.9%	11.3%	7.3%	9.0%	4.3%	4.3%	3.6%	**4.1%**	**4.1%**	**3.6%**	**3.7%**	**3.8%**	**3.8%**	**3.7%**	**2.8%**
Total other income (expense)	3.0%	6.0%	4.9%	5.5%	5.2%	2.6%	2.6%	1.9%	**2.3%**	**2.4%**	**2.2%**	**2.2%**	**2.3%**	**2.3%**	**2.3%**	**1.5%**
Income before provision for income taxes and minority interest	26.1%	27.9%	25.0%	21.9%	23.7%	23.1%	24.8%	22.3%	**21.0%**	**22.8%**	**23.2%**	**22.9%**	**23.0%**	**23.2%**	**23.1%**	**24.1%**
Provision for income taxes	36.7%	37.3%	34.3%	27.7%	31.4%	34.5%	34.4%	34.2%	**34.5%**	**34.4%**	**34.5%**	**34.5%**	**34.5%**	**34.5%**	**34.5%**	**34.5%**
Net income before minority interest	16.5%	17.5%	16.4%	15.9%	16.2%	15.1%	16.3%	14.7%	**13.7%**	**15.0%**	**15.2%**	**15.0%**	**15.1%**	**15.2%**	**15.1%**	**15.8%**
Minority interest			0.1%	0.2%	0.1%	0.2%	0.3%	0.1%	**0.2%**	**0.2%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**
Net Income	16.5%	17.5%	16.3%	15.7%	16.1%	14.9%	16.0%	14.5%	**13.6%**	**14.8%**	**15.1%**	**14.9%**	**14.9%**	**15.0%**	**15.0%**	**15.6%**

Large Scale Biology Corporation (LSBC)

Price: $3.46 **Rating:** 1
Market Capitalization: $85 million **Long-term EPS Growth Rate:** 40%

Large Scale Biology is a developmental-stage leader in proteomics, which we believe is one of the most promising market segments in the genomics-driven drug discovery value chain. LSB's proprietary ProGEx™ system provides an automated, high-throughput snapshot of the protein composition, or proteome, of cells and tissues, which is used to rapidly identify and quantify proteins, yielding proteomics databases such as the Human Protein Index. In addition, the company's GENEWARE™ technology is a proprietary, automated functional genomics technology for rapidly inserting genes into organisms for gene discovery and gene analysis. The company's customers and collaborators have included Pfizer, GlaxoSmithKline, Eli Lilly, Genentech, Novartis, Incyte Genomics, Gemini (now owned by Sequenom), Biosite, Procter & Gamble, and Dow AgroSciences. We view Large Scale Biology as having substantial, potential medical and economic value as a result of its proprietary position.

Large Scale Biology's products are poised to capitalize on the growing importance of proteomics. Understanding the behavior and function of proteins, the predominant structural and working molecules in the body, is essential to understanding disease. Proteins, not genes, are the targets for nearly all commercially successful, small-molecule drugs, and the blockbuster biotech therapies—Nutropin, Activase, EPO, and Neupogen—are themselves proteins. The ProGEx™ platform should enable pharmaceutical researchers to elucidate rapidly and reproducibly the changes that diseases and drug candidates cause proteins, paving the way for the discovery of novel therapeutic agents. Having identified candidate drug targets or therapeutic proteins, GENEWARE®, the company's bioprocessing technology, also permits the production of therapeutic-grade proteins in half the time required and at a lower cost than by conventional techniques, yielding valuable time and cost savings in the drug-discovery race.

Large Scale Biology's suite of powerful technologies facilitates the industrial scale analysis and production of proteins. We believe that the company's ProGEx™ platform overcomes many of the limitations of traditional proteomics analyses, integrating a series of proprietary technologies and methods to enable the quantitative, scalable, and reproducible analysis of proteins. The company's molecular anatomy and pathology (MAP), molecular effects of drugs (MED), and HPI databases should aggregate data on the expression of proteins in normal and diseased settings, as well as data concerning changes in protein expression resulting from the administration of drugs, valuable resources in the biotechnology, pharmaceutical, and other industries. The company's proprietary bioinformatics software platform, KEPLER, should provide efficient access and powerful analysis of the databases and other proteomics experiments. Lastly, novel proteins identified by Large Scale Biology have the potential to be used as therapeutic proteins or medical diagnostic markers.

Large Scale Biology is already a leader in providing proteomics products and services. In 2001, the company announced an exciting collaboration with Biosite to develop antibodies for 2,000-5,000 proteins for use in protein chips, therapeutics, and diagnostics. Although the collaboration is currently suspended pending the resolution of Biosite's dispute with XOMA, we believe there is significant upside from this project. A key advantage of this collaboration is the combination of superior technologies to create a platform with the highest throughput and quality. We believe Large Scale Biology provides the highest throughput and resolution discovery process for protein targets or markers using its ProGEx™ system, and that Biosite provides the highest throughput of high-specificity and high-affinity antibodies using their Omniclonal technology. We believe LSBC and BSTE will work together on specific products for diagnostic applications, based on Biosite's assumption of the legal risk involved. Large Scale Biology has 10 issued U.S. patents for proteomic equipment, process, and purification, as well as an additional 10 issued U.S. patents related to gene expression for functional genomics and protein manufacturing.

Table 26
Large Scale Biology Corporation (LSBC)
Earnings Model
($ in thousands)

FYE Dec 31	1Q00	2Q00	3Q00	4Q00	2000	1Q01	2Q01	3Q01	4Q01E	2001E	2002E	2003E
Genomics	4,675	4,801	6,247	4,276	19,999	5,200	5,284	4,600	**250**	**15,334**	**10,988**	**12,097**
Proteomics	954	803	91	1,443	3,291	781	659	529	**555**	**2,524**	**6,070**	**11,500**
Other	-	-	-	-	-	-	-	-	**-**	**-**	**5,905**	**14,467**
Revenues	5,629	5,604	6,338	5,719	23,290	5,981	5,943	5,129	**805**	**17,859**	**22,963**	**38,064**
Development agreements	2,023	1,821	2,561	1,710	8,115	1,435	1,100	681	**222**	**3,438**	**5,349**	**7,161**
R&D	3,623	4,112	3,743	4,725	16,203	4,808	5,774	5,794	**4,961**	**21,337**	**20,911**	**21,120**
SG&A	1,611	1,584	2,405	2,687	8,287	3,003	3,482	3,781	**2,821**	**13,087**	**12,433**	**13,055**
Amortization & purchased R&D	222	325	325	325	1,197	325	325	325	**325**	**1,300**	**1,300**	**1,300**
Operating expense	7,479	7,842	9,034	9,447	33,802	9,571	10,681	10,581	**8,330**	**39,163**	**39,992**	**42,635**
Operating income	(1,850)	(2,238)	(2,696)	(3,728)	(10,512)	(3,590)	(4,738)	(5,452)	**(7,524)**	**(21,304)**	**(17,029)**	**(4,571)**
Other income	350	743	666	1,467	3,226	1,198	861	651	**602**	**3,312**	**1,990**	**1,457**
Net loss from operation before provision for income taxes	(1,500)	(1,495)	(2,030)	(2,261)	(7,286)	(2,392)	(3,877)	(4,801)	**(6,922)**	**(17,992)**	**(15,040)**	**(3,114)**
Provision for income taxes	-	-	-	-	-	-	-	-	**-**	**-**	**-**	**(825)**
Net loss	(1,500)	(1,495)	(2,030)	(2,261)	(7,286)	(2,392)	(3,877)	(4,801)	**(6,922)**	**(17,992)**	**(15,040)**	**(3,939)**
EPS	(0.16)	(0.16)	(0.11)	(0.09)	(0.48)	(0.10)	(0.16)	(0.20)	**(0.28)**	**(0.73)**	**(0.61)**	**(0.16)**
Average shares outstanding	9,334	9,417	17,749	24,379	15,252	24,501	24,526	24,573	**24,598**	**24,549**	**24,659**	**24,758**
Year-over-year Growth												
Revenue	113.1%	60.6%	54.8%	-2.5%	44.7%	6.3%	6.1%	-19.1%	**-85.9%**	**-23.3%**	**28.6%**	**65.8%**
Operating Expense	-71.3%	8.3%	38.2%	33.4%	-27.9%	28.0%	36.2%	17.1%	**-11.8%**	**15.9%**	**2.1%**	**6.6%**
Net Loss	93.5%	45.6%	23.1%	-105.4%	75.4%	-59.5%	-159.2%	-136.5%	**-206.2%**	**-146.9%**	**16.4%**	**73.8%**
100% Income Statement	**1Q00**	**2Q00**	**3Q00**	**4Q00**	**2000**	**1Q01**	**2Q01**	**3Q01**	**4Q01E**	**2001E**	**2002E**	**2003E**
Genomics	83.1%	85.7%	98.6%	74.8%	85.9%	86.9%	88.9%	89.7%	**31.0%**	**85.9%**	**47.8%**	**31.8%**
Proteomics	16.9%	14.3%	1.4%	25.2%	14.1%	13.1%	11.1%	10.3%	**69.0%**	**14.1%**	**26.4%**	**30.2%**
Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**25.7%**	**38.0%**
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Development agreements	35.9%	32.5%	40.4%	29.9%	34.8%	24.0%	18.5%	13.3%	**27.6%**	**19.3%**	**23.3%**	**18.8%**
R&D	64.4%	73.4%	59.1%	82.6%	69.6%	80.4%	97.1%	113.0%	**616.0%**	**119.5%**	**91.1%**	**55.5%**
SG&A	28.6%	28.3%	37.9%	47.0%	35.6%	50.2%	58.6%	73.7%	**350.3%**	**73.3%**	**54.1%**	**34.3%**
Amortization & purchased R&D	3.9%	5.8%	5.1%	5.7%	5.1%	5.4%	5.5%	6.3%	**40.4%**	**7.3%**	**5.7%**	**3.4%**
Operating expense	132.9%	139.9%	142.5%	165.2%	145.1%	160.0%	179.7%	206.3%	**1034.2%**	**219.3%**	**174.2%**	**112.0%**
Operating income	-32.9%	-39.9%	-42.5%	-65.2%	-45.1%	-60.0%	-79.7%	-106.3%	**-934.2%**	**-119.3%**	**-74.2%**	**-12.0%**
Litigation settlements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Loss from operations	-32.9%	-39.9%	-42.5%	-65.2%	-45.1%	-60.0%	-79.7%	-106.3%	**-934.2%**	**-119.3%**	**-74.2%**	**-12.0%**
Other income	6.2%	13.3%	10.5%	25.7%	13.9%	20.0%	14.5%	12.7%	**74.8%**	**18.5%**	**8.7%**	**3.8%**
Net loss from operation before provision for income taxes	-26.6%	-26.7%	-32.0%	-39.5%	-31.3%	-40.0%	-65.2%	-93.6%	**-859.4%**	**-100.7%**	**-65.5%**	**-8.2%**
Provision for income taxes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**	**0.0%**	**0.0%**	**26.5%**
Net loss	-26.6%	-26.7%	-32.0%	-39.5%	-31.3%	-40.0%	-65.2%	-93.6%	**-859.4%**	**-100.7%**	**-65.5%**	**-10.3%**

Sangamo BioSciences, Inc. (SGMO)

Price: $8.01 **Rating:** 1
Market Capitalization: $179 million **Long-term EPS Growth Rate:** 40%

Sangamo is a leading supplier of functional genomics tools, through its zinc finger protein (ZFP) transcription factors, which enable flexible regulation of gene expression that aids in the control and elucidation of gene function. ZFPs produced by Sangamo can be used to identify gene function, validate the gene and the proteins it produces as useful drug targets, and help to screen and optimize potential drug candidates against these targets. Furthermore, it appears that ZFP transcription factors can be used for therapeutic approaches using a patient's own genes, as well as for industrial-scale production of proteins. We believe that the company's technology also offers significant advantages such as the ability to reversibly increase or decrease the expression of a gene. We view Sangamo as having substantial, long-term, potential medical and economic value as a result of its gene-regulation tools and products, which should appeal to investors interested in high-quality, genomics companies.

The potential market for functional genomics tools is large and likely to grow rapidly. Genomics should revolutionize pharmaceutical and life science research with the full human genome completed, 30,000 genes and up to 250,000 new proteins should be identified. Ascribing functional information and regulating the effect of these genes-whether by traditional drug approaches or gene therapy-should create substantial economic value.

The ZFP technology from Sangamo fits into crucial segments of the genomics value chain. Sangamo's ZFPs allow researchers to rapidly discover and develop new drug candidates, a process that involves: 1) identifying new drug targets; 2) producing libraries of potential drugs; and 3) screening libraries against the targets to produce lead drug candidates, which are then optimized, put through clinical trials, and if successful, manufactured and used clinically. The company's ZFP technology appears quite powerful in the steps to identify potential drug candidates and may even be a therapy itself. In addition, it appears to be useful in manufacturing protein-based therapies.

We believe that Sangamo's ZFP technology provide numerous, significant advantages over other approaches in these crucial segments. The advantages of ZFPs over approaches that either only insert new genes or only stop gene function appear to be that ZFPs: 1) can turn the expression level of genes either up or down; 2) can make the effects reversible or inducible by taking another drug, in an on/off fashion; 3) can be used in cases where eliminating a gene early in development would otherwise be lethal; and 4) are substantially faster than other approaches, such as knockout mice, to develop. Furthermore, the ZFP transcription factors appear to be quite specific-recognize single-letter changes in DNA; appear to be able to work not just on single genes when desired, but also designed to recognize gene families; and are chemically and functionally robust. Lastly, ZFPs work with patient's or organism's own (native) genes, thus obviating the need and eliminating the risks involved in introducing foreign genes, as well as potentially removing intellectual property barriers caused by gene sequence patents.

The financial potential for selling or licensing ZFPs seems economically compelling. Sangamo's acquisition of Gendaq, the only other company broadly engaged in ZFPs, should enhance its overwhelming leadership through 16 extra scientific experts in this field and the intellectual property of 24 patent applications that it has acquired. We anticipate the company will achieve a three-year compounded annual revenue growth of approximately 85%, increasing to $13 million in 2002 from $2 million in 1999 as a result of existing and future collaborations. With tens of thousands of newly discovered genes with unknown functions, the use of these ZFP transcription factors in functional genomics alone should provide a compelling business case. Moreover, the use of these products as potential therapeutics appears to provide considerable upside.

Table 27
Sangamo BioSciences, Inc. (SGMO)
Earnings Model
($ in thousands)

FYE Dec. 31	1Q00	2Q00	3Q00	4Q00	2000	1Q01	2Q01E	3Q01E	4Q01E	2001E	1Q02E	2Q02E	3Q02E	4Q02E	2002E	2003E
Net Revenues	$807	$747	$823	$1,056	$3,433	$634	$1,348	$739	**$2,192**	**$4,913**	**$2,619**	**$2,943**	**$3,593**	**$4,208**	**$13,363**	**$26,262**
SG&A	371	595	775	861	2,602	644	854	987	**1,066**	**3,551**	**1,044**	**1,127**	**1,179**	**1,365**	**4,714**	**6,966**
R&D	1,343	1,738	1,896	2,435	7,412	2,210	3,050	3,892	**4,203**	**13,355**	**3,990**	**4,135**	**4,573**	**4,735**	**17,433**	**22,330**
Total Operating Expenses	1,714	2,333	2,671	3,296	10,014	2,854	3,904	4,879	**5,269**	**16,906**	**5,034**	**5,262**	**5,752**	**6,100**	**22,147**	**29,296**
Operating Profit (Loss)	(907)	(1,586)	(1,848)	(2,240)	(6,581)	(2,220)	(2,556)	(4,140)	**(3,077)**	**(11,993)**	**(2,415)**	**(2,319)**	**(2,159)**	**(1,892)**	**(8,784)**	**(3,034)**
Net Interest Income	70	945	1,287	1,074	3,376	961	841	783	**895**	**3,480**	**860**	**826**	**792**	**758**	**3,236**	**3,065**
Income before Taxes	(837)	(641)	(561)	(1,166)	(3,205)	(1,259)	(1,715)	(3,357)	**(2,183)**	**(8,514)**	**(1,555)**	**(1,494)**	**(1,367)**	**(1,133)**	**(5,548)**	**31**
Provision for Taxes	-	-	-	-	-	-	-	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**406**
Net Loss	($837)	($641)	($561)	($1,166)	($3,205)	($1,259)	($1,715)	($3,357)	**($2,183)**	**($8,514)**	**($1,555)**	**($1,494)**	**($1,367)**	**($1,133)**	**(5,548)**	**(375)**
Shares	5,947	20,800	21,809	21,690	17,383	22,078	22,162	24,320	**24,381**	**23,235**	**24,442**	**24,503**	**24,564**	**24,626**	**24,534**	**24,780**
EPS	($0.14)	($0.03)	($0.03)	($0.05)	($0.18)	($0.06)	($0.08)	($0.14)	**($0.09)**	**($0.37)**	**($0.06)**	**($0.06)**	**($0.06)**	**($0.05)**	**($0.23)**	**($0.02)**
Year-over-year Growth																
Revenue						-21%	80%	-10%	**108%**	**43%**	**313%**	**118%**	**386%**	**92%**	**172%**	**97%**
SG&A						74%	44%	27%	**24%**	**36%**	**62%**	**32%**	**19%**	**28%**	**33%**	**48%**
R&D						65%	75%	105%	**73%**	**80%**	**81%**	**36%**	**18%**	**13%**	**31%**	**28%**
100% Income Statement	**1Q00**	**2Q00**	**3Q00**	**4Q00**	**2000**	**1Q01**	**2Q01**	**3Q01**	**4Q01E**	**2001E**	**1Q02E**	**2Q02E**	**3Q02E**	**4Q02E**	**2002E**	**2002E**
Net Revenues	100%	100%	100%	100%	100%	100%	100%	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
SG&A	46%	80%	94%	82%	76%	102%	63%	134%	**49%**	**72%**	**40%**	**38%**	**33%**	**32%**	**35%**	**27%**
R&D	166%	233%	230%	231%	216%	349%	226%	527%	**192%**	**272%**	**152%**	**141%**	**127%**	**113%**	**130%**	**85%**
Total Operating Expenses	212%	312%	325%	312%	292%	450%	290%	660%	**240%**	**344%**	**192%**	**179%**	**160%**	**145%**	**166%**	**112%**
Operating Profit (Loss)	-112%	-212%	-225%	-212%	-192%	-350%	-190%	-560%	**-140%**	**-244%**	**-92%**	**-79%**	**-60%**	**-45%**	**-66%**	**-12%**
Net Interest Income	9%	127%	156%	102%	98%	152%	62%	106%	**41%**	**71%**	**33%**	**28%**	**22%**	**18%**	**24%**	**12%**
Income before Taxes	-104%	-86%	-68%	-110%	-93%	-199%	-127%	-454%	**-100%**	**-173%**	**-59%**	**-51%**	**-38%**	**-27%**	**-42%**	**0%**
Provision for Taxes (%EBT)	0%	0%	0%	0%	0%	0%	0%	0%	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**NM**
Net Income	-104%	-86%	-68%	-110%	-93%	-199%	-127%	-454%	**-100%**	**-173%**	**-59%**	**-51%**	**-38%**	**-27%**	**-42%**	**-1%**