Carrere Development in Science
Weizmann Institute

Dr. Nurit Eyal
June 2015
My Talk Today

The Israel National Brain Gain Program

The Office of The Chief Scientist (OCS)
Opportunities & Programs
Israel National Brain Gain Program

A designated program for handling the Israeli Brain Drain phenomena

- The program was launched in June 2013 based on Government resolution 1503
- Pooling resources of the Ministries of Economy, Finance, Immigration & Absorption and the Planning and Budgeting Committee of the Council of High Education
- The program is run under the Chief Scientist of the Ministry Economy
Israel National Brain Gain Program

Main directions of activity:

- Assistance in finding employment and in the return process
- Research and policy formulation
- Designated programs
What Do We Offer?

- Direct personal communication with representatives of the program
- **Assistance in finding a job**
- Information supplement and problems solutions for the entire family in the return process
- **Flight grants for attending job interviews**
- Social Security Direct route – providing information while still abroad and receipt of approvals by email following landing
- Informative interactive Website
- **Training workshops**
  - Career Development
  - Entire family Absorption
- **Memorandum of tax benefits and facilitations**
- Return process diagram including links to all the websites and forms
- Listening and adapt ideas and needs
Over 180 partnering employers in the program (5.2015)
Research and policy formulation
Number of Students

From 7 universities to 65 Academic Institutions

1980 to 2015

71,670 to 310,125
PhD Students

About 1,500 PhD graduates every year

1987

6,070

1990

6,307

1993

7,037

1997

7,944

2000

9,315

2003

9,972

2006

10,272

2009

10,590

2012

10,654

2014

10,860
Total PhD and MD Graduates Amongst Israel’s Academic Institutions

PhD Graduates Between 1985-2013
Total 23,104

- Biology + agriculture + medicine
- Social sciences, law & education
- Arts & humanities
- Physical sciences
- Engineering & architecture
- Mathematics, statistics & computer sciences
- Paramedicine

MD Training Between 1985-2013
Total - 9,495

Preliminary report conducted by the CBS for the Israel National Brain Gain Program, March 2015
## Percent of Advanced Degree Graduates Amongst 1985-2013 Graduates

<table>
<thead>
<tr>
<th>Field</th>
<th>Second Degree</th>
<th>PhD</th>
<th>Proportion Amongst Total PhDs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>26.2%</td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td>Biology + Agriculture + Medicine</td>
<td>30.2%</td>
<td>21.0%</td>
<td>30.34%</td>
</tr>
<tr>
<td>Paramedical</td>
<td>22.8%</td>
<td>1.2%</td>
<td>1.49%</td>
</tr>
<tr>
<td>Engineering + Architecture</td>
<td>15.9%</td>
<td>2.7%</td>
<td>9.69%</td>
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<tr>
<td>Mathematics, Statistics, and Computer Sciences</td>
<td>14.3%</td>
<td>4.2%</td>
<td>6.85%</td>
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<tr>
<td>Physics</td>
<td>27.0%</td>
<td>23.1%</td>
<td>14.10%</td>
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<tr>
<td>Humanities</td>
<td>23.4%</td>
<td>4.2%</td>
<td>16.69%</td>
</tr>
<tr>
<td>Social Sciences, Law and Education</td>
<td>30.2%</td>
<td>1.1%</td>
<td>20.84%</td>
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</table>
PhDs and MDs Abroad for Three Years or more, as of 2014, by Year of Graduation and Profession

Preliminary report conducted by the CBS for the Israel National Brain Gain Program, March 2015
PhDs and MDs Abroad for Three Years and more in 2014

PhDs and MDs abroad for three years and more in 2014, graduated between 1987-2010
Totaling 2,083

- Biology + agriculture + medicine: 586
- Paramedicine: 24
- Engineering & architecture: 206
- Mathematics, statistics & computer sciences: 186
- Physical sciences: 308
- Arts & humanities: 91
- Social sciences, law & education: 118
- MDs: 564
### Did Not Find Work
(Wish to find work, returned and not returning without a job)

<table>
<thead>
<tr>
<th>Field</th>
<th>First Degree</th>
<th>Second Degree</th>
<th>PhD</th>
<th>MD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities &amp; Arts</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>15</td>
<td>43</td>
<td>3</td>
<td>0</td>
<td>61</td>
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<tr>
<td>Exact Sciences &amp; Engineering</td>
<td>40</td>
<td>24</td>
<td>27</td>
<td>0</td>
<td>91</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>4</td>
<td>5</td>
<td>30</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>Medicine and Paramedicine</td>
<td>13</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>77</strong></td>
<td><strong>66</strong></td>
<td><strong>6</strong></td>
<td><strong>222</strong></td>
</tr>
</tbody>
</table>
Preliminary report conducted by the CBS for the Israel National Brain Gain Program, March 2015
- WHAT YOU CAN DO?

- WHAT THE GOVERNMENT DOES?
Be Professional
Create Relative advantage

- PhD is not a profession!!
- Homework – learn the market, the options & opportunities!!
- If you would like to be in the Academy system
  - Do a Post doctorate in the best place you can
  - Understand the options in the Israeli academia (before you start your post doctorate)
Be Professional
Create Relative advantage

- If you would like to integrate into the Industry
  - Take relevant courses
  - Go to the Industry conferences
  - Cooperate with the Industry
  - Few years in the industry between M.Sc. to PhD will give you direction and advantage
  - Don’t do long post doctorate in the Academy!!!
  - Find fellowships program in the industry abroad
  - Speak with friends and colleagues
It is a Global Phenomena

- Reducing trainings
- Control number of trainings
- Staff Scientists track
- Training adjustment – academic track for the industry
- Advanced training tracks in industry

Rescuing US biomedical research from its systemic flaws (Bruce A. et al, PNAS, 2014)
Training Grants In The Industry

- Life sciences –
  - Training in the global pharma industry and the Israeli biotech as an alternative to a post-doctorate
  - Solution to the shortage of skilled, experienced manpower in the Israeli biotech industry
  - Will open more employment channels to returnees

- Physical sciences –
  - Training in the Israeli hi-tech industry as an alternative to a post-doctorate
  - Will open more employment channels to returnees

- Adaptation of academia contents to the labour market (designated tracks)

Win Win
Execution of government policy supporting industrial R&D

Goal is not to make money but strengthen the industry

Enable but don’t lead the market – “do no harm”

37 different programs to promote innovative R&D
The OCS Main Programs:

- R&D Centers for MNC's
- R&D Fund
- Technological Incubators
- Tnufa
- Assistance for New Start-Up
- Multi National Corporations Program
- Magnet
- Nofar
- Kamin
OCS Designated Programs to Biotechnology

**Life Science Fund**
*biopharma and medical devices:*
- Total Investment $220M, operated by Orbimed Partners Israel

**Biotechnology Incubator**
- Partners: Orbimed, Takeda, J&J
- $2.025M, 85% OSC: 15% Incubator

**Extended support (time & $) to biotechnology projects in other incubators and programs.**
www.israel-braingain.org.il