

# Investigating the Performance of Research Companies

## - A Reporting Example on DeCODE Genetics

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<b>1</b>	<b>INTRODUCTION.....</b>	<b>3</b>
1.1	SOME DEFINITIONS .....	4
<b>2</b>	<b>THE DECODE EXAMPLE .....</b>	<b>5</b>
2.1	INTRODUCTION TO DECODE GENETICS.....	5
2.2	THE PROBLEM WITH TRADITIONAL JOURNALISTIC METHODS ...	5
2.3	USING NONTRADITIONAL JOURNALISTIC METHODS.....	7
2.4	DECODE SPECIFIC CONCLUSIONS .....	9
<b>3</b>	<b>ADDITIONAL METHODS AND TOOLS.....</b>	<b>10</b>
3.1	EARNINGS AND REVENUE.....	10
3.2	RESEARCH AND DEVELOPMENT .....	11
3.3	EMPLOYEES .....	11
3.4	PATENTS.....	12
3.5	DRUGS AND DIAGNOSTICS .....	13
3.6	FUTURE PROJECTIONS .....	14
3.7	SHARE PRICE AND INDEXES .....	15
3.8	INSIDER TRADING .....	15
3.9	LAWSUITS.....	16
3.10	PARTNERS .....	16
<b>4</b>	<b>CONCLUSION .....</b>	<b>17</b>
4.1	LIMITATIONS WITH THE TOOLS AND METHODS .....	17
4.2	POSSIBILITIES WITH THE TOOLS AND METHODS.....	18
<b>5</b>	<b>ACKNOWLEDGEMENTS.....</b>	<b>19</b>
	<b>NAME INDEX .....</b>	<b>20</b>

# Investigating the Performance of Research Companies

- An awarded reporting example on DeCODE Genetics

**The sparse journalistic coverage of research companies doesn't reflect their importance to the modern economies. This imbalance could be explained by a lack of methods and tools for journalists striving to cover these companies. This paper describes a practical reporting example in which the author had to develop and employ new untraditional journalistic methods, because solely using traditional methods wouldn't have served the readers. There are limitations to the methods. Due to that, this paper includes ten additional methods that could have been used, some of which are accompanied by useful tools, suitable for journalists seeking unbiased information based on figures and facts rather than gossip and belief.**

## 1 Introduction

In the spring of 2002, I visited Iceland to write a newspaper story on the biotech company DeCODE Genetics ([www.decode.com](http://www.decode.com)). The task was to measure the health of the company, hailed for its innovative approach to population genetics, but criticized for its vague ethics.

I soon noticed that ordinary journalistic tools were inadequate. General business reporting tools, for one, couldn't be used since the company was hardly making any money, a typical scenario for innovation-based startups. On the other hand, quoting the hopeful company executives wouldn't serve the readers, because of the executives' biased view. I had to conduct several interviews with people in and around the company. In that way I could describe who says what about whom. This can be described as a traditional journalistic method, as such often enlightening and revealing.

However, that alone was also inadequate, because it would confuse the readers rather than give them a thorough understanding of the company. During its first five years, the company had reported some income, but the losses were far greater. So how come it still exists? This was the question I had to answer.

By studying DeCODE-files sent to the SEC, Securities and Exchange Commission, I found that the main suppliers of capital to DeCODE Genetics were other enterprises. One deal, in particular, caught my eyes. A Swiss pharmaceutical giant, Roche, had signed a cross-license agreement granting DeCODE Genetics a large amount of money, but also options on an additional larger sum, "milestone payments", if it reached some scientific goals. Three years had passed since the four-year agreement was signed. By comparing the possible milestone payments to the actual payments, I could get a measurement of how successful DeCODE had

been in gene-patenting and method-development – progress that can't be measured solely by investigating its finances.

By using this approach, I revealed that DeCODE hadn't received any milestone payments so far, information much more valuable to readers than only describing the quarrel and gossip. Investigating the Roche-deal can be described as a non-traditional journalistic method, as such very revealing.

The story on DeCODE was published in a Swedish newspaper, Västerbottens-Kuriren ([www.vk.se](http://www.vk.se)), as a trilogy on June 6<sup>th</sup>, 7<sup>th</sup> and 10<sup>th</sup> 2002<sup>1</sup>. It was later nominated to the Royal Swedish Academy of Engineering Sciences annual Scientific Media Award for the year 2002, and named the winner.

As holder of a Swedish Innovation Journalism fellowship, I was working at The Wall Street Journal, a prestigious U.S. business daily, in the spring of 2004. The hindsight and training allowed me to discover several new methods and some new tools that probably would have improved the DeCODE-story and most certainly made the research less frustrating. I believe that many journalists in Europe and elsewhere could benefit from using some of these methods and tools, since they can be employed together with traditional journalistic tools to paint a very compelling picture of the health of companies, in particular innovation-based startups, thus cutting through the praise from PR-departments better than before.

An early version of this paper was presented on April 15<sup>th</sup> 2004 at The [First Conference on Innovation Journalism](#)<sup>2</sup> at Stanford University in Palo Alto, Ca., USA.

## 1.1 Some definitions

As part of the above mentioned fellowship was a quest to evaluate the concept of [“Innovation Journalism”](#)<sup>3</sup>, coined by David Nordfors in 2003, and described as journalism covering technical, legal and political aspects of innovation and innovation systems. In this paper I use the adjective “innovative” to describe journalistic tools and methods applicable in, and perhaps crucial for, conducting Innovation Journalism.

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<sup>1</sup> M. Lillkvist. Västerbottens-Kuriren. ”Här skapas framtidens medicin” (Jun. 6, 2002), ”Flera års kamp för att ta sig ur databasen” (Jun 7, 2002), ”Umeå behöver Decode” (Jun 10, 2002). Available as PDF-files (in Swedish) at <http://www.lillkvist.com/>. The articles can also be ordered from the author.

<sup>2</sup> M.Lillkvist, ”Decoding DeCODE – Using history and SEC\_files as journalistic methods to evaluate an innovation-based company's status”, *Innovation Journalism* Vol. 1 No. 3, May 2004. <http://www.innovationjournalism.org/archive/INJO-1-3.pdf>

<sup>3</sup> D. Nordfors. “The Concept of Innovation Journalism and a Programme for Developing it”, *VINNOVA Information* VI 2003:5, ISSN 1650-3120, Nov. 2003. Also published in *Innovation Journalism*, Vol. 1 No. 1, May 2004. <http://www.innovationjournalism.org/archive/INJO-1-1.pdf>

## 2 The DeCODE example

This section exemplifies how a start-up company can be investigated. It delivers a practical reporting example on DeCODE Genetics.

### 2.1 Introduction to DeCODE Genetics

In May 2002, I met Kári Stefánsson. The tall, gray-bearded neuroscientist had discovered unique possibilities on Iceland, a desolate island in the Atlantic Ocean, just like his ancestors had done centuries ago. But Mr. Stefánsson's discoveries were of a different kind. His plan was not to harvest wealth from the marine life in the sea surrounding Iceland. Instead, Kári Stefánsson planned to harvest wealth from the genetic makeup of 260,000 individuals; the Icelanders.

Kári Stefánsson is the founder and Chief Executive Officer of Decode Genetics, sometimes called the world's most promising gene hunting company. Using three different sources of information; DNA, genealogy and occurrence of diseases, Mr. Stefánsson planned to dig deeper than ever before into the connection between genetic heritage and mankind's most devastating diseases. The plan was to use this new information to create new diagnostic methods and novel drugs.

Because the company's raw material comes from Icelanders, Mr. Stefánsson promised to give them something back if they would participate. As he founded DeCODE, Kári Stefánsson offered Icelanders worthy rates on the company's shares, suggesting that their value would increase. Furthermore, DeCODE's first deal with a major pharmaceutical company, Roche, granted free drugs to all Icelanders.

I was on Iceland to see if the dream was coming true. The aim of the reporting was to compare DeCODE Genetics to a much smaller – but still comparable - Swedish company, UmanGenomics ([www.umangenomics.com](http://www.umangenomics.com)), which had caused some debate in the city of Umeå, home to a regional newspaper, Västerbottens-Kuriren.

### 2.2 The problem with traditional journalistic methods

In July 2000, DeCODE - shares were introduced on the U.S. secondary market, thus allowing any investor to speculate in the company's future. Icelandic banks issued a huge campaign to turn the stock into "the citizen's stock". However, as months and years passed, the share didn't grow as expected, instead it reached its all times low at the time I visited Iceland.

In article after article, readers of science and technology stories are faced with words like "revolutionary" and "breakthrough" in the description of how future technology will transform their everyday life<sup>4</sup>. That has also been the case with biotech companies, with promoting journalists quoting CEOs promising cures for

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<sup>4</sup> D. Nelkin. "Selling Science." W.H. Freeman and Company, 1987, pp.33

anything from cancer to diabetes. So far none of that has happened. Technology has certainly made life easier, but so far the hyped areas of biotechnology haven't come up with any medical breakthroughs that has proven to revolutionize our everyday life in the way that decade-old inventions like antibiotics and X-ray did.

That is, however, what companies like DeCODE Genetics wants to do. And they claim that they will. But they can't say when. So how should a journalist assess such a problem? DeCODE Genetics is one of those companies that investors keep their eyes on to get a measurement of the biotech temperature, making it even more important that the journalist performs a good and honest job.

Any company wants the good news to be published rather than the bad news. This is a problem for the company's stockholders, in need of both good and bad news to make informed decisions. Brokers, banks and venture capitalists spend time to find tools to evaluate companies. Lay people, however, seldom do. Instead they rely on information from the company, or even better, from the, hopefully, unbiased news media.

Because tens of thousands of Icelanders bought DeCODE shares, one could believe that the Icelandic media had performed intensive critical coverage of DeCODE. That is however not the case, since the company's close connections to the center-right Icelandic government meant that criticism of the company equaled to criticism of the government, a phenomenon that is more common in smaller societies like Iceland<sup>5</sup>.

So when I arrived in Iceland, my background material was limited to a handful of stories from foreign newspapers. This was, of course, not enough. Conducting interviews with numerous people expressing different standpoints about the company was necessary. On Iceland I met DeCODE's PR-staff, its scientists and its CEO Kári Stefánsson as well as representatives for an association called Mannvernd, critics of DeCODE's work, claiming that the company possesses information too sensitive for it to handle.

I also met with people who were not medical professionals nor hired by the company, thus expected to express a less biased view of the company. These were science historians and lay people on the street, as well as blood-donors willing to help DeCODE solve the mysteries of their genetic diseases. Everybody had an opinion, and more often than not the opinions were personal and not based on facts about the company. For instance, one woman interviewed for the story built her opinion on a newspaper gossip-story telling how Kári Stefánsson was sued after having built himself a large estate that blocked the neighbor's view.

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<sup>5</sup> S.J. Erlingsson. Our genes. Biotechnology and Icelandic Society. Reykjavik, 2002

## 2.3 Using nontraditional journalistic methods

In order to assess DeCODE, I had to rely on facts. The only way to do that, I argued, was to use history to extrapolate the company's future. What has the company promised, and what has it really accomplished so far?

I chose the most objective way to reach my conclusions; public filings. All companies that are publicly traded in the U.S., are forced by law to file a huge amount of company information to the Securities and Exchange Commission, SEC, at least on a quarterly bases. This can be an invaluable source of information on a company's finance and operation.

First, I scanned DeCODE's latest annual report. In a section entitled "Risk related to our business", I found the following statement: "We expect it will be years, if ever, before we will recognize revenue from the development of therapeutic or diagnostic products"<sup>6</sup>. While a traditional company can create profit in a matter of months, innovation-based companies may need years, or even tens of years. So just examining revenue and earnings won't serve the journalist who wants to evaluate an innovation-based company. I had to use other methods.

I soon found out that a deal with the gigantic Swiss pharmaceutical company Roche had been crucial for DeCODE's possibility to grow. In February 1998, a research collaboration and cross-license agreement was signed between DeCODE and Roche<sup>7</sup>. This was a great opportunity for DeCODE, at that time in great need of start-up money. The four-year deal guaranteed DeCODE \$70 Million in research funding and an additional \$130 Million in "milestone" payments if it reached some scientific and financial goals in the hunt for genetic factors involved in ten common diseases, pre-decided by Roche.

Suddenly, I had my measurement at hand. By comparing the possible amount of money from Roche to the actual amount, I would get a figure on how many milestones DeCODE had reached.

By December 31st, 2000, nearly three years of the four-year agreement had passed, and DeCODE could have received \$145,8 Million: \$51,0 Million in research funding plus \$94,8 Million milestone payments.

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<sup>6</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 24

<sup>7</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 17

According to the annual report, DeCODE's total revenue during the three years was \$50.85 Million, including the Roche payments<sup>8</sup>. However, the total amount of money that Roche had paid, or owed, DeCODE was \$52,425 Million<sup>9</sup>. This equals to the total possible research funding from Roche (\$51,0 Million), excluding the possible milestone payments. This indicated that DeCODE hadn't received any milestone payments at all. The conclusion: DeCODE hadn't been very successful.

**Table 1: DeCODE funding from Roche 1998-2000**

All figures are in Million U.S.-dollars.

Year	Roche Research Funding	Possible Milestone Payment	Total Possible Payment	Actual Revenue, including Roche
1998	16,0*	29,8*	45,8*	12,71
1999	17,5	32,5	50	16,59
2000	17,5	32,5	50	21,55
<b>Total</b>	<b>51,0</b>	<b>94,8</b>	<b>145,8</b>	<b>50,85</b>

\*) The deal was signed in February 1998 and therefore only effective during eleven months in the year 1998.

While the lack of milestone revenue was the main revelation of my story, other facts were revealed as a result of my investigation. One example is an exclusive government bond amended to DeCODE. As many other gene hunting companies, DeCODE changed focus in the spring of 2002. By acquiring the American company Medichem Life Sciences, DeCODE would not only hunt genes involved in diseases, but also develop drugs<sup>10</sup>. To help establish this new branch, the Icelandic parliament promised to provide a government guarantee of a convertible bond offering up to \$200 Million, helping DeCODE to receive the much needed bank loans<sup>11</sup>. This move caused intense criticism from other Icelandic companies, questioning why the parliament supported only this one enterprise<sup>12</sup>. The EFTA Surveillance Authority doubted the State Aid Provision and opened a formal

<sup>8</sup> DeCODE 2000 Annual Report, Form 10-K, SEC Commission File Number 000-30469 (Mar. 20, 2001), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 36-37

<sup>9</sup> DeCODE 2000 Annual Report, Form 10-K, SEC Commission File Number 000-30469 (Mar. 20, 2001), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 11

<sup>10</sup> Press Release "DeCODE Announces Completion of MediChem Acquisition (Mar. 18, 2002) [www.decode.com](http://www.decode.com) [Aug. 2, 2004]

<sup>11</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 28-29

<sup>12</sup> J. Meek, "Decode was meant to save lives ... now it's destroying them", The Guardian (Oct. 31, 2002) <http://www.guardian.co.uk/g2/story/0,3604,822816,00.html> [Aug. 2, 2004]

investigation which was closed on April 23, 2004 as DeCODE “no longer needed the State Guarantee”<sup>13</sup>.

Another revelation resulting from my research was on the Icelandic Health Sector Database, IHSD. In 1998 the Icelandic parliament passed a law that would oblige all medical professionals to send their patient’s medical files to the IHSD<sup>14</sup>. The aim of this database is to support DeCODE’s two other databases; the genealogical bank and the blood bank, to create a powerful tool in assessing the genetics involved in diseases of Icelandic families.

DeCODE ensured that the encrypting system would be safe, claiming that no individual would be identified, thus risking genetic discrimination. The IHSD would be based on presumed consent, meaning that people who don’t actively choose to opt out are considered willing to participate. The association Mannvernd<sup>15</sup> criticized the proposed IHSD, claiming that it clashes with the physician’s ethics and that the presumed-consent solution is in conflict with the Helsinki Declaration<sup>16</sup>, stating that no research should be done on human beings who haven’t actively decided to participate via an “informed consent”. Accordingly, in May 2002, four years after the law was passed, the health database hadn’t yet been established, and still hadn’t in May 2004.

## 2.4 Decode Specific Conclusions

By using the deal between DeCODE Genetics and Roche, I managed to establish a firm ground in claiming that the company hadn’t kept its promises to the Icelanders. Thanks to my efforts to hunt down facts, I managed to guide the readers to a more thorough understanding of its status.

So far, the company was only selling dreams. Like most other biotech companies, the primary force behind DeCODE Genetics is the boundless optimism of public stock-market investors, fueled by the expectation of huge rewards. In 2003, for instance, the U.S. Biotechnology firms raised nearly \$4 Billion by selling new stock issues<sup>17</sup>. But during the same year, biotech managed to post almost exactly the same amount in net losses. In fact, only 13 of the largest biotechs managed to even turn in a profit in 2003.

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<sup>13</sup> Press Release “EFTA Surveillance Authority closes formal investigation procedure regarding aid to deCODE following the withdrawal of the notification” (Apr. 23, 2004) [www.eftasurv.int](http://www.eftasurv.int) [Aug. 2, 2004]

<sup>14</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 10

<sup>15</sup> [www.mannvernd.is/english/aboutmv.html](http://www.mannvernd.is/english/aboutmv.html) [Aug. 2, 2004]

<sup>16</sup> The World Medical Association “Helsinki Declaration”. Internet: [www.wma.net/e/policy/b3.htm](http://www.wma.net/e/policy/b3.htm) [Apr. 1, 2004]

<sup>17</sup> D. Hamilton. “The Biotech lottery”, private e-mail communication regarding his research for a Wall Street Journal leader (Apr., 2004)

### 3 Additional methods and tools

Since I wrote the DeCODE story, I have discovered several new investigative methods as well as some tools. In particular, my four-month Innovation Journalism fellowship at The Wall Street Journal, gave useful hindsight and training. In the following section I will present ten methods together with some tools that could have been used.

#### 3.1 Earnings and revenue

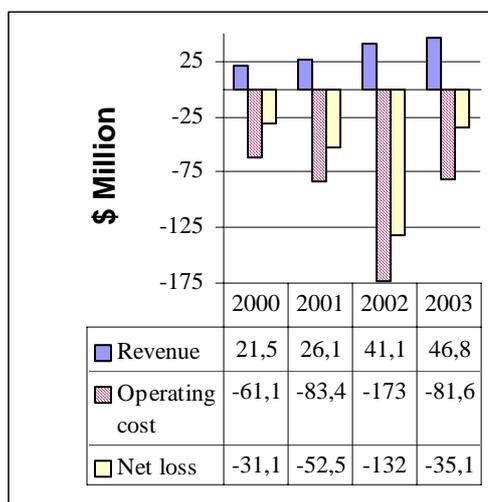
Every quarter all publicly traded companies have to file their earnings and revenue. For instance, even though one can compare the current quarter with the past quarter, or the current fiscal year with the former, innovation-based companies can be promising even though they haven't earned much money so far. The annual change in the ratio revenue/costs can reveal if the company is heading in the right direction.

Information can be found in annual (form 10-K) or quarterly (form 10-Q) reports, often available at the company's web page, in this case [www.decode.com](http://www.decode.com). Find the site-map and scroll down to SEC-filings, search for "Selected financial data". Info can also be found at The Securities and Exchange Commission<sup>18</sup> and, in DeCODE's case at Nasdaq ([www.nasdaq.com](http://www.nasdaq.com)).

##### 3.1.1 DeCODE Earnings and Revenue

DeCODE's revenue derives primarily from milestone payment, exclusivity, technology access and development for its collaborators. It hasn't been profitable during any of its first seven years. However, as long as investors maintain their support, this shouldn't be considered a problem, though it could be worrying that the annual net losses aren't shrinking significantly. As of Dec 31<sup>st</sup> 2003 DeCODE's total deficit was \$330,2 Million<sup>19</sup>.

**Table 2. DeCODE Revenue/cost 2000-2003**



<sup>18</sup> The Securities and Exchange Commission (<http://www.sec.gov/>)

<sup>19</sup>DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 91

### 3.2 Research and development

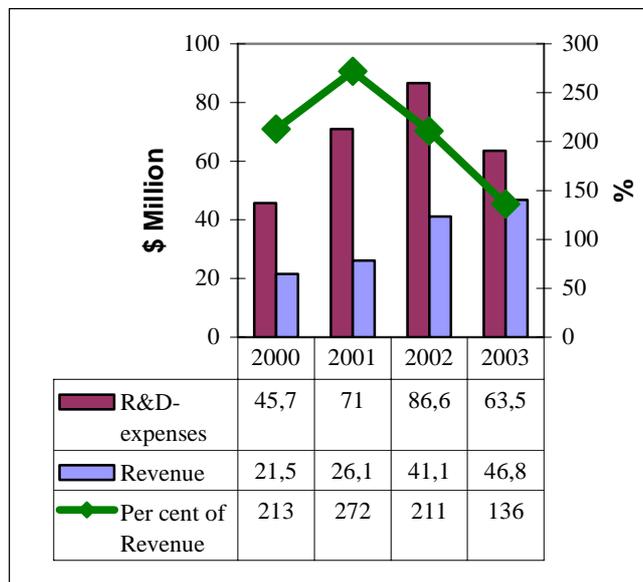
Innovation based companies build their value on new findings that can be commercialized. That is why such a company must be very aggressive, and sometimes dare to put more money on stake in research and development, R&D, than it actually can afford.

Information can be found in annual reports.

#### 3.2.1 DeCODE R&D

Despite modest revenue, DeCODE has continued its strong investment in R&D, which is crucial and positive as long as it gains investor’s support. DeCODE explains the decreased R&D expenditure in 2003 with cost reductions due to automation, reduction of usage of chemicals and other consumables as well as salaries.

**Table 3. DeCODE R&D-expenses 2000-2003**



### 3.3 Employees

In general terms, a company that decreases its number of employees is considered to have financial problems. However, that does not necessarily have to be the case as a change can be necessary, and even welcome, for a company that is changing

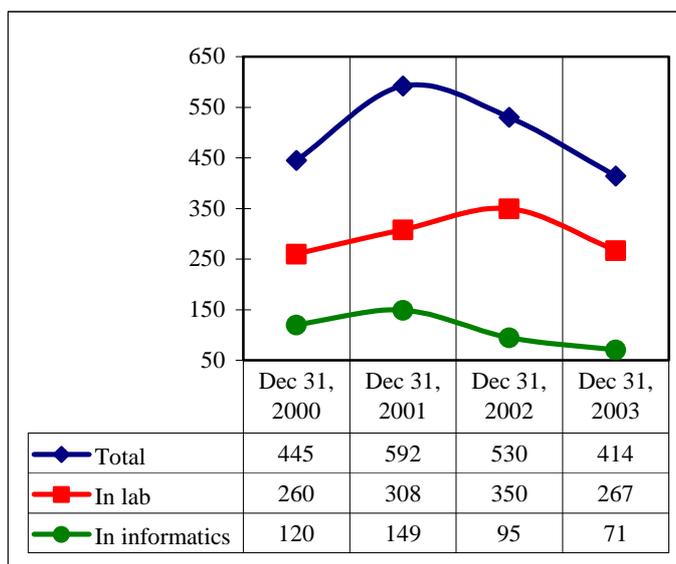
its strategy. For instance, the California biotech company Incyte’s share price rose by nine percent on the news that it would close its Palo Alto facility and eliminate 257 jobs, more than half of its work force<sup>20</sup>. The distribution of employees also mirrors whether the company has managed to concentrate on its main activity.

Information can be found in annual reports.

### 3.3.1 DeCODE Employment

Roughly eight out of ten employees are involved in the core activity, (laboratory and informatics) which should be considered gratifying. Solely during 2002, expenditures involving employee termination cost DeCODE \$64,8 Million, contributing to half the company’s deficit that year<sup>21</sup>.

**Table 4. DeCODE number of employees 2000-2003**



## 3.4 Patents

Innovation-based companies often create revenue from non-traditional products like methods, ideas, licensing and information. To protect their intellectual property, they often apply for patents. The procedure of patenting can be time-consuming and costly, so the journalist may predict that the company wouldn’t try to patent unless it believes the idea is valuable.

<sup>20</sup> T. Simmers. The Oakland Tribune (Feb. 3, 2004)

<sup>21</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 50

Information can be found at The United States Patent and Trademark Office, USPTO, which issues U.S. patents. It offers a searchable database on its web page ([www.uspto.gov/patft](http://www.uspto.gov/patft)).

### 3.4.1 DeCODE Patents

A total of 16 genes implicated in 13 diseases, including myocardial infections and obesity, are identified. DeCODE is the assignee name for nine U.S. patents, three on genes, four on informatics and two on genetic methodology. However, according to the latest annual report, DeCODE has issued 24 U.S patents<sup>22</sup>.

DeCODE hasn't patented all of its discoveries in its own name, but together with its collaborators, which means it hasn't the sole right to the patents. DeCODE hasn't patented all of its discovered genes, which exposes that some discoveries aren't considered valuable enough. The figures also confirm that DeCODE is much more than a gene hunting company.

## 3.5 Drugs and diagnostics

The main goal for most biotech companies is to produce drugs. A secondary goal is to produce diagnostic methods. Before any drug can be accepted, it must be proven secure and efficient. Approval by FDA, the Food and Drug Administration, opens the U.S. market, which is the largest one in the world. That is why journalists should examine whether any product of the company is subject for FDA's approval procedure.

Before any company applies, it first performs some tests on its drugs. These tests are pre-clinical, involving lab- and animal-tests, and clinical, involving various amounts of people involved (Phase I, II and III).

Information can be found in annual reports, and in FDA-files ([www.fda.gov](http://www.fda.gov)).

### 3.5.1 DeCODE Drugs and Diagnostics

So far, DeCODE's experimental drugs haven't been approved by the FDA, thus none is so far on any market. No diagnostic test has so far been commercially available.

A phase II trial has started on a potential myocardial infection drug candidate licensed from Bayer. Two other phase II trials are planned for 2004, targeting myocardial infarction and asthma<sup>23</sup>. DeCODE expects to file its first investigational

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<sup>22</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004) PDF-file downloaded from [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 19

<sup>23</sup> DeCODE's 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 6 and Press Release "DeCODE Licenses Developmental Compound" (Nov. 17, 2003), [www.decode.com](http://www.decode.com) [Aug. 2, 2004]

new drug application, regarding myocardial infarction, to the FDA in early 2005<sup>24</sup>. DeCODE is also developing genetic methods to diagnose increased risk for osteoporosis together with collaborator Roche Diagnostics<sup>25</sup>.

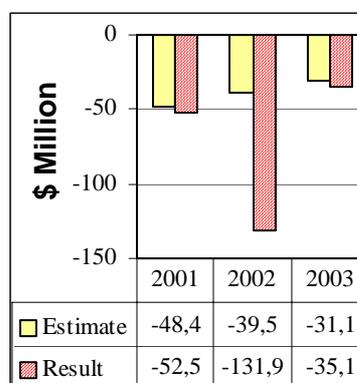
Since FDA-approvals take years and only three drug-candidates might be in the pipeline, no investor can expect revenue from DeCODE soon. To grasp the impact of the different phases and the potential drug, it is crucial for journalists to consult unbiased medical experts in the specific area of research.

### 3.6 Future projections

Companies often give forward-looking statements in their quarterly and annual reports. A journalist can investigate the company's self esteem by comparing its earlier forecast with its actual result. However, the SEC doesn't require companies to give future estimation, so in some cases they don't. Then the journalist at least will find future estimations done by analysts.

The best source is Thomson's First Call<sup>26</sup>, a company gathering multiple views on Wall Street, creating an average estimate on the company's future financial results. Analysts also publish research reports on the companies they cover. For instance, three different analysts cover DeCODE Genetics: Jeffrey Zekauskas at JP Morgan, Daniel Mahony at Morgan Stanley Dean Witter and Esther Finnbogadottir at Kaupthing Bank.

**Table 5. J.P. Morgan's estimations of DeCODEs results, compared to the actual results**



#### 3.6.1 DeCODE Future Projections

As the example of the DeCODE Future Projections according to JP Morgan<sup>27</sup> highlights [Table 5], not even the specialized analysts know what the future will bring. Journalists should consult as many analysts as possible. For small start-up companies this might however be a problem, because small companies tend to be covered by few analysts.

<sup>24</sup> Press Release "DeCODE Completes Enrollment for Phase IIa Clinical Trial of DG031" (Jun, 18, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] and DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 8

<sup>25</sup> DeCODE 2003 Annual Report II, Form 10-K, SEC Commission File Number 000-30469 (Mar. 15, 2004), [www.decode.com](http://www.decode.com) [Aug. 2, 2004] pp. 8

<sup>26</sup> Telephone number to Thomson's First Call: 1-617-856-24 59. <http://www.thomson.com/financial/financial.jsp>

<sup>27</sup> J. Zekauskas. Company Report DeCODE Genetics, JP Morgan Securities Inc. (Sep. 27, 2001)

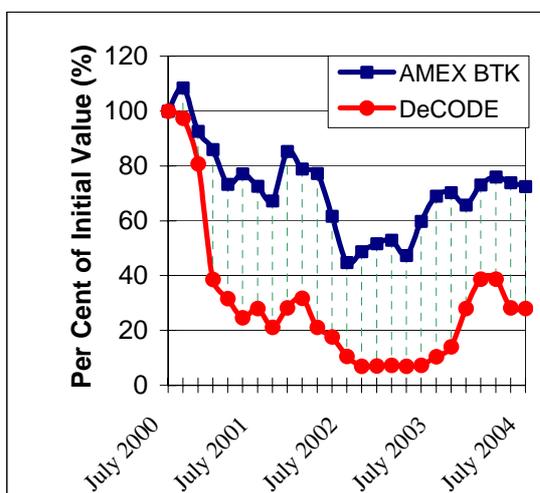
### 3.7 Share Price and Indexes

The share prices are often used by journalists as a means of measuring day-to-day temperatures of companies. It is, however not a good journalistic tool for journalists who really want to evaluate a company’s status. All that the share price can tell you is whether investors are excited about their stocks or not. However, if a journalist wants to mention the share prices, it should be done wisely. A journalist writing about a biotech company should, for instance, compare the target company to other biotech companies. For most branches, there are indexes stating the overall development. In biotech, there are two major indexes. The Nasdaq Biotech Index, NBI, is an average of the 130 largest companies. The Amex Biotechnology Index, BTK, is an average of the 17 largest companies<sup>28</sup>.

#### 3.7.1 DeCODE Share Price and Indexes

DeCODE shares have lost much of their value since the stock was introduced on the secondary market in July 2000, starting at \$28, reaching its all time weekly low at \$1,66 in September 2002, and slowly recovering again to reach \$13 in February 2004, after which it again dipped down to \$8 in July 2004. This down-surge certainly has created distrust among the tens of thousands of Icelanders who acquired DeCODE shares. When comparing to the AMEX Biotech Index BTK<sup>29</sup> it is also clear that the DeCODE share has performed much worse than other biotech shares.

Table 6. DeCODE vs AMEX Biotech Index (BTK)



### 3.8 Insider Trading

The individuals in the board as well as the executives usually own stocks in their company. Their decision to either sell or buy shares is a good measurement on their belief in the company’s future.

<sup>28</sup>Nasdaq Biotech Index: [http://dynamic.nasdaq.com/dynamic/nasdaqbiotech\\_activity.stm](http://dynamic.nasdaq.com/dynamic/nasdaqbiotech_activity.stm)  
and Amex Biotechnology Index: <http://www.amex.com>

<sup>29</sup> The Nasdaq Biotech Index (NBI) wasn't yet created when DeCODE was introduced on the Nasdaq.

Information can be found at [www.lanceranalytics.com](http://www.lanceranalytics.com), a subscription-based service from Thomson Financial. Lanceranalytics can also be a valuable tool if you want to investigate whether a company is into illegal business.

### 3.8.1 DeCODE Insider trading

Of his three million shares, the CEO Kári Stefánsson sold one hundred thousand just before Christmas 2003. This wasn't a good move, since their value increased shortly after that. No other major sales, purchases or option exercise reported.

## 3.9 **Lawsuits**

A company may run into legal hurdles. Depending on its activity, a private person, another company or special interest organizations might file lawsuits. This might significantly slow the progress of the company. Finding information about lawsuits can be hard, but if it's a major one, it must be filed to SEC. Depending on which country the lawsuit is filed in, the public right to access the information varies.

Information can be found at [www.westlaw.com](http://www.westlaw.com), or, specifically for Sweden, at [www.westlaw.se](http://www.westlaw.se)

### 3.9.1 DeCODE Lawsuits

The first lawsuit was filed in May 2001 by a minor, Ragnhildur Gudmundsdóttir. She wanted to force the Icelandic Public Health Director General to honor her request that her diseased father's health records not be transferred to the Icelandic Health Sector Database, IHSD. In a landmark decision<sup>30</sup>, the Icelandic Supreme Court stroke down the IHSD Act as unconstitutional on November 27<sup>th</sup> 2003.

This was a serious drawback for DeCODE, having advertised the IHSD as a crucial part of its gene mining exploration.

## 3.10 **Partners**

Start-up companies almost always need a financial partner to get started. It varies widely from private investors, angels, to venture capitalist funds and even other companies. One way to evaluate such a company is to examine its partners. Since it's a risky move to support new companies, an evaluation is always done before any company decides to offer their support. If a well-known proven company is involved, chances are greater that the business idea of the target company is solid, as stated by Jeffrey Zekauskas at JP Morgan<sup>31</sup>:

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<sup>30</sup> Icelandic Supreme Court, Verdict No. 151/2003, Nov. 27, 2003. Ragnhildur Gudmundsdóttir Vs. The State of Iceland. As PDF-file on [www.mannvernd.is/english](http://www.mannvernd.is/english) [Aug. 2, 2004]

<sup>31</sup> J. Zekauskas. Company Report DeCODE Genetics, JP Morgan Securities Inc. (Sep. 27, 2001)

*“The size and quality of partnerships [...] between the early-stage company and large pharmaceutical partners present the investor with reasonable [...] starting points for the rank ordering of the value of early-stage companies. Moreover, collaborations undertaken with the leaders in various therapeutic categories or fields can lead to a different validation than those undertaken with pharmaceutical partners whose technical or market strength is not the highest.”*

Information can be found in annual reports.

### 3.10.1 Partners of DeCODE

A substantial portion of DeCODE’s revenue has derived from contracts with a limited number of significant partners. The largest partner is Roche, followed by Merck and Applied Biosystems Group, ABG. Together, these three joint ventures have accounted for up to 60% of DeCODE’s annual revenue. In March 2004, DeCODE teamed up with computer giant IBM to develop genetic informatic tools.

Other companies believe in DeCODE. However, it can be worthwhile for journalists to investigate whether the partner’s agenda coincide with the supported company’s, or if hidden agendas might be present.

## 4 Conclusion

This paper is not a manual for journalists covering innovation-based companies, but rather an innovative journalistic introduction and tutorial to support investigations of young companies, particularly those that can be characterized as startups in hot fields. Since companies may meet competition, legal regulations, ethical hurdles, political resistance and customer’s skepticism, journalists will have to add other methods, depending on specifics and the developmental stage of the company.

### 4.1 Limitations with the tools and methods

This paper focuses on a publicly traded company. A private company, like Google before the IPO, will be harder to evaluate since the journalist must find people willing to speak. Mylene Mangalindan, a Wall Street Journal reporter in San Francisco, covers two Internet search engine companies; privately held Google (the news on Google’s IPO hadn’t broke at this time) and publicly traded Yahoo. When it came to Google, she was deserted to interviews with investors and employees as well as with Google’s partners and customers. But crucial figures like revenue, income, expenses and executive compensation were “extremely hard to find”<sup>32</sup>.

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<sup>32</sup> M. Mangalindan. “Google and Yahoo” Private e-mail communication regarding her beat at The Wall Street Journal (April, 2004)

Since most methods in this paper rely on SEC-filings, they can't be applied to research on privately owned companies. However, that isn't a large problem for main stream news media since the editorial interest in a company tends to increase significantly as it goes public, thus becoming interesting to the audience who wants to know where to invest.

For specialized news media covering innovation-based startup companies that aren't publicly traded, the only way is to do like Mrs. Mangalindan; conduct lots of reporting and build a trustful relationship with the company.

## 4.2 Possibilities with the tools and methods

At The First Conference on Innovation Journalism in April 2004, most participants agreed that the limited coverage on Innovation based companies doesn't reflect their importance in the modern, innovation-based economies. A number of possible reasons were suggested. One explanation could be a lack of journalistic tools and methods. Numerous tools and methods have been developed to ease the challenge for business reporters, regularly supplying the audience with information to decide whether to buy or sell. The science reporter, on the other hand, writes stories without forward looking statements. The audience seldom, or never, expects the science reporter to blow the whistle on unhealthy companies or weak business ideas.

The problem arises somewhere in between. Traditional business reporting tools, for one, probably won't aid a reporter trying to understand why a company like DeCODE still exists though it hasn't made profit during its seven years of existence. Similarly, as business moves into universities and science institutions - the domains of science journalists - the reporter will have to grasp business models and cope with secrecy. I believe that the lack of Innovation Journalism can't be explained by a lack of audience or market, but by an absence of Innovative Journalism, in other words adequate journalistic methods and tools. There are few, if any, papers published on Innovation Journalism tools and methods.

The lack of investigational methods and tools isn't an isolated problem for journalists covering innovation-based startups. I used DeCODE Genetics' start-up agreements with its partners to evaluate its health. Much later, I realized that this is the method that analysts trust the most when they evaluate innovation-based startups. Furthermore, the Wall Street Journal biotech reporter David Hamilton claims that much of the financial uncertainty in the biotech industry reflects the fact that there is no particular good way for investors and analyst to value biotechnology companies<sup>33</sup>. This, if anything, calls for an urgent need to develop new methods and tools for reporters covering innovation-based startups, no matter if they call themselves Innovation Journalists or not.

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<sup>33</sup> D. Hamilton. "The Biotech lottery", private e-mail communication regarding his research for a Wall Street Journal leader (Apr., 2004)

## 5 Acknowledgements

I wish to thank Scott Thurm for valuable input at the oral presentation of this paper, Steve Yoder and Cathy Panagoulas for hosting me at the Wall Street Journal's San Francisco bureau, Don Clark for helping me cutting through the crap in financial reports, VINNOVA for financial support during my stay in San Francisco and Västerbottens-Kuiren for granting me a four month leave.

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## Name Index

- ABG, Applied Biosystems Group, 17  
 BTK, Amex Biotechnology Index, 15  
 Clark, Don, 19  
 EFTA Surveillance Authority, 8, 9  
 Erlingsson, S.J., 6  
 FDA, Food and Drug Administration, 13, 14  
 Finnbogadóttir, Esther, 14  
 Guðmundsdóttir, Ragnhildur, 16  
 Hamilton, D., 9, 18  
 IBM, 17  
 Icelandic Supreme Court, 16  
 IHSD, Icelandice Health Sector Database, 9, 16  
 Incyte, 12  
 Innovation Journalism, 4  
 JP Morgan, 14, 16  
 Kaupthing Bank, 14  
 Lanceranalytics, 16  
 Lillkvist, Marcus, 1, 4, 19  
 Mahony, Daniel, 14  
 Mangalindan, Mylene, 17, 18  
 Mannvernd, 6, 9  
 Medichem Life Sciences, 8  
 Meek, J., 8  
 Merck, 17  
 Morgan Stanley, 14  
 NBI, Nasdaq Biotech Index, 15  
 Nelkin, D., 5  
 Nordfors, David, 4  
 Panagoulas, Cathy, 19  
 Roche, 3, 4, 5, 7, 8, 9, 14, 17  
 SEC, Securities and Exchange Commission, 3, 4, 7, 8, 9, 10, 12, 13, 14, 16, 18  
 Simmers, T., 12  
 Stefánsson, Kári, 5, 6, 16  
 The First Conference on Innovation Journalism, 4, 18  
 Thomson Financial, 16  
 Thomson's First Call, 14  
 Thurm, Scott, 19  
 UmanGenomics, 5, 19  
 USPTO, US Patent and Trademark Office, 13  
 Västerbottens-Kuriren, 1, 4, 5, 19  
 VINNOVA, 4, 19  
 Wall Street Journal, 4, 9, 10, 17, 18, 19  
 Witter, Dean, 14  
 Yoder, Steve, 19  
 Zekauskas, Jeffrey, 14, 16

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