

ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES

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November 1994 Vol. X. Issue No. 10

ISSN 0334-6307

From the Editor's Desk

Biotechnology industry flourishes

Whether the Israeli biotechnology industry "is come of age" or "about to come of age" depends on the speaker. Prof. Max Herzberg, Chairman of the

National Steering Committee for Biotechnology points out that sales of the industry, not including pharmaceuticals, have increased dramatically from \$15 million in 1988 to \$265 million in 1993. "The industry's contribution is in exports, as 85% of all sales are outside Israel," points out Herzberg. Chief Scientist of the Ministry of Industry & Trade. Dr. "Shuki" Gleitman says the Israeli biotechnology industry concentrates the majority of its activity among the ten largest companies. "There are many small participating companies whom I do not classify as conventional industrial organizations. Yet, health care as a group is third in importance in the ministry's priorities, and part of its financial backing of R&D activities." The chief scientist has a \$300 million annual budget for research and development grants.

"We do not choose specific areas of activity to support, but react to the market's interest. To us, it is important only that the applicant meets the criteria and shares the financial risk," explains Gleitman.

Activity justifies additional funding

"The demand for research and development funding, and the amount of funds provided, increased slowly in the four-year period ending in 1992. In 1989, the grants awarded were under \$100 million. By 1992, this figure reached almost \$150 million. But budgets

were increased sharply in 1993, as was the value of grants awarded -- a total of \$230 million. The 1994 budget included a record \$300 million for R&D,"

says a ministry spokesman. The biotechnology industry exports just under \$200 million worth of products every year -- about 15% of Israel's total industrial exports in 1993. Should it not be entitled to nearly \$42 million worth of R&D support? Based on the growth of recent years, sales of \$650 million by the year 2000, or 1-2% of the total world market, is a realistic goal.

Gleitman points out that it takes 10 years and \$150 million for a company to research and develop a pharmaceutical product and then move from the development stage to the market place. Companies that are in that business are his criteria for a biotechnology industry. Herzberg counters that Israeli companies keep the period short -- an average 3-5 years versus 6-10 years in other countries. The *Israel High Tech Report* in its

The survey of the 63 companies included in the Israeli Biotechnology Industry Survey carried out in October 1994 by the *Israel High-Tech and Investment Report* offered some insights: Companies prefer to schedule relatively short-term product development cycle projects.

* Typically, diagnostic kit companies need two years to move a product from the laboratory to the market place.

* Dr. Michal Arnon, Director for R&D and Business Development of Teva-ABIC, a unit of Teva Pharmaceuticals and a veterinary vaccines and pharmaceutical company, responded that it requires 3-4 years. The company has a \$1 million annual R&D program

* Diagenetics' General Manager Dr. S. Hirsch estimates that the development stage company will have taken 24 months with its first diagnostic product for genetic disease. The company has used more than \$1 million in its R&D program. "We are in advanced stages of negotiations to sign an international agreement for technology and marketing," says Dr. Hirsch. Diagenetics R&D funding has come from the OCS and from its investors, namely the Dutch Erythiae Group. "We are very satisfied with the support given to us by Dr. Gleitman's office," adds Dr. Hirsch in reference to Office of the Chief Scientist.

In this Issue

BIOTECHNOLOGY CONFERENCE ISSUE

Biotechnology industry flourishes

IHTIR survey reveals industry's focused approach

Thermoflex non-surgical treatment for prostate treatment

End of secondary Arab boycott

Trade with Jordan expected to stay small

Israel's *Fortune* list

Teva's multiple sclerosis drug

Hypericyn testing for AIDS

The Capital Market

Subscription: Bulk copy and reprint information available on request

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survey has found that companies are not seeking to develop a molecule but to concentrate on specific technology.

Recently *Business Week* in its analysis of biotechnology in America, pointed to the existence of 1,000 public and private companies. In 1993 American biotechnology firms sold \$4 billion. On a comparative basis the Israeli industry has done as well, and its future appears to be brighter than that of its American counterpart, as it concentrates on realistic goals rather than on scheduling "blockbuster" pharmaceuticals research and development programs.

Israel as an international research center

The local biotechnology industry is in a hurry to move forward. Our reports indicate that 60 major international corporations, some of the best names in the world, have asked to participate in the Jerusalem conference. They are coming to meet with their counterparts and discuss possible business connections. Israel has been described as "an interesting place for biotechnology" On the other hand, the *Israel High Tech & Investment Report's* national survey of the biotechnology industry indicates that an over-riding majority of the Israeli companies are seeking international corporate connections in the form of joint ventures, marketing or other kinds of cooperation. The conditions are ripe for expansion by means of international ties.

In the August and September 1985 issues of the *IHTIR* we wrote about two companies: InterPharm Laboratories and Biotechnology General. These companies had no visible products, but they had a dream, and technologies based on local R&D. In 1993 they produced more than \$50 million worth of biotechnological substances and employed over 400 researchers. In the field of diagnostics, Orgenics and Savyon Diagnostics are producing diagnostic kits at an annual rate of \$8 million and \$6 million respectively. In 1993 there were 23 startup companies, indicating that where there is a good idea, financial backing can be found.

The National Biotechnology Steering committee, sensitive to the needs of the local biotechnology industry, intends to make Israel an international center for research and development in biotechnology. This could be as natural a development as in the electronics field, where world-class companies such as Intel and Motorola have used Israeli human resources to develop world-class products. The logic is both simple and

powerful. Israel possesses the necessary human element, with 30% of all scientists in the life-sciences; the universities are internationally minded; a new pool of 10,000 -40,000 scientists (recent immigrants from Russia) is available; and the correct mental attitude to hard work and perseverance is assured.

Herzberg likes to point out that scientists in the biotechnology industry tend to integrate successfully.

He sees it as a virtue that they take an interest in other aspects of the business and thereby become more valuable to their companies. He also points out that sales per employee in the industry have risen sharply -- \$110,000 per individual in 1993, from \$83,000 in 1990. This has taken place notwithstanding the fact that the number of employees has risen four-fold in that time, which indicates that there are many new companies entering the field and selling products for the first time. International cooperation is already taking place, with the formation of the United States - Israel High Tech Commission. It has an initial joint capitalization of \$30 million. One of their first programs adopted is to standardize the Israel Ministry of Health's criteria for approving drugs to parallel those of the American Food and Drug Administration (FDA).

A Visit to Improve Economic Ties

The Minister of Trade & Industry, Mr. Micha Harish, met the Chinese Vice-Premier Jou Jiahua in Israel on October 3, 1993. The Vice Premier attended meetings with government officials and Israeli industrialists to improve economic ties between the two countries. During his stay he visited the Dead Sea Works to promote a joint venture to establish a potash production plant in China. He also stopped in at Tadiran to discuss electronics, and visited Israel Aircraft Industries to talk about aircraft and associated products. The Vice Premier was also interested in Israeli high-tech products, medical equipment, biotechnology and software. In 1993 trade between the two countries amounted to \$87 million, Israel exporting \$54.7 million to and importing \$32.7 million from China. During the first six months of 1994, imports from China amounted to \$33.3 million, primarily due to an increase in textiles and light industries. Israel exported \$21.6 million worth of goods to China during the same period.

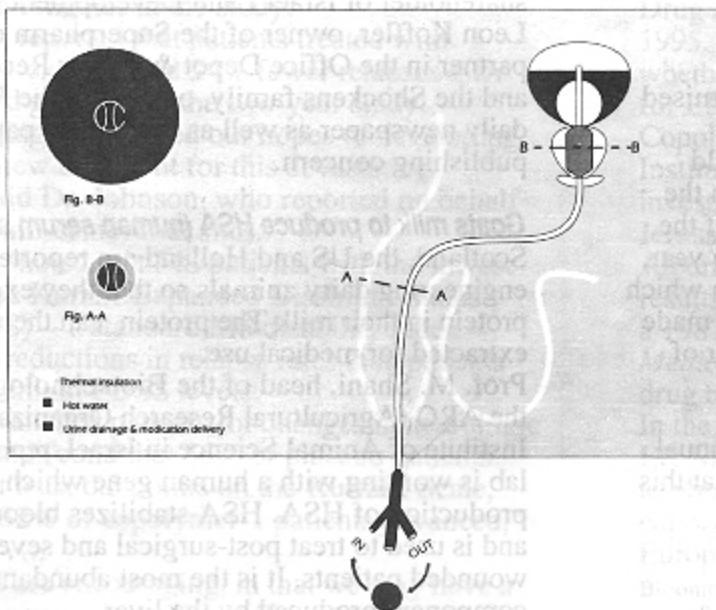
Elimination of double-taxation between the US and Israel

The long-negotiated treaty between the US and Israel for the prevention of double taxation is due to come into existence in January 1995. Its main thrust is the elimination of double taxation of profits. Both countries will have access to bank account information under certain conditions

Innovation in Prostate Reduction

Males suffering from benign prostatic hyperplasia -- enlargement of the prostate gland -- may soon have the option of a patented non-surgical treatment which decreases the size of the gland. Since most middle-aged males suffer from some form of prostate disorder, there is a vast market for an alternative to surgery, ultrasound or microwave treatments.

The new treatment uses a system named Thermoflex, developed in Israel over nearly five years and at a cost of \$1 million. Private investment and government-guaranteed loans have provided the required financing. An American patent has been granted and patent protection has been applied for in other countries. The know-how is held by Argomed Ltd., Herzliya Pituach, Israel.



"The results of initial clinical trials in Israel and England are most promising," says Uzi Eshel, medical engineer and inventor of Thermoflex. An initial group of 40 patients have responded favorably with an improvement in their condition after a period of one to six months. The questionnaire dealt with before-and-after symptoms. Besides general improvement, "post peak flowrate" and "post-void residual urine tested" showed a meaningful improvement.

Prof. Zvi F. Braf, Chairman of Surgery and Chief of Neurology at Tel Aviv Medical Center in Ichilov Hospital, says he is satisfied with the results of the clinical tests on Thermoflex. "The procedure is suitable for males suffering from certain forms of partial blockage by the prostate. The treatment can be performed in a clinic on an ambulatory basis, without the need for full anesthesia," says Prof. Braf. The thin catheter introduced through the urethra is similar to that used in angioplasty, and

incorporates a balloon. Water heated to 60 degrees centigrade is introduced. After the procedure is performed the urinary tract is reopened. To broaden clinical testing, an additional study is being prepared. One hundred prostate sufferers are being signed up. As the company moves towards commercialization it may consider additional equity financing.

The first buds of a peace economy?

The secondary and tertiary boycott of Israel was officially ended by six of the Gulf states on September 30, 1994.

The six member states of the Gulf Cooperation Council -- Saudi Arabia, Oman, Kuwait, Qatar, Bahrain and the UAE -- have announced that they will cease upholding the secondary and tertiary boycotts. The secondary boycott prevented Arab countries from doing business with firms dealing with Israel, while the third-level boycott stopped these states from contacting companies dealing with blacklisted concerns. Finance Minister Avraham Shohat said the move will help the Israeli economy, while Industry & Trade Minister Micha Harish predicted the benefits will be political rather than economic. Harish commented that due to the peace process, multinational concerns have already begun making moves to enter the Israeli market, proving that the boycott had already lost its teeth. Danny Katarivas, head of trade with Arab countries at the Industry &

Trade Ministry, said that without a doubt, multinationals which until now have been bound by the boycott will review their relations with Israel and make it part of their Middle East business plans. He noted that international construction, insurance, banking and trading concerns are likely to review their relations with Israel following the GCC's move.

Industry & Trade Ministry

Trade with Jordan will only grow to between US\$5 million and US\$10 million a year during the next ten years. This analysis was arrived at by two economists from the Bank of Israel's research division, who predicted that even with free trade and warm relations, the amount of trade between the two states will be minimal in the short and medium term. The researchers based their evaluation on comparisons of the import and export needs of both states. Likely trade items include vegetables, fruits and textiles

from Jordan, while export items from Israel include scientific instruments and industrial inspection services.

Avital Ber

"Let there be clean irrigation!"

Palestinian vegetable growers in Gaza need up-to-date irrigation techniques -- an area in which Israel excels. Recent reports by the Israeli Center for Consumer Protection indicate that lettuce, celery and parsley imported from Gaza have been irrigated with sewage water. The Ministry of Health's inspection of eggplants revealed that they contain excessive quantities of *E-coli*, an intestinal bacteria. Techniques for the re-use of sewage water have been developed at Hebrew and Ben Gurion Universities, and have already been adopted by a number of African nations.

Privatization of El-Al - History in the making

Y. Kasar, Israel's Transport Minister, has promised that El-Al Israel Airlines will emerge from receivership by mid-February 1995. This would clear the way for a sale of 51% of its shares on the Tel Aviv Stock Exchange in the early spring. If the privatization move does take place this coming year, it will mark the 27th anniversary of the date on which Jack Nash, currently an Odyssey partner, first made an offer to Ben Arzi, then the General Manager of El-Al.

In recent years, El-Al's profitability has been approximately, US\$10 million, or 1% of its annual income. Some members of parliament claim that this is too small to justify privatization.

The richest of the rich -- millionaires all

There's an old joke that says it's easy to make a small fortune in Israel -- simply come to the country with a large fortune, and let the Israeli economy do the rest.

Well, it's time to lay that old saw to rest. The Hebrew daily *Yediot Achronot* recently listed the 50 richest people in Israel. At the top of the list is Shoul Eisenberg, multi-millionaire businessman, with a variety of interests in over 18 countries. A close second is Ted Arison, who made his fortune in the US, and runs his own shipping line. One of the most successful industrialists in Israel is Stef Wertheimer. Last year his Iscar company had a net turnover of US\$177 million. His worth is estimated at around US\$400 million.

On a par is the Carasso family. The Carassos have been in business in Israel since 1920, when they founded Bank Discount with the Recanatis. Their car import business had a 1993 turnover of US\$141 million, and they have assets in IDB Holdings and real estate totaling around US\$400 million. Close on

their heels is the Federman family, which owns the Israel Dan Hotel chain, founded in 1960. Next is Michael Strauss, the majority shareholder in Strauss food factories, a restaurant and ice cream chain valued at US\$150 - 200 million. The Zoglobeks are another family which started their fortune with a food company in Nahariya over 57 years ago. Today it is valued at about US\$100 million. The Zoglobek family is also reputed to own real estate valued at a mere \$250,000.

Brothers Yuli and Sami Ofer, owners of a shipping company, real estate and other projects, are together worth about US\$100 million. The President of the Builder's Association, Yona Mordechai -- the new Central Bus Station was constructed by his company -- is worth about US\$50 million.

Lower down the list are Yaacov Nimrodi, majority shareholder of Israel Land Development Company Leon Koffler, owner of the Superpharm chain and a partner in the Office Depot & Tower Record chains, and the Shockens family, owners of the *Ha'aretz* daily newspaper as well as other local papers and a publishing concern.

Goats milk to produce HSA (human serum albumin)

Scotland, the US and Holland are reportedly engineering dairy animals so that they express human protein in their milk. The protein can then be extracted for medical use.

Prof. M. Shani, head of the Biotechnology Unit of the ARO (Agricultural Research Organization) Institute of Animal Science in Israel, reports that his lab is working with a human gene which governs the production of HSA. HSA stabilizes blood pressure, and is used to treat post-surgical and severely wounded patients. It is the most abundant blood component produced by the liver.

Prof. Shani's team is trying to get goats to produce it in their mammary glands rather than in their livers by hooking gene-control elements to the genes expressed in milk.

Transgenic mice which have had this altered gene inserted into them secrete 20 gm of protein for every liter of milk. If goats could produce only 1 gram per liter, it would make the venture viable.

Besides stimulating the expression of the gene, there is a problem of gene integration. As there is no known way of aiming genes at a specific DNA site, the altered genes have to be microinjected blindly into the nuclei of fertilized goat eggs. The injected eggs are implanted in foster mothers in the hope that the offspring will carry the gene in an inheritable, protein-functioning fashion. One such transgenic goat could then breed many.

Of the 200 female goats presently serving as egg donors and recipients of genetically manipulated eggs, 20 are carrying fetuses.

Peri Ltd. has taken over R&D support from a US drug firm, establishing the Serum-Tech Company in a joint venture to develop the goat with Teuza Venture Capital Ltd.

The endeavor rests on a patent for the production of HSA in animal milk. Despite trade estimated at half a billion dollars, demand for the protein still exceeds supply.

Teva's new multiple sclerosis drug

Teva's Copolymer-1, a novel agent being tested for use in exacerbating-relapsing multiple sclerosis, has been found to significantly reduce the relapse rate, according to data presented to the American Neurological Association by Dr. Kenneth Johnson, professor and chairman, Department of Neurology, University of Maryland School of Medicine, and principal investigator in the study.

Dr. Johnson reported that patients treated with copolymer-1 experienced 24% fewer relapses than the untreated group over the two-year study.

"These findings confirmed our hopes of developing an entirely new treatment for this devastating disease," said Dr. Johnson, who reported on behalf of the 11 multi-center trial sites.

Dr. Johnson noted that MS patients with the lowest scores on the Kurtzke Expanded Disability Status Scale (EDSS) -- a standard MS disability index -- had greater reductions in relapse rates than patients with higher initial EDSS levels.

"We also evaluated patients for changes in neurologic disability, and found that 46% of placebo patients advanced at least 0.5 points on the Kurtzke Scale, while only 32% of copolymer-1 patients advanced," he said.

"These data are encouraging, in that we may have a completely new agent with a different mechanism of action with which to treat this difficult disease," he said. "It is especially important to find early therapeutic interventions, since the reduction in number of relapses may affect the natural course of MS in many patients."

Patients in the study who had less disability as measured on the Kurtzke Scale also had fewer relapses than did more disabled patients -- a finding that suggests copolymer-1 may be more useful earlier in the disease.

Side effects of copolymer-1 were primarily minor injection-site reactions. A brief systematic flushing or chest tightness and dyspnea, palpitations and anxiety developed at least once in 6% of copolymer-1 patients and in 5% of placebo patients, but caused only 2% of the patients to drop out of the study. In these patients, reactions resolved quickly with no lasting effects. Dr. Johnson commented that copolymer-1 appears to be well tolerated, with a minimal side-effect profile.

Reacting to Dr. Johnson's report, and to data presented by a researcher on another investigational drug, Dr. Stephen Reingold, Vice-President of Research and Medical Programs for the National Multiple Sclerosis Society, said the society "is highly encouraged by these promising results. They may lead to the development of additional treatments for relapsing-relapsing [also known as ER] MS."

"Because we were interested in assessing the impact of copolymer-1 in early MS patients, we studied those with exacerbating-relapsing MS rather than looking at patients who were more progressed," Dr. Johnson said. "Further work will be needed to fully evaluate the effect of the drug in more severe, progressing patients."

On the basis of its presentation, Teva plans to submit a New Drug Application (NDA) to the U.S. Food & Drug Administration (FDA) in the second quarter of 1995. The FDA will evaluate the data to decide whether copolymer-1 can be marketed as a treatment for ER-MS.

Copolymer-1 was discovered at the Weizmann Institute of Science in Rehovot. It was clinically investigated first at the Hadassah Medical Center in Jerusalem, and studies were then carried out at the Albert Einstein College of Medicine in the U.S. The results of the Albert Einstein study were published in a 1987 article in *The New England Journal of Medicine*. Copolymer-1 is designated as an orphan drug by the FDA.

In the US, copolymer-1 is being made available to ER-MS patients in a program which allows patients to obtain the promising medication. Additionally, copolymer-1 is being studied in clinical trials in Europe and Israel.

Bloomberg

Locally developed biofungicide readied for market

Ecogen Israel, a company specializing in the development of biofungicides, is expected to launch its "unique, environmentally safe biofungicide" in January.

AQ-10 acts to prevent the damage caused by powdery mildew, a widespread agricultural disease. Sales will begin early in 1995 to growers of specialty crops such as grapes, strawberries and ornamentals.

Editorial note: It has been nearly 11 years since this chemical was first isolated by Prof. Abraham Sztejnberg, department head of the Hebrew University of Jerusalem's department of plant pathology and microbiology. Ecogen acquired rights to the invention in 1986. The development is a milestone, in that it joins a relatively short list of chemically-based products totally developed within the country. It is also a reminder of the time needed and the vast resources required to make the jump from the laboratory to the marketplace.

UPDATE**ORGENICS LTD.****The strategy**

Since its founding in 1983, Orgenics Ltd. has adhered to its strategy of developing and marketing simple but sophisticated diagnostic tests which are accurate, easy to use, relatively inexpensive and provide quick results. These kits are used in the analysis of blood, saliva and other clinical specimens for evidence of infectious diseases, including AIDS, hepatitis and chlamydia.

**The Orgenics line of diagnostic products
ImmunoComb**

Since 1985, Orgenics has been selling ImmunoComb, its primary product line. The ImmunoComb product line is a patented family of solid state enzyme immunoassay test kits which permit diagnosis of diseases caused by several infectious agents, including HIV-1 and HIV-2 (the viruses associated with AIDS), hepatitis and chlamydia. The ImmunoComb simplifies and streamlines the diagnostic procedure, offering a high degree of accuracy without requiring the costly and time consuming ELISA procedures and equipment.

It is currently estimated that the number of people worldwide infected with these three diseases is 14 million, 300 million and 280 million respectively. Over the next 12 months, to complement its existing line of 17 different ImmunoComb test kits, the company expects to introduce to the market additional ImmunoComb tests. These will include a test for *H. pylori*, a bacterium associated with ulcers and stomach cancer, and a saliva test for HIV.

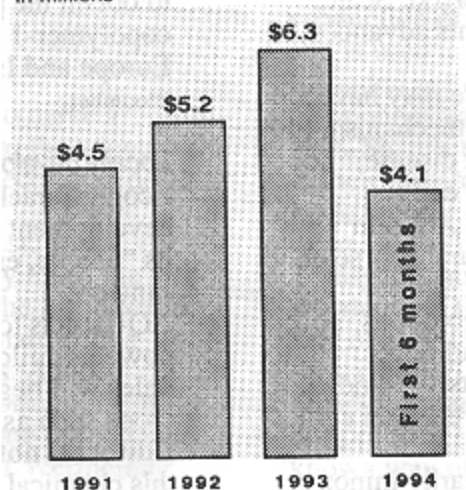
Additional products in advanced development

At an advanced stage of development is the StreamTest, a single-sample,

compact diagnostic device which is expected to provide the sensitivity required for saliva and blood serum testing and will give the results in 2 to 10 minutes. The StreamTest will allow dual recognition of antibodies, leading to achievement of a high degree of specificity and sensitivity in diagnosing various diseases.

GeneComb is also at an advanced stage of development. GeneComb is a simple and easily performed genetic assay that will substantially reduce the time required to perform DNA testing. The GeneComb can detect and target DNA in as little as 30 minutes with sensitivity equivalent to existing genetic testing techniques and equivalent to currently widely-performed genetic testing which requires a full day and, in some cases, longer.

Sales
in millions



"The market for genetic testing is huge and should be near the \$1 billion annually. However, the market's projected development has not taken place. Genetic testing currently in use tends to be complicated, expensive and needlessly sophisticated. We are entering the field with a brand new technology which makes gene testing

as simple and routine as the use of a dipstick. In an hour, or less, after a two-step procedure, the test results become clearly evident. It is obvious that genetic testing, for it to become commercially feasible, must match the price of clinical testing costs. What we are doing for HIV testing will also be done for ulcer testing. After determining the related bacteria, it can be cured in ten days with simple antibiotics and with bismuth," says Prof. Max Herzberg, Orgenics Chairman of the Board and its Chief Executive Officer.

Rapid Growth in Sales

These two new lines, StreamTest and GeneComb, could add substantially to the company's 1993 sales of \$6.3 million. In the first half of 1994, sales continued to increase at a record pace, to \$4.1 million. Orgenics' products are sold in more than 20 countries with France, Germany and South America being major markets.

Research & Development

Twenty one researchers are involved in R & D of which seven hold advanced degrees. Over the three years ending December 1993, R & D expenditures have averaged 13% of annual sales for a total of \$2.55 million.

Orgenics plans its Initial Public Offering

Orgenics is a privately owned company, but after completing its planned IPO, its shares will be traded on NASDAQ National Market under the symbol "ORGXF".

For further information:

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The Capital Market

Stability, Inflation and Devaluation

The Israeli capital market continues to react emotionally to political developments. The initialing of the Israel-Jordan Peace Agreement and the expectation of further movement with Israel's eastern neighbor is motivating the bulls to buy equities based on the possibility of peace negotiations with Syria.

	10/18/94	Change since 1/1/94
General Share Index	182.31	-32.50%
Mishtanim Index	191.92	-22.51%
Maof Index	195.30	-20.29%
Karam Index	172.89	-46.05%
Devaluation of Shekel	3.01	-1.50%

However, the volumes are not convincing. The Mishtanim equities, those of the 100 largest capitalization issues, traded in mid-October on low volumes of less than \$13 million a session. The savage terrorist attack in the heart of Tel Aviv was followed by a sharp drop, but the next day the Mishtanim Index rose 3%. As can be seen from the table, the Mishtanim Index on October 18 stood at 192, close to the recovery high since 4th July, when the index stood at 148.

Economic indicators appear to be positive, with the Gross Disposable Product (GDP) being projected by most economists at 6-7% for the current year.

unemployment remains stable and well below the 10% level, but the trade gap continues to be negative and is widening.

As the international financing community focuses on the value of international currencies, with the Japanese yen and the German mark recently recording new highs, there is a call for adjustment of the rate of exchange of the Israel shekel in terms of the U.S. dollar. The recent representative rate of the dollar has been NIS 3.01, just 1.5% less than it was at the beginning of 1994. While importers are pleased (and that goes for those buying capital goods and raw materials) exporters are now calling for an adjustment in the rate of exchange of at least 3%.

The Bank of Israel, Israel's central bank, chooses to refrain from intervening in the currency market as long as the dollar is showing weakness. However, our own feeling is that some slow adjustment as mentioned above is likely before the end of the year. Our logic is simple. The rate of inflation is likely to

reach 14% this year, and the par between inflation and devaluation of 5% - 8% would be acceptable to both importers and exporters. The Bank of Israel twice a week issues currency options, and there is shekel - dollar option market as well. But these are still in their infancy and cannot be counted on by investors either as a hedge or for speculative purposes.

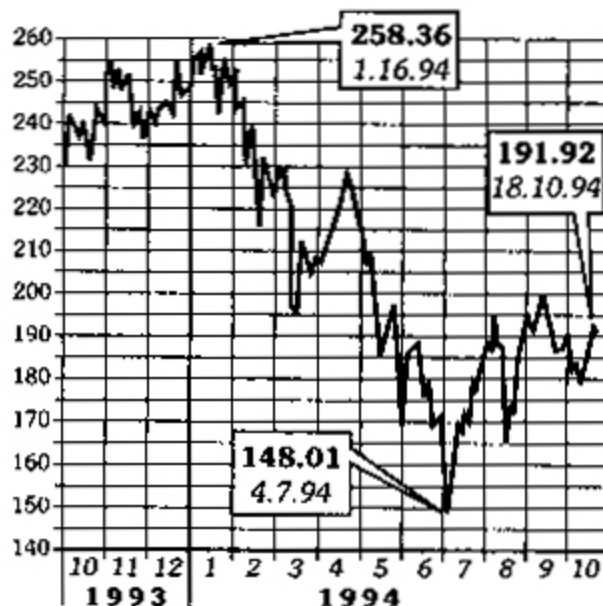
The privatization program is moving ahead only slightly, and the prospects are that Israel Chemicals -- the country's largest chemical combine -- and El-Al Israel Airlines will not go under the block in 1995. In this sense Israel is the same as France, Italy and Spain, where privatization programs have been delayed for a number of months.

Israeli Companies on Wall Street Tower Semiconductor Ltd.

As we go to press, we are expecting Tower Semiconductors Ltd. to register its shares for trading on NASDAQ under the symbol TSEMF. The extract below is from the registration prospectus:

The company commenced operations as an independent business on March 1, 1993, when it acquired its manufacturing facility from National Semiconductor. National invested approximately \$120 million to construct and equip the facility

Two Sided Index
(Mishtanim)



before selling it as part of a worldwide restructuring of its manufacturing operations. National continues to own 19.2% of the outstanding equity of Tower, and has a representative on the company's board of directors. Since the acquisition, the company has significantly increased its manufacturing capacity, sales and net income, as well as expanding its customer base to include three of the worldwide leaders in semiconductor technology.

At the time of the acquisition the company had one customer and a capacity of approximately 5,000 wafer starts per month, and used both the 1.25 and 1.0 micron manufacturing processes.

Since the acquisition the company has been able to increase its sales and profitability significantly by focusing on four primary objectives: (i) the expansion of its customer base through long-term purchase agreements with Hewlett Packard and Motorola, (ii) the expansion of its manufacturing capacity (currently about 8,500 wafer starts per month) through installation of new equipment, improvement of equipment utilization, reduction of cycle time and streamlining of the manufacturing process, (iii) the reduction of its costs through improvement of equipment, process yields, operational efficiencies and economies of scale and (iv) the advancement of its process technology through the introduction of an 0.8 micron process. The underwriters of the company are Bear Stearns & Co. Inc. and Furman Selz Inc. Israeli banking sources indicate that there is good demand for this issue, consisting of 3 million shares with pricing expected to be at about \$13.

Tower is profitable and sales for the six months ending June 1994 were \$25.6 million, on which it earned \$2.7 million. Since the company only recently became an independent facility, there are no comparable figures available.

Organics Ltd.

In the sponsored editorial appearing in this issue is an update of the activities of Organics Ltd. which produces innovative diagnostic kits. Its IPO (Initial Public Offering) one million shares, underwritten by Fahnstock & Co. Inc. Unlike biotechnology companies which are sinking money into the development of products, Organics has product, sales and profits. It is one of the two largest diagnostic kit firms in Israel. Its profit margins are moving upwards, and for the six months ending June 30, 1994, were at 11.6%. The margins were more than double those recorded in 1993.

Elscint and ADAC Labs settle their patent disputes

Elscint Ltd. (NYSE: ELT), a leading manufacturer of diagnostic medical imaging systems and Elscint Inc., its American distributor, have agreed to settle

their patent disputes with ADAC Laboratories Inc., and not to engage in patent litigation in the fields of nuclear medicine and digital subtraction angiography for a period of ten years. As part of the settlement, ADAC will pay Elscint Inc. US\$ 2 million, and will use Elscint as a preferred supplier of multi-format imaging cameras.

The Elscint board of directors have nominated Jonathan Adereth as President and CEO, effective September 13, 1994.

Mr. Adereth has been with Elscint for 22 years in various managerial positions, both in Israel and abroad. He has played an active role in the sales growth of the company since 1981. In 1986 he was appointed Vice President of Sales. This year he was appointed Vice President of Marketing and Sales. At the annual general meeting, Adereth and Yigal Baruch, Elbit's CEO, were added to the board of directors.

Scitex acquires ImMix for \$21 million.

With this acquisition, Scitex has acquired its third US-based company, for a total investment of \$100 million.

Scitex management has expressed its faith in the future of video editing by acquiring ImMIX, a California-based video editing company, for \$21 million in cash. ImMIX has installed 700 of its VideoCube systems worldwide.

B.V.R. wins US\$ 2.6 million contract for F-5 simulators

B.V.R. Technologies Israel, a company specializing in ACMI, simulators and other state-of-the-art training equipment, has announced that one of its international subsidiaries won a contract for two fixed-base F-5 flight simulators valued, before options, at US\$2.6 million, to be delivered to an undisclosed customer by the end of 1995.

The company attaches a great deal of importance to this contract, due to the worldwide trend towards F-5 flight upgrades.

This simulator joins a long line of similar products for F-15s, F-16s, A-4s and other fixed and rotary-wing aircraft developed and manufactured by B.V.R. Technologies.

Toppan Moore Expands Indigo Printing Business in Japan

Indigo N.V. (NASDAQ/MNS:INDGF), a leading innovator in electronic printing, has announced that Toppan Moore Company Ltd., Toppan Printing and KSA Systems are strengthening their leadership role in digital printing in Japan by taking delivery of ten additional Indigo E-Print 1000 presses. The Indigo presses, known as E-Press 1440 in Japan, are to be delivered this year. Indigo's recent product enhancements led the companies to request delivery of these units.

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The biotechnology industry in the United States
 OUT is an acronym summarizing the views and opinions held by a growing number of American analysts and fund managers involved in the US biotechnology industry. The letters stand for *Overhyped, Under financed and Too crowded*. Self criticism which in 1994 has been voiced mostly by industry insiders and analysts recently surfaced -- or more correctly, erupted -- in the financial media. *American Business Week*, in a major story of September 26, reported what the biotechnology and investment banking community has been concerned about for many months. *Business Week* writers cited those interviewed. Among the criticisms voiced was that the industry is an underachiever. The conclusions pointed to a dark future for most of the more than 1,000 public and private companies in operation.

A convincing case was presented as to the few achievements of the 20-year-old industry which has attracted \$20 billion in capitalization. This year the prices of the biotechnology companies were sharply lower, and *Business Week* predicted a further shakeout of the industry is inevitable. It would be improper to claim that the performance of the Israeli biotechnology industry bears little or no resemblance to what is happening in the United States. The raising of funds for business activities or R&D on the part of Israeli companies is affected by the state of mind of the investment community. When optimism reigns on Wall Street, investors also direct venture capital and publicly raised money for long-term projects. The success ratio in the field of biotechnology in Israel is unproportionately high. Not counting research institutes and pharmaceutical companies, the country's biotechnology sector consists of 63 enterprises -- gene cloners, recombinant producers, diagnostic kit manufacturers -- most of them striving to develop a unique or at least a differentiated product which will have a chance to find its place in international markets. InterPharm, BioTechnology General, Biomakor, Ecogen,, Healthcare, Mahkteshim, Medi El, Organics, RAD Chemicals, Rahan Meristen, Rotem Industries, Savyon Diagnostics, Zer Science Based Industries, and a handful of others have developed novel products and/or employed novel technologies. Yet, while these companies account for the majority of the turnover and exports, many others are emerging and represent the second tier which will probably produce generate the same excitement that the above companies generated in the business world and in the media.

Hypericin for AIDS

The antiviral properties of the compound Hypericin, first documented at the Weizmann Institute, are being

tested on AIDS patients in three American research hospitals.

In the early 1980s Prof. David Lavie of the Department of Organic Chemistry began investigating whether *Hypericum triquetrifolium*, a plant growing wild in Israel, possesses the same medicinal qualities as *Hypericum perforatum* (St. John's wort), long used as an anti-depressant. Dr. Lavie isolated one of the plant's active ingredients, hypericin, and found it has antiviral activity. Prof. Lavie's son, Dr. Gad Lavie, then working at New York University Medical Center, discovered that hypericin suppresses the action of two animal retroviruses. A joint Weizmann Institute / New York University Medical Center study subsequently showed that hypericin is active against yet another retrovirus, the human AIDS virus HIV. A Weizmann Institute team headed by Prof. David Lavie and Prof. Yehuda Mazur, also of the Weizmann Department of Organic Chemistry, proceeded to synthesize the active substance hypericin and to elucidate its chemical properties.

Laboratory tests of this material by the New York Blood Center recently achieved complete inactivation of over 100,000 HIV particles per milliliter of human blood.

Hypericin for these studies is manufactured by VIMRx Pharmaceuticals of Stamford, Connecticut, under a license granted by Yeda Research & Development Co., which is responsible for the commercial application of Weizmann research.

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