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<b>New Rec: Incyte Pharma.</b>	<b>(INCY: \$135)</b>	<b>February 6, 2000</b>
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**Position: Sell      Target: \$60      Timing: 2 (1=aggressive; 5=cautious)**

000 \$	4Q99a	1Q00e	2Q00e	3Q00e	4Q00e	2000e	2001e	2002e
<b>Revs</b>	46024	43639	45492	44857	44716	178704	171722	128264
<b>EPS\$</b>	-0.22	-0.55	-0.55	-0.49	-0.37	-1.95	-1.56	-0.89
<b>Growth</b>						n/a	n/a	n/a
<b>PE</b>						n/a	n/a	n/a
<b>PSR</b>						20	21	28
<b>Consens</b>		-0.66	-0.55	-0.32	0.06	-1.45	0.15	0.64

**Shares Out: 28.5 M**

**Mkt. Cap: \$3.85 B**

**FYE: Dec**

Summary: Incyte was an early leader in the gene database business. By investing aggressively in the mid 1990s in the sequencing of ESTs (expressed sequence tags – fragments of DNA sequences), INCY built up the world's largest EST database. ESTs are used to identify therapeutic targets for drug development. With a lead over other public and private sequencing projects, Incyte was able to provide valuable information from its LifeSeq Gold database to large pharmaceutical companies hoping to accelerate their drug development efforts.

The future value of Incyte's LifeSeq Gold database is limited, in our view.

LifeSeq Gold, Incyte's key revenue driver, will soon lose significant market share. By the end of 2002, the human genome will be fully sequenced and publicly available at no cost, making the value of Incyte's LifeSeq Gold database negligible. Moreover, Celera Genomics is offering a competitive product with more data and better search capabilities. Even today, Incyte's subscribers turn first to the public databases. They access LifeSeq Gold as a last resort, thereby avoiding future royalty payments to Incyte.

Because the value of its core product should decline precipitously after 2000, when nearly everything LifeSeq Gold has to offer can be had for less money elsewhere, Incyte is scrambling to develop new database products it can sell to replace this revenue stream. Unfortunately, patent problems and competition are likely to derail these efforts. LifeExpress, a gene expression database, is threatened by worrisome patent litigation with Affymetrix that may prevent it from ever generating significant revenue. This database also faces formidable competition from Gene Logic's gene expression database generated using Affymetrix' GeneChips. The SNP (single nucleotide polymorphism) database faces even more competition, with Celera, CuraGen, Genset, Gene Logic, and the Wellcome Trust-led SNP Consortium already in the market.

As a result, while we expect several new LifeSeq Gold deals to generate about 14% database revenue growth in 2000, we do not expect any significant new revenue generators to appear in 2000. Furthermore, we foresee no growth in database revenue for 2001, and in fact we expect database revenue to decline in 2001 because of a lack of license renewals. When the fully sequenced human genome becomes available to the public in 2002, license renewals should end and usage of the LifeSeq database should plunge.

Investors began to see signs of the company's weakness in 1999. By that time, the majority of big pharmaceutical companies had either become Incyte subscribers, or had chosen other routes to enter the genomics arena. As a result, Incyte gained no new customers from October 1998 to October 1999. The company had to revise down its earnings projections twice in 1999. Database revenue in Q4 1999 (excluding an estimated \$5 M upfront payment from Pfizer) was only 7% higher than revenue in Q4 1998. Even including the Pfizer payment, the company lost \$0.22 in Q4 99 versus earnings of \$0.05 in Q4 1998. The problem is clear: as more information is made available by the Human Genome Project and by Celera, the value of Incyte's databases is diminishing. Database revenue per agreement seems to have declined by 6% from Q4 98 to Q4 99, by our estimate.

While Incyte waits for revenue from its new databases to kick in, it appears that the company has changed its business model in an effort to keep generating revenue from its current products. Where before customers paid multi-year license fees in advance, we think that Incyte is now offering its database service on a pay-as-you-go basis with one year agreements. As a result, Incyte picked up two new customers, Millennium in October and Biogen in January . It also expanded its deal with Bayer in January, but the deal appears to be limited in scope and duration, and thus should provide lower than usual total fees. The new

revenue model is evidence of the weakening position of Incyte in the database market. The new model reduces revenue per deal, generates higher accounts receivable, and reduces revenue visibility. We think that new users will utilize the data for shorter periods of time than in the past, and that the LifeSeq Gold database will continue to lose value.

Incyte is also attempting to improve its prospects by developing and patenting full-length genes sequences. It is gambling that these patents, if allowed, will have value. In this effort, Incyte is racing against Celera and the Human Genome Project. There are several problems with this approach. First, Incyte will have trouble choosing what gene sequences to file, and may be unable to file them before they appear in the public domain. Second, if and when these patents issue, they will most likely be composition of matter patents providing only tools for other discovery efforts and offering little royalty potential. Third, these patents are likely to encounter significant litigation from others claiming the same sequences. They will be expensive to maintain and prosecute. Finally, it is likely that these patents (particularly EST patents) will be slow in issuing. Therefore, discoveries using the sequences may be made long before the patents actually issue. Since the patents cannot be enforced until they issue, it will be difficult for Incyte to collect royalties, except perhaps from direct database subscribers. However, even these subscribers are avoiding royalties by using sequences from the public databases wherever possible. In the end, the patenting of gene sequences and of genes is unlikely to help Incyte any time soon, since royalties from drugs utilizing these discoveries will not likely begin for seven years or more.

“Street” analysts expect database revenues to increase by 15% in 2000 and by 20% in 2001. Although we expect 14% growth in database revenues in 2000, due to a few new deals, we expect a decline of 4% in 2001. The big surprise to investors in 2000, however, will be the failure of LifeExpress to gain paying subscribers. As investors realize that revenues from the LifeExpress database are not going to materialize to replace LifeSeq Gold in 2001 and beyond, and as they see LifeSeq Gold license renewals for less money and for shorter terms, we expect them to sell their shares.

“Street” analysts expect microarray revenues to increase by 25% in 2000, and 16% in 2001. We think microarray revenues will be flat in 2000, and will decline 45% in 2001 when Incyte could lose its patent battle with Affymetrix. “Street” analysts expect reagent revenues to increase 62% in 2000, and 36% in 2001. We expect more modest growth of 45% in 2000, and 30% in 2001, but note that this business generates margins of only about 15%. Finally, analysts project other revenue to increase 66% in 2000 and 16% in 2001. We can find no reason why these revenues, which are mostly bioinformatics software and contract sequencing, should change at all, and have kept them nearly flat going forward.

Overall, we expect Incyte to increase its total revenues by only 14% in 2000 and to decline by 4% in 2001 and by 25% in 2002, versus the 22%, 21%, and 22% increases expected by the “street”. We expect EPS of (\$1.95) in 2000,

(\$1.56) in 2001, and (\$0.89) in 2002, versus the (\$1.45), \$0.15, and \$0.64 expected by the “street.”

Discussion:

#### I. Database Business:

Database subscriptions and partnerships generated 80% of Incyte’s revenue in 1999, and grew 19% year-over-year. Incyte bulls see existing products maintaining their value, and expect new products to generate accelerating revenues. We think Incyte’s core product (LifeSeq Gold) is rapidly losing value, and that new products (LifeExpress and a SNP database) will fail to pick up the slack. We think LifeExpress will not be a significant source of revenue due to patent problems. The SNP database may generate revenue, but it faces significant competition that will lower revenue and the number of customers using the product.

As we detail below, database revenue in the past two quarters suggests Incyte has already cut prices for its existing data offerings. We expect these cuts to continue into 2000 and beyond. With reduced prices, even if Incyte is successful in signing several more deals, it will likely experience decelerating database revenues in 2000. The company lost one subscriber in 1999, and may lose more in 2000. Moreover, at least six Incyte customers will complete mergers in 2000, reducing the number of revenue sources even if no other customers cancel. As a result, while the “street” projects 15% and 20% year-over-year increases in database revenues in 2000 and 2001, we expect only a 14% increase in 2000 and a 4% decrease in 2001.

LifeSeq Gold:

1. Since 1994, Incyte has been a leader in the gene database field. Its LifeSeq Gold database offers the world’s largest collection of ESTs (expressed sequence tags). ESTs are short fragments of DNA sequences that represent a snapshot of the genes expressed in a given tissue, and/or at a given developmental stage. While they are incomplete and inaccurate, in the absence of a complete sequence of the human genome, ESTs have been useful to scientists. They are used to identify therapeutic targets for drug development, to develop diagnostics, and to study the pharmacology and toxicology of existing drugs.

By aggressively investing in EST sequencing in the mid 1990s, Incyte built up a virtual monopoly in the genetic database business. From 1994-1998, it signed up over 20 large pharmaceutical companies who paid to access its information. With a significant lead over other public and private sequencing efforts, Incyte could provide value with its 3 million “Incyte-proprietary” ESTs and 50,000 genes “exclusive to Incyte.” Database users paid Incyte for access to this information to gain valuable lead time in their development efforts.

In 1999, problems began to appear. With no new customers from October 1998 to October 1999, it seemed that Incyte had saturated the market for its data

among large pharmaceutical companies. It also failed to generate subscriptions from biotechnology companies and academic groups, who could have provided a new source of revenue. The company has thus far been unable to find a way to offer its data at lower rates to some customers without diminishing the revenue potential from its full subscribers.

The acceleration of sequencing efforts at the Human Genome Project and at Celera have created increasing competition for LifeSeq Gold. As more and more sequence and gene information becomes available in public databases, Incyte's data increasingly becomes a commodity. Celera's data provides an alternative to Incyte, and promises full sequencing information instead of Incyte's EST fragments. Celera also promises greater search capabilities.

2. As LifeSeq Gold has lost value, Incyte has had difficulty enlisting new users, and database revenue growth has been decelerating. Incyte has tried to hide this deceleration by including new revenue items in its database revenue line, which beginning in 4Q99 became "Database and partnership program revenues." The company disclosed that revenue from Pfizer related to its full-length gene sequencing program is included in this line, though it did not disclose the amount. We estimate the Pfizer payment represented \$5 M in 4Q database revenue, and have excluded it from our analysis of database revenue trends.

As shown in the table below, through 4Q99 Incyte failed to expand the number of users accessing LifeSeq and LifeSeq Gold. The company lost its first subscriber in 3Q99, when BASF declined to renew its agreement. In the same quarter, Incyte saw its first sequential decline in database revenue.

	1Q98	2Q98	3Q98	4Q98	1Q99	2Q99	3Q99	4Q99
LifeSeq/LifeSeq Gold Users	18	18	18	19	19	19	18	19
Database Rev M	\$24.7	\$25.9	\$26.1	\$28.9	\$30.4	\$30.8	\$28.1	\$31.0*
Q-Q% chng		5%	0%	11%	5%	1%	-9%	10%
Y-Y % chng					23%	19%	8%	7%

\*Does not include estimated \$5 M license payment from Pfizer.

Unable to sign up new users, Incyte instead increased revenue by expanding the number of databases being accessed by each existing user. These databases include the LifeSeq FL database of full-length genes (also included in LifeSeq Gold), a microbial genetic database called PathoSeq, and an animal genetic database called ZooSeq. Even though the amount of information contained in each of these databases is increasing, revenue per agreement is decreasing. As shown in the table below, in Q3 and in Q4 estimated revenue per agreement declined by 4% and by 6% respectively..

	1Q98	2Q98	3Q98	4Q98	1Q99	2Q99	3Q99	4Q99
LifeSeq/Gold	18	18	18	19	19	19	18	19
LifeSeq PD	0	1	1	1	1	1	1	1
LifeSeq FL	4	5	5	6	6	6	6	4
PathoSeq	6	7	7	7	8	8	8	9
ZooSeq	2	2	2	2	3	3	4	4
Total Access Agreements	30	33	33	35	37	37	37	40
Database Rev/ Agreement (M)	\$0.823	\$0.785	\$0.791	\$0.826	\$0.822	\$0.832	\$0.759	\$0.775
Y-Y% chng					0%	6%	-4%	-6%

3. In another attempt to solve its growing revenue problems, Incyte appears to have recently loosened its database licensing requirements in order to attract new customers. An analysis of recent deals suggests that Incyte no longer requires customers to pay for access to the full LifeSeq database. Nor are customers forced to sign three year deals. These new terms have generated new customers, but generate lower revenue per deal. Moreover, by showing weakness in these new deals, Incyte may face tough negotiations with companies renewing their arrangements, who may see an opportunity to reduce their fees.

In October, Millennium signed on as Incyte's first new user in a year. This deal was much ballyhooed, both because it marked the end of an extended dry period in deal making, and because it was with a biotechnology company. Prior to Millennium, the only biotechnology companies Incyte had signed up were Genentech and the Hoechst-Ariad joint venture. With virtual saturation of the big pharmaceutical companies, biotechnology companies have been touted by bulls as a rich potential source of new deals. The Millennium deal seemed to validate those hopes.

However, it appears that Incyte may have permitted Millennium to access the LifeSeq Gold database on more liberal payment terms than demanded from earlier users. Unlike all but one of its earlier deal announcements, Incyte's press release announcing the Millennium deal fails to mention any annual fees. We think Millennium may be billed periodically, perhaps in relation to its use of the database in that particular period. Incyte's press release also fails to use the term "multi-year" to describe the deal, suggesting it may be of short duration. We think that Millennium and some other customers are being billed for services rendered, rather than paying annual fees. Incyte's fourth quarter 86% year-over-year increase in accounts receivable to \$26.6 M from \$14.3 M may reflect the different billing method.

Millennium's press release says that it is using Incyte's data to complement its other sources of genetic information, including its own proprietary database and public human genome databases. Millennium does not need all of the data in Lifeseq Gold. At this late date in the sequencing race, we suspect the same is true for many potential database customers. Moreover, in the same release, Millennium also announced that it had gained access to Lexicon Genetics' databases. Lexicon is an Incyte competitor that claims its

GeneTrapping technology captures genes that cannot be seen using Incyte's technology. The Millennium announcement also suggests that it is using the database for a short period – perhaps as little as one year. The release says that by combining all of these sources, Millennium can complete its gene discovery efforts within 12 months. We think it may have little need for the data after that time.

In January, Incyte announced that Biogen will gain access to its LifeSeq Gold database. However, the Biogen deal announcement, like the Millennium announcement, mentions no annual fees, and is not described as multi-year. We think Biogen is also paying periodically for its use of the database.

Pay-as-you-go or other lesser revenue commitments are likely the only way most biotechnology companies will consider using Incyte's databases. The barrier is, in part, Incyte's large annual access fee, \$3 M-\$5 M for LifeSeq Gold. Perhaps more significant, however, is the large internal investment that must be made to effectively utilize the data. We understand from discussions with some of Incyte's pharmaceutical customers that they have trained hundreds of scientists to mine and manage the Incyte data. With research staffs numbering in the thousands, large pharmaceutical companies can manage this kind of commitment. Millennium and Biogen, on the other hand, have 580 and 244 employees in research and development, respectively. Going forward, we expect Incyte to announce more biotechnology deals, but we expect these deals to yield much lower database revenues than past deals.

Even with reduced fees for data access, however, biotechnology companies with whom we have spoken say they are still reluctant to use Incyte's data. Incyte's user agreements have a strict sublicensing limitation stipulating that the user can sublicense products developed using the data only to other database subscribers. While this protects the interests of Incyte's other users, to small biotechnology companies dependent on licensing for survival, such a restriction is enough to kill any thought of using the data.

Incyte's expanded deal with Bayer announced in January provides another example of how current and future users may be able to reduce their fees. Bayer has been accessing Incyte's LifeSeq PD public domain database since April 1998. Now it will subscribe to LifeSeq Gold, but not as a full subscriber, and not on a multi-year basis. Bayer will use the data only for therapeutic protein discovery, and not for development of small molecule drugs. By limiting its use of the data, Bayer will no doubt pay a lower fee than users with full development rights. In the end, it may not be paying much more than it did to access the LifeSeq PD database.

4. New Database Initiatives: In an effort to improve the prospects for its database business, Incyte is developing two new database products that extend beyond LifeSeq Gold: LifeExpress, a database of gene expression information, and a SNP database that provides information about single nucleotide polymorphisms, alterations in the genetic code that make each individual unique. INCY is also investing heavily in developing and patenting full sequences of

“medically interesting” genes, and is promising to put all of its products “on-line”, to permit biotechnology companies and academic institutions web access to its databases.

These efforts have raised research and development spending, generating losses for Incyte over the past four quarters. These losses look set to continue into 2000. Company guidance in its 4Q99 earnings conference call suggests that spending will continue to be high through the first half of 2000. Even with a \$10 M increase in revenues, increased spending will mean losses of \$35 M-\$40 M. “Street” analysts have increased their revenue expectations for 2000 from \$179 M to \$191 M, but have expanded expected losses from \$16 M to \$35 M.

5. LifeExpress: This database will provide RNA and protein expression data to be used to investigate the role that individual genes play in disease. Gene expression information is gathered using GEM microarrays to compare gene activity in normal and diseased tissues.

LifeExpress is touted by Incyte as the next LifeSeq Gold. Its revenue stream is supposed to kick in as LifeSeq Gold’s diminishes, allowing database revenues to continue to grow. However, patent issues make it unlikely that this database will ever generate significant revenues, in our view. Affymetrix has sued Incyte, alleging that Incyte’s GEM microarrays infringe its patents. We think Affymetrix has a strong case, as we detail below. If the court finds in Affymetrix’ favor, then Affymetrix can block Incyte not only from selling the microarrays, but also from selling any data generated using the microarrays. LifeExpress would be discontinued, and any experiments underway using this information would be difficult to complete. Moreover, data users could be required to sign licensing agreements with Affymetrix for any products generated using the LifeExpress database. Thus, we think that until this litigation is resolved (expected by mid-2001), customers will be reluctant to use the database.

We think Affymetrix has a very strong case against Incyte, and is likely to win its litigation. Three Affymetrix patents are at issue. The first is US Patent No. 5,445,934, which covers arrays of nucleic acids with more than 1,000 probes in a square centimeter. Affymetrix’ position on this patent appeared to be strengthened when the Patent Office ruled that oligonucleotides are polynucleotides, thereby rejecting one of Incyte’s main defenses. The second is US Patent No. 5,800, 992, which covers two color assays. The broadest claims of this patent were not part of an interference proceeding involving this patent, suggesting Incyte found no room to argue with the validity of these claims, or to argue that it does not infringe them. Moreover, in September 1999, Incyte lost an interference concerning other claims in this patent, bolstering Affymetrix’ case. The final patent is US Patent No. 5,744,305, relating to arrays of nucleic acids with more than 400 probes per centimeter. This patent was also the subject of an interference, which Incyte lost in September 1999. Given the Court’s actions in Affymetrix’ favor thus far, and given that a win for Incyte requires that it convince the Court that three Affymetrix patents are either non-infringed or invalid, we think Affymetrix stands the best chance of winning.

This situation could be further clarified in February 2000, when a Markman hearing is scheduled for the case. At that hearing, the trial judge will set the scope of the claims to be litigated at the trial in September 2000. The judge's opinion helps to set the direction that the actual trial will take. The trial itself could take a year to complete, all the while leaving the LifeExpress database in limbo.

Should Incyte lose this litigation, Affymetrix could seek triple damages based on sales of GEM arrays and on revenues from sales of the LifeExpress database. The near term consequence of this, in our view, is that potential users of the LifeExpress database will look elsewhere for the information they need. Over the longer term, eliminating the LifeExpress database as a source of revenue as LifeSeq Gold loses value would mean a decline in database revenues in 2001 and beyond.

While it is possible that Incyte and Affymetrix could settle their patent litigation, we think it is unlikely. Affymetrix has closely aligned itself with Gene Logic, a company with its own expression database generated using Affymetrix GeneChips. Customers who use Gene Logic's database are natural customers for Affymetrix GeneChips, since data from their GeneChip experiments can be integrated with data from Gene Logic's database. Thus, keeping Incyte's expression database off the market improves the market potential for Gene Logic's database and, by extension, for Affymetrix' GeneChips.

Patent issues aside, Gene Logic's database appears to be a formidable competitor for LifeExpress. This database was launched in January, and will compete for the same customers targeted by LifeExpress. This competition will, at the very least, reduce the revenue potential of LifeExpress. We think potential customers may perceive Gene Logic's product as superior because its data is generated with Affymetrix GeneChips. Many pharmaceutical companies already use GeneChips and can easily integrate their experimental data with data in Gene Logic's database. Additionally, because the GeneChip data expresses absolute levels of gene expression, as opposed to the relative levels provided by the GEM microarrays, scientists may find it easier to work with the data included in the Gene Logic database.

At any rate, the LifeExpress database appears to be far from functional at this point. Incyte has signed up only one customer for LifeExpress to date. AstraZeneca became the first user when it renewed its agreement in October. We suspect that this move was more PR than substance, especially since it appears to have added little to Incyte's database revenues. Industry sources tell us that AstraZeneca is now in the process of evaluating the first sets of data from LifeExpress, and has not yet decided what value LifeExpress may hold for AstraZeneca. We think Incyte's customers will show little interest in paying for this database until it becomes more functional and until the patent controversy surrounding it is resolved, which could come in mid 2001.

6. SNP Database: SNPs (single nucleotide polymorphisms) are the most common type of genetic variation, consisting of a single change in a DNA molecule.

There are an estimated 3 million SNPs in the human genome. Understanding where they lie should help scientists pinpoint subtle genetic difference that predispose people to disease, and could help to develop drugs that are more closely tailored to individual patient characteristics.

Incyte's SNP (single nucleotide polymorphism) database currently contains about 60,000 SNPs. It generates its SNP data using gel-based SNP discovery technology it purchased in 1998 with its acquisition of Hexagen. Thus, this database is not at risk if Incyte loses its microarray patent fight with Affymetrix. Thus far, Incyte has signed up Eli Lilly and another undisclosed pharmaceutical company as database users.

Incyte faces a great deal of competition in this effort. Among the companies competing with their own SNP databases are Celera, CuraGen, Genset, and Gene Logic. The public SNP Consortium and a public database called dbSNP are also in the fray. While no leader is yet apparent in the SNP race, it seems clear that Incyte will not be able to duplicate its initial success with LifeSeq, where it held a virtual monopoly for several years.

7. Full-length gene database: Incyte is making much of its effort to develop and patent full-length sequences of "medically interesting" genes selected with the help of its database customers. This effort appears to be the company's response to the threat posed by the Human Genome Project and Celera, who promise to have full sequences of all genes available by 2003 or sooner. Incyte has taken a lower cost, faster approach by choosing to fully sequence a subset of human genes.

In November 1999, Incyte announced that Pfizer will provide funding, scientific expertise, and priorities for the completion of this portfolio of full-length genes. These genes will be made available nonexclusively to all LifeSeq Gold subscribers, although the timing is unclear. Additionally, Pfizer is paying undisclosed fees to license a number of potential drugs to be developed using Incyte's sequences. We estimate that Pfizer made a \$5 M upfront payment in 4Q99 as part of that deal. The deal lets Pfizer insure that its genes of interest are sequenced. Paying discounted fees for licenses today makes business sense for Pfizer, and gives Incyte a chance to get more revenue on its books now.

"Street" analysts estimate Pfizer will now pay Incyte \$10 M-\$25 M in 2000. We estimate that before this deal, Pfizer paid Incyte about \$5 M per year for its subscription to LifeSeq Gold. With the addition of ZooSeq and PathoSeq, that subscription fee may go up to \$9 M per year. We estimate funding for the full-length gene sequencing effort at \$7 M in 2000. Thus, we estimate total Pfizer revenue at \$16 M in 2000, \$15 M in 2001, and \$15 M in 2002. Pfizer appears to have no commitments beyond 2002, when its subscription to LifeSeq Gold expires.

While the Pfizer deal may appear to be a vote of confidence in Incyte and in the value of its patents, several things should be kept in mind. First, Pfizer holds 10% of Incyte's stock. At the time the deal was announced, Incyte was

trading at \$30 per share, and Pfizer's \$9 M investment was worth \$21.3 M. This announcement surely helped to increase the value of that investment. Second, at the time the announcement was made, Pfizer was in a tough public relations battle for the hearts and minds of Warner-Lambert stockholders. This release helped to enhance Pfizer's image as a cutting edge R&D powerhouse. Finally, on the same day this deal was announced, Pfizer announced a deal with Incyte-rival Celera Genomics that also included a gene discovery agreement. Pfizer will pay Celera an estimated \$10 M per year for five years to access its five databases. Interestingly, Pfizer's deal with Celera expires in 2005, while its deal with Incyte expires in 2002.

8. By focusing on developing full-length sequences of a limited number of genes, Incyte is trying to shift from a database revenue strategy to an intellectual property revenue strategy. However, because Incyte is offering only tools to assist others in the development of therapeutics and diagnostics, we think the revenue that can be generated by this strategy is limited to single digit royalties, and any revenue is unlikely to be realized for 7 years or more. Moreover, in order to realize this revenue, Incyte will likely be faced with significant litigation and cross-licensing expenses. Also, Incyte's customers have stated that they look for targets in the public databases first, since if they isolate targets from that data, they don't owe any royalties. Glaxo's head of R&D is on record saying that Glaxo accesses very few targets out of Incyte's database. In the end, the revenue that can be generated from this strategy is likely to be quite limited.

Incyte plans to file patents on every drug target in the human genome. Just how it is able to identify these targets more accurately and more quickly than Celera and its other rivals is unclear. Incyte is betting that companies and academic institutions will have to come to Incyte for licenses if they are developing products that in some way use the DNA it has patented. Incyte has been filing patents at a blistering pace, driven by the fact that once a sequence appears on the public databases, it is no longer patentable. In one six month period in 1999, Incyte claims it filed 3,000 full-length gene sequences patents. In addition, Incyte claims to have filed patent applications covering over 50,000 full or partial genes (most of these likely cover ESTs), and patent applications covering 6,300 full-length genes. It now has 490 issued or allowed patents covering full-length genes.

What is the real value of these patents and patent applications? Most of the gene patents issued to Incyte thus far are for composition of matter. They cover tools that may be useful to other companies discovering and developing drugs that upregulate or down regulate gene expression, or developing diagnostics using gene expression information. These drugs will be covered by more valuable method of use patents. Patent experts we have spoken to think that most of Incyte's pending patent applications are also restricted to composition of matter claims. Incyte has simply not had the time to complete the experiments that would likely be required to obtain method of use claims in these applications.

The potential revenue from these tool patents is limited, in our view. We

think the best Incyte could realize from these patents is low single digit royalties on products discovered using these tools. Moreover, these royalties are many years away, since products found using these tools have not even entered the clinic. The real value-added work needed to create products using information from the human genome will be done by pharmaceutical and biotechnology companies who use Incyte's tools and many other resources to bring these products to market.

There are other issues. As patent law continues to evolve, it is likely that a full-length gene sequence patent will not confer sole rights to a particular sequence of DNA. It is quite likely an EST patent application filed by someone else could subsequently issue that covers the same sequence of DNA. When that EST patent issues, Incyte may be sued by the holder of the EST patent, and cross-licensing terms may be extracted, further diminishing Incyte's return.

Moreover, generating revenue from tools such as Incyte's is inherently difficult. Since it is only part of the process used to discover a product, it may be difficult for Incyte to identify the instances in which its sequences were employed. If it suspects the sequence was used, it may have to sue to get access to the confidential materials needed to prove its case. Thus, in instances where Incyte's sequences play a minor role in a drug's discovery, it may be very easy for companies to side-step getting a license from Incyte.

We also note that the issuance of DNA patents is very low relative to the number of applications that have been filed. This is particularly true of EST patents. It may be that the Patent Office is bogged down in tremendous amounts of paper as companies rush to file on their gene discoveries. Or, it may be that the Patent Office is in no hurry to issue patents on what some might argue should not be patentable, despite court rulings to the contrary. Whatever the causes, it could take years for the backlog to diminish. During this time, researchers will be using sequences available in the public domain to discover and develop therapeutic and diagnostic products. Since a patent is not enforceable until it issues, we think discoveries will be made using these sequences before Incyte has an opportunity to derive licensing revenues.

Finally, the European Patent Office has thus far been unwilling to issue any patents covering DNA. If this situation continues, Incyte will not be able to generate any royalty revenue from European sales of products developed using its tools.

9. Incyte has announced that during 2000 it will make its databases available over the internet. This approach targets biotechnology companies and academic institutions by providing them with a lower cost option (perhaps "pay-per-view") to access Incyte's data, and providing access for users who may not have the computer capacity necessary for running a large database. This internet approach would also allow companies without servers capable of housing the databases to access data using Incyte's servers.

The company has not yet explained how it will derive revenues from this

system, what databases will be included, or when the on-line product will be available. Industry sources tell us that Incyte salespeople have mentioned a pay-per-view option, but have said that terms would not be available until March at the earliest. While this option is of interest to companies with whom we have spoken, they are concerned that Incyte's fees will be too high.

Once launched, we think this on-line option will be of interest only to companies who already know what they are looking for, and so will likely generate low fees. Unlike database subscribers who use the database to search for targets, on-line users will have limited access, and so must already have a target in mind. By using search programs (called BLAST searches) to look for sequence matches in the Incyte database, researchers can more quickly get to results than they could in the lab. While this has value, we think it is of significantly lower value than mining the entire database.

Several other barriers exist to the successful adoption of on-line database access. First, academic groups and biotechnology researchers will need the right to sublicense discoveries generated using Incyte's data. To date, Incyte appears to have been unwilling to grant such rights. This could be a significant barrier to the adoption of on-line use. Second, as time passes, researchers have a diminishing need for Incyte's resources. Data in the public domain (already internet accessible and BLAST searchable) is increasingly replicating what Incyte can offer. Finally, current subscribers may use Incyte's on-line access offerings to argue for lower subscription fees. Many of these users have been paying Incyte millions of dollars each year for the development of these databases. We think that these clients will want a price break if new comers can access the same data for a low fee.

## II. Microarray Service Business:

Despite company guidance suggesting that microarray service revenues are likely to be flat in 2000, Incyte bulls include 25% revenue growth in their estimates. We think sales will disappoint bullish investors, remaining flat year-over-year in 2000.

We expect several factors to contribute to lower microarray service revenues. First, Incyte is itself consuming GEM microarrays as it continues to build the LifeExpress database in the hope that the patent litigation with Affymetrix goes its way. This will leave fewer microarrays available to sell to its customers. Second, patent concerns, which turned off many users in 1999, may be heightened with February's Markman hearing. If this hearing goes against Incyte, more customers will look for alternatives to the GEM arrays. Third, with Affymetrix' new manufacturing facility on-line, we expect its capacity constraints to lessen, meaning less business for Incyte. This appears to be occurring already. We note that Affymetrix announced an expanded chip supply agreement with Novartis in January. Novartis signed a four year microarray agreement with Incyte in July 1998.

### III. Reagent Revenues:

“Street” analysts expect big things from Incyte’s reagent revenue business in 2000, projecting a 62% increase over the \$11 M in revenue generated in 1999. Incyte management has cited increased experimentation related to the Human Genome Project and its full-length gene sequencing program as contributing to potential growth.

While reagent revenue may increase with increased gene experimentation, we think growth for Incyte should be closer to 45%. One of Incyte’s competitors in this area, the non-profit American Tissue Culture Collection, has recently decreased its clone prices by 20%-50%, making it more competitive with Incyte’s pricing. Moreover, we note that margins on this business are around 15%, and are not a significant contributor to the bottom line.

Reagent revenue is generated by clones sold by Incyte’s Genome Systems subsidiary. In addition to distributing Incyte-proprietary clones, Genome Systems is one of three U.S. and two European companies authorized to distribute clones from the public I.M.A.G.E. Consortium. The I.M.A.G.E. Consortium maintains DNA libraries from the Human Genome Project and other public sources, providing a consistent source of material for experiments. Margins on this business are low, in part due to the mandate of I.M.A.G.E., which was formed to provide low cost, royalty free access to clones for the research community.

### IV. Other Red Flags

We worry when companies tell us revenues are “on the way” — it sounds like “the check is in the mail.” For the past two quarters, Incyte has suggested that revenue from a sequencing project conducted with the University of Scranton was imminent, pending a release of funds. However, sources at Scranton tell us that this sequencing work has not started. Moreover, the funds for it are unlikely to be released in the foreseeable future. As a result, this money is unlikely to appear in Incyte’s “other revenue” line any time soon.

We note Incyte’s fourth quarter results included several other red flags for investors. DSOs increased 48% versus 4Q98, most likely reflecting a change in billing practice that allows customers to pay as they use the service. Also, pre-paid expenses shot up \$7 M sequentially, to its highest level ever. We note that the company’s loss of \$7 M would have doubled had these expenses been included in the quarter. Finally, the company realized an income tax benefit of \$800,000. This was not anticipated by the “street”, and improved earnings by \$0.03, allowing the company to beat consensus by \$0.02.

## V. Financial Projections

\$000	1Q99	2Q99	3Q99	4Q99	1999
Database	30430	30793	28100	36000	125323
Microarray	2200	1900	3600	3300	11000
Reagent	2300	2400	2100	2700	9500
Other	2700	2800	1615	4024	11139
Tot Revenue	37630	37893	35415	46024	156962
R&D	31244	36122	36874	42593	146833
G&A	8379	9497	8989	10370	37235
Total Expenses	39623	45619	45863	52963	184068
Int expense	0	0	0	0	0
Int/other net	1459	1556	1236	918	5169
Loss from JV	-1376	-1217	-1854	-1184	-5631
EBT	-1,910	-7,387	-11,066	-7,205	-27,568
Taxes	0	0	0	-800	-800
Net Income	-1,910	-7,387	-11,066	-6,405	-26,768
Shares	27879	27879	27879	27879	27879
EPS	-0.07	-0.26	-0.39	-0.22	-0.95

% of Sales	1Q99	2Q99	3Q99	4Q99	1999
Database revenues	81%	81%	79%	78%	80%
Microarray revenue	6%	5%	10%	7%	7%
Reagent revenue	6%	6%	6%	6%	6%
Other revenue	7%	7%	5%	9%	7%
Total Revenue	100%	100%	100%	100%	100%
R&D	83%	95%	104%	93%	94%
G&A	22%	25%	25%	23%	24%
Total Expenses	105%	120%	130%	115%	117%
Interest expense	0%	0%	0%	0%	0%
Interest and other inc net	4%	4%	3%	2%	3%
Losses from JV	-4%	-3%	-5%	-3%	-4%
EBT	-5%	-19%	-31%	-16%	-18%
Taxes	0%	0%	0%	-2%	-1%
Net Income	-5%	-19%	-31%	-14%	-17%

Y-Y% Chng	1Q99	2Q99	3Q99	4Q99	1999
Database	23%	19%	8%	25%	19%
Microarray	126%	46%	17%	25%	38%
Reagent	18%	1%	-8%	24%	8%
Other	-2%	-20%	-50%	37%	-10%
Tot Revenue	24%	15%	2%	26%	16%
R&D	44%	56%	49%	54%	51%
G&A	82%	66%	31%	26%	46%
Total Expenses	44%	58%	8%	48%	37%
Int expense					
Int/other net	-22%	-14%	-32%	-52%	-30%
Loss from JV	n/a	n/a	n/a	n/a	n/a
EBT	n/a	n/a	n/a	n/a	n/a
Taxes					
Net Income	n/a	n/a	n/a	n/a	n/a

\$000	1Q00	2Q00	3Q00	4Q00	1Q01	2Q01	3Q01	4Q01
Database	34719	36525	36063	35813	34508	35008	33508	34008
Microarray	3250	3000	2500	2250	3000	3000	0	0
Reagent	2970	3267	3594	3953	4151	4358	4576	4805
Other	2700	2700	2700	2700	2700	2700	2700	2700
Tot Revenue	43639	45492	44857	44716	44359	45066	40784	41513
R&D	45500	47000	45000	42000	42000	42000	42000	42000
G&A	12300	12800	13300	13800	13000	12500	12000	13000
Total Expenses	57800	59800	58300	55800	55000	54500	54000	55000
Int expense	0	0	0	0	0	0	0	0
Int/other net	743	555	368	180	0	0	0	0
Loss from JV	-2300	-2200	-1300	0	0	0	0	0
EBT	-15718	-15953	-14375	-10903	-10641	-9434	-13216	-13487
Taxes	0	0	0	0	0	0	0	0
Net Income	-15718	-15953	-14375	-10903	-10641	-9434	-13216	-13487
Shares	28805	29093	29384	29678	29975	29533	30275	29828
EPS	-0.55	-0.55	-0.49	-0.37	-0.36	-0.32	-0.44	-0.45
<b>% of Sales</b>	<b>1Q00</b>	<b>2Q00</b>	<b>3Q00</b>	<b>4Q00</b>	<b>1Q01</b>	<b>2Q01</b>	<b>3Q01</b>	<b>4Q01</b>
Database	80%	80%	80%	80%	78%	78%	82%	82%
Microarray	7%	7%	6%	5%	7%	7%	0%	0%
Reagent	7%	7%	8%	9%	9%	10%	11%	12%
Other	6%	6%	6%	6%	6%	6%	7%	7%
Tot Revenue	100%	100%	100%	100%	100%	100%	100%	100%
R&D	104%	103%	100%	94%	95%	93%	103%	101%
G&A	28%	28%	30%	31%	29%	28%	29%	31%
Total Expenses	132%	131%	130%	125%	124%	121%	132%	132%
Int expense	0%	0%	0%	0%	0%	0%	0%	0%
Int/other net	2%	1%	1%	0%	0%	0%	0%	0%
Loss from JV	-5%	-5%	-3%	0%	0%	0%	0%	0%
EBT	-36%	-35%	-32%	-24%	-24%	-21%	-32%	-32%
Taxes	0%	0%	0%	0%	0%	0%	0%	0%
Net Income	-36%	-35%	-32%	-24%	-24%	-21%	-32%	-32%
<b>Y-Y% Chng</b>	<b>1Q00</b>	<b>2Q00</b>	<b>3Q00</b>	<b>4Q00</b>	<b>1Q01</b>	<b>2Q01</b>	<b>3Q01</b>	<b>4Q01</b>
Database	14%	19%	28%	-1%	-1%	-4%	-7%	-5%
Microarray	48%	58%	-31%	-32%	-8%	0%	-100%	-100%
Reagent	29%	36%	71%	46%	40%	33%	27%	22%
Other	0%	-4%	67%	-33%	0%	0%	0%	0%
Tot Revenue	16%	20%	27%	-3%	2%	-1%	-9%	-7%
R&D	46%	30%	22%	-1%	-8%	-11%	-7%	0%
G&A	47%	35%	48%	33%	6%	-2%	-10%	-6%
Total Expenses	46%	31%	27%	5%	-5%	-9%	-7%	-1%
Int expense								
Int/other net	-49%	-64%	-70%	-80%	-100%	-100%	-100%	-100%
Loss from JV	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EBT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Taxes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Net Income	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

\$000	1999	2000e	2001e	2002e
Database	125323	143120	137032	94207
Microarray	11000	11000	6000	0
Reagent	9500	13784	17890	23257
Other	11139	10800	10800	10800
Tot Revenue	156962	178704	171722	128264
R&D	146833	179500	168000	117600
G&A	37235	52200	50500	38479
Total Expenses	184068	231700	218500	156079
Int expense	0	0	0	0
Int/other net	5169	1847	0	0
Loss from JV	-5631	-5800	0	0
EBT	-27568	-56949	-46778	-27815
Taxes	-800	0	0	0
Net Income	-26768	-56949	-46778	-27815
Shares	28138	29240	29902	31099
EPS	-0.95	-1.95	-1.56	-0.89

% of Sales	1999	2000	2001	2002
Database	80%	80%	80%	73%
Microarray	7%	6%	3%	0%
Reagent	6%	8%	10%	18%
Other	7%	6%	6%	8%
Tot Revenue	100%	100%	100%	100%
R&D	94%	100%	98%	92%
G&A	24%	29%	29%	30%
Total Expenses	117%	130%	127%	122%
Int expense	0%	0%	0%	0%
Int/other net	3%	1%	0%	0%
Loss from JV	-4%	-3%	0%	0%
EBT	-18%	-32%	-27%	-22%
Taxes	-1%	0%	0%	0%
Net Income	-17%	-32%	-27%	-22%

Y-Y% Chng	1999	2000	2001	2002
Database	19%	14%	-4%	-31%
Microarray	38%	0%	-45%	-100%
Reagent	8%	45%	30%	30%
Other	-10%	-3%	0%	0%
Tot Revenue	16%	14%	-4%	-25%
R&D	51%	22%	-6%	-30%
G&A	46%	40%	-3%	-24%
Total Expenses	37%	26%	-6%	-29%
Int expense	100%	0%	0%	0%
Int/other net	-30%	-64%	-100%	0%
Loss from JV	n/a	n/a	n/a	n/a
EBT	n/a	n/a	n/a	n/a
Taxes	n/a	n/a	n/a	n/a
Net Income	n/a	n/a	n/a	n/a