

## The National Strategy for 2400 Israeli Brains 'Returning to Motherland' from Around the World Is Being Implemented

Israel changed its strategy to attract the top talents

This country has around 7.8 million populations and its land area is as small as that of Gyeongsang provinces, the southern part of Korea. Israel is called "The Nation of Miracle" due to its fastest growth in making desert bloom since its establishment in 1948. Surrounded by enemies, the situation in this country has always been tense. However, Israel boasts of its nominal gross domestic product GDP per capita 6 to 8 times higher than that of Korea (according to IMF, World Bank and CIA statistics). The number of Israeli entries in the NASDAQ market is second to only to the US. Israel is currently struggling to overcome a new crisis. The crisis is not caused by Iran's nuclear program but by the brain drain.

### ◆ Brain drain threatening the national existence

Israel fears the outflow of the brains more than it fears the threat of war. Political leaders view it as a crisis of national existence - talents go abroad and don't return.

After the collapse of the former Soviet Union, Israel absorbed a lot of Russian-Jewish scientists which became national assets. The scientists were taught Hebrew and given full material and emotional support by the government. Those supports for the Russian scientists and their families served as a foundation for the success of the Israeli venture businesses. Since then, there was no more voluntary inflow of this advanced think tank.



A statue of Einstein in Israeli Centers of Research Excellence

Under this situation, the Council for Higher Education (CHE) sounded alarms about the brain drain in October 2009. CHE reported that years of reduction in advanced research budgets has led 25% of Israeli scholars to live abroad, pointing out that over 2,000 scientists and researchers went overseas.

This figure was the highest rate among OECD members. Compared to Canada (12.2%), Netherlands (4%) and Spain (1.3%), the percentage was particularly high. In addition, the report revealed the issues with aging of the top-level human resources in Israeli universities, indicating 48.3% of them are seniors above the age of 55.

With this composition of manpower, the report concluded that researches could not make progresses in line with technological development trends as well as significant advancements.

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### ◆ **Get Israeli Researchers Back Home**

So Israel turned its eyes to the US and Europe. From early 2010, it has studied the way to assist numerous Israeli scientists and scholars scattered around the US to return to their homeland.

Yuval Steinitz, the finance minister of Israel, met 200 scholars in Yale and MIT in the U.S. in January 2010. All of them came from Israel. They complained that there are no positions available for them though they want to go back to Israel, when the minister talked about the crisis.

Minister Steinitz opened his eyes at their remarks. He was really stumped when he realized there are no positions for them, though their country has world top class laboratories such as The Weizman Institute of Science and produced as many as 10 Nobel prize laureates. He returned to Jerusalem and recognized there is no system to recruit top class people scattered all over the globe. The existing well-known institutions were occupied by older scholars. New scholars could hardly find tenured positions in those institutions.

### **The Answers obtained from the Crisis**

#### ◆ **Exodus after Cuts in Research Funds**

#### ◆ **The “Outflow of scientists – a greater threat than war”**

#### ◆ **A Breakthrough policy change to attract the talents**

The country embarked on a large-scale media blitz to attract Israeli scholars in the US in September 2011. As a part of this program, huge advertisement boards appealing to homecoming of Israeli researchers were posted along the highways of IT cities including Boston, New York, LA, Palo Alto and Miami.

At the same time, TV advertisements also were made.

Unfortunately the funds invested in the advertisements suffered from the backlash of the criticism. American and Israeli media attacked the Israeli government saying that Israeli scholars in the US were insulted by the advertisements. As a result, the commercials did not last even two months.

Among the Israeli people, there is a pejorative term “Yordim” indicating those who left Israel. But you can now hardly find people using this word in this country. This shows the decrease in the centripetal force of the Israeli government. Better job opportunities for competent Israelis have been offered by foreign countries other than their homeland.

Previously, Israeli political circles felt in their heart that scientists did not return to their home country because of security threats and national egoism. In fact, the reason that the talents were leaving Israel simply involved jobs, career paths, and wages and housing conditions.

#### ◆ **The dream of becoming the world leader in scientific research**

Israel planned a breakthrough strategy to attract top scientists. The government promised to provide cutting-edge research environments like those in the Technion Institute of Technology and Weizmann Institute of Science – and as many as 30 new centers, not the only one. This plan targeted 300 top researchers. The plan was led by both the prime minister’s office and the planning & budget committee of CHE, which is in charge of higher education.

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Dr. Iser Peer at Bar-Ilan University said the program aims to “build a new Israel recognized as the world leader in scientific research through getting Israeli scholars with superior talent return to their homeland”.

Israel named this project I-CORE program, the acronym of Israeli Centers of Research Excellence. The key content of this program is that universities, colleges, research institutes and hospitals jointly build a system in which specialized research is made possible while the government plays a pivotal role in the financial support.

In Phase I, 3 hospitals, 6 universities and 1 college joined the I-CORE program. This is how four research centers studying molecular medicine, computer science, cognitive science and renewable and sustainable energy started operating in October 2011. A total of 14 scientists were newly returned to Israel.

Collaborative systems for efficient study were organized with existing Israeli university professors and medical doctors as well as new scientists ‘attracted’ from some the world’s top institutions including Harvard, MIT, New York University and German laboratories. For example, the cognitive science center is primarily operated by Weizman Institute of Science while Tel Aviv University and Bar-Ilan University associate with the center as cooperative institutions. All of the newly added members were guaranteed employment by the security of tenure (Tenure Track) at universities.

The scientists returning from overseas received USD 600 thousands immediately after their homecoming. These funds are wholly used to purchase equipment for launching their laboratories. Additionally, they also receive USD 120,000 annually for 5 years as a research grant. This research grant will be spent on selecting Ph. D students, participating in international conferences and other expenses. Giving a research grant, which is sometimes more than that in the US is a strategy to motivate them. These two fund sources are granted for the purpose of laboratory establishments, which is additional to their wages.

### **Let’s invite ‘Einsteins’**

- ◆ **Research grants - more than those in the U.S.**
- ◆ **Full support including Tenure Track Positions**
- ◆ **Blocking external political pressure on research**

The total budget of I-CORE amounts to USD 365 millions, and a third of the budget comes from the government. For this purpose, there was an increase in the universities research budget which has been cut for years. The participating research institutions in the program and strategic partners (businesses’ supports and donation) agreed to make a joint contribution to the program. The budget for this program is allocated by the PBC, which is independent from the Ministry of Education, to secure the consistency of the policy. This way of budget management was designed to protect against any external political pressure.

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Israel started Phase II of I-CORE in full-scale this year, which encompasses 10 more research centers. The program will expand the number and size of participating organizations. An I-CORE program coordinator, Noah Tal said, "We are planning to attract over 2,400 known Israeli researchers scattered in the U.S. and Europe." Noah also quoted the famous saying of Jonas Salk, the developer of the polio vaccine: "Our greatest responsibility is to be good ancestors."

**By Yong-keol Han from Jerusalem**

## "We aim to attract the best of the best; the cream of the crop"



Dr. Liat Maoz (34, photo), the director of Israel's I-CORE program, explained that the program is aiming to attract "the cream of the crop".

"Like the ripples on a lake ever widening, we are striving to invite the best researchers to get the ripple effect.", said Dr. Maoz during the interview with the Segye Times at Israeli Centers of Research Excellence (CHE) on April 17. She said the economic effect from the success of the program may be beyond description.

Through her six years including two years of post-doctorate study in the U.S., she obtained a doctorate degree in physics from Harvard University.

Prior to joining this job to support other Israeli researchers returning to their home, she worked at a consulting company.

Dr. Maoz continued to say that they will launch around 25 I-COREs in the future. She explained the number of centers has reduced due to the increase in the size of each center.

She continued, "We will establish the best research groups by hiring hundreds of scientists." Dr. Maoz said, "Our goal is to establish very good research institutes and to make Israel an attractive place for high-quality sustainable research activities."

She mentioned, "We did not build new buildings when launching I-CORE because many research groups have already been doing their job using the facilities at existing universities. Therefore, we decided to use the universities as our physical laboratories instead of providing new buildings. The I-CORE program is in pursuit of the creation of and support for the framework where cooperative activity is possible between existing research groups.

She continued, "We believe the beginning of this program is truly successful. The confidence in this program is high because it is a government-sponsored one." Israel had struggled with attracting foreign investment until the government introduced the very successful "Yozma" program early 1990s, which funded the investment in the form of matching-fund grants as well as compensated for the initial investment.

She said, "Only two years ago, it was a real problem that there were hardly any jobs in universities. At that time, (cutting-edge) research was slowed down due to lack of new researchers, but the environment is dramatically changed."

**By Yong-Keol Han from Jerusalem**