



**State of Israel**  
**Ministry of Industry, Trade & Labor**  
**Investment Promotion Center**

**Invest In Israel**  
Where **Breakthroughs** Happen

---

**Creating Synergies in Life Sciences**  
**2010**

# Main Economic Indicators

<b>Criteria</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
GDP (current prices in \$B)*	144.0	164.1	191.8	193.1	202.0
GDP Real Growth Rate (%)	5.2%	5.4%	4.0%	0.7%	4.6%
GDP per Capita (PPP adjusted)**	\$24,271	\$27,395	\$28,473	\$28,160	\$28,920
GDP per Capita Growth Rate (%, Current prices)	3.3%	3.5%	2.1%	-1.1%	2.7%
Exports (Goods & Services)** \$B* (As Percentage of GDP)	62.6 (43.5%)	71.2 (43.4%)	80.4 (40.3%)	70.35 (36%)	81.8 (40%)
Imports (Goods & Services)** \$B* (As Percentage of GDP)	62.2 (43.2%)	74.0 (45.1%)	84.1 (42.2%)	72.3 (37.4%)	81.2 (40%)
Unemployment Rate (%)	8.4%	7.3%	6.1%	7.5%	6.6%

# Highlights

- **Highest civilian R&D expenditure/GDP (4.1% of GDP)**
- Largest number of scientists per capita in the world and dedicates one third of its research budget to the Life Sciences.
- First in the world for Medical Device Patents per Capita, Fourth for Bio-Pharma Patents.
- Fourth in investments in Biotechnology/GDP
- Rated 3<sup>rd</sup> worldwide in Medical Device area
- More than 18 drugs in advanced clinical trials (3<sup>rd</sup> in Europe)

# Israel's Competitive Edge – IMD World Report 2011

Country Rank →	1st	2nd	3rd	4th
BUSINESS EXPENDITURE ON R&D (% GDP)	Israel	Sweden	Japan	Finland
TOTAL EXPENDITURE ON R&D (% GDP)	Israel	Sweden	Finland	Japan
SKILLED LABOR	Israel	Denmark	Iceland	Ireland
ENTREPRENEURSHIP OF MANAGERS	Malaysia	Israel	Taiwan	Hong Kong
FLEXIBILITY AND ADAPTABILITY OF PEOPLE	Iceland	Israel	Hong Kong	Brazil
VENTURE CAPITAL AVAILABILITY	Hong Kong	Malaysia	Israel	Taiwan

**Israel Ranks 17**

# Acquisitions of Israeli Life Science Companies

<u>Acquirer</u>	<u>Amount(\$M)</u>	<u>Company</u>	<u>Sector</u>	<u>Date</u>
Roche	160	Medingo	Medical Technology	2010
Medtronic	325	Ventor	Medical Devices	2009
Alcon Inc.	180	Optonol Ltd.	Medical Technology	2009
Abbott Laboratories	123	Starlims Technologies	Laboratory Information Management	2009
Johnson & Johnson	447	Omrix	Biotechnology	2008
St. Jude	300	MediGuide	Medical Devices	2008
Nobel BioCare	95	AlphaBioTec	Dental	2008
Sun Pharma	454	Taro	Pharmaceuticals	2007
Kyphon	220	Disc-O-Tech	Medical Devices	2006

# Foreign Companies Invested in Israel - Some Examples

## US

- **Perrigo**
- **GE Healthcare**
- **Johnson & Johnson**
- **Dentsply**
- **Stryker**
- **Boston Scientific**
- **Microsoft**
- **AOL Time Warner**
- **Intel**
- **IBM**
- **Cisco Systems**
- **Lucent**
- **3Com**
- **Hewlett Packard**
- **Motorola**
- **Sun Microsystems**
- **Google**

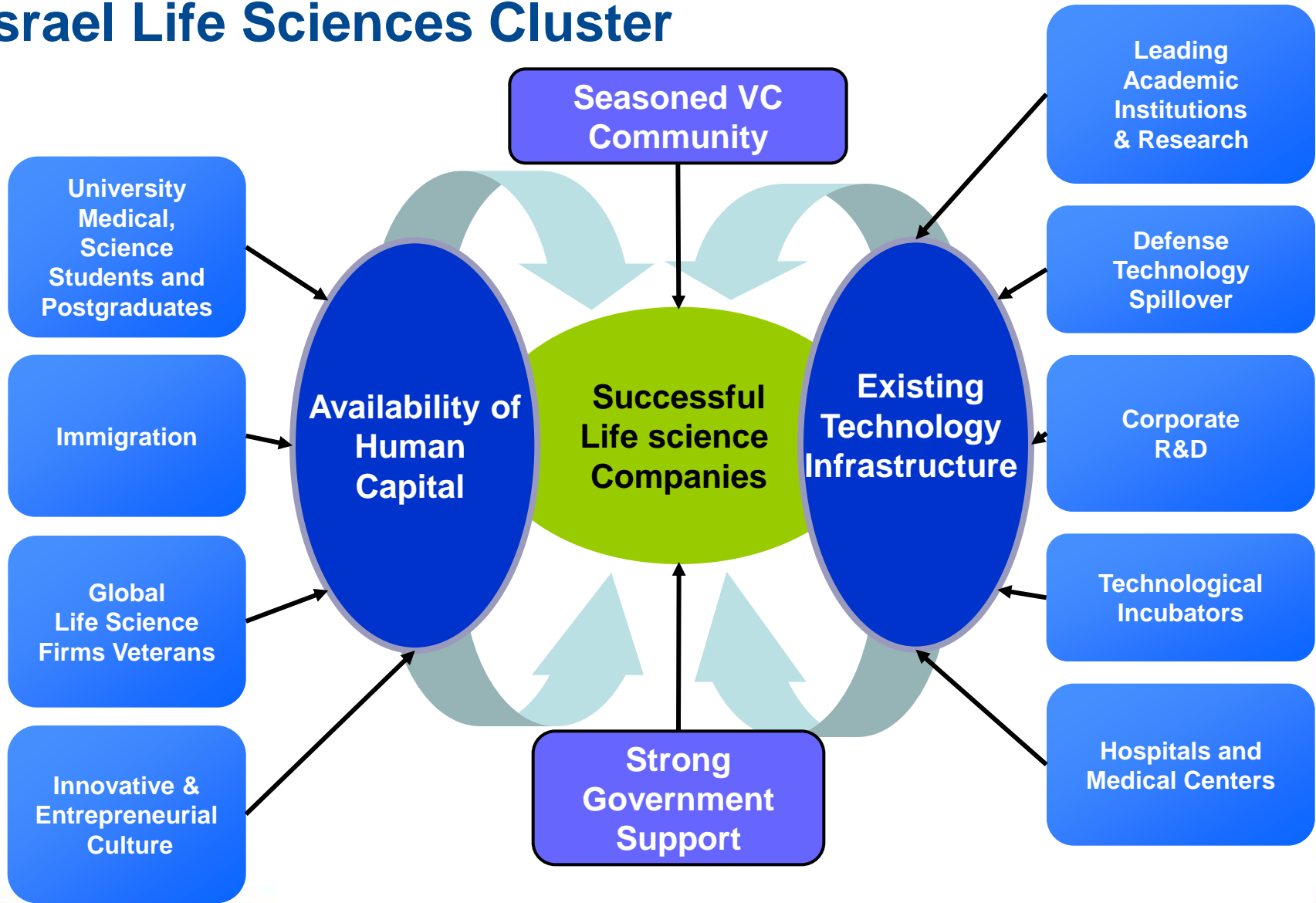
## Europe

- **Roche**
- **Philips Medical**
- **Ferring**
- **Merck-Serrono**
- **British Telecom**
- **SAP**
- **Alcatel**
- **Siemens**
- **Cable & Wireless**
- **Deutsche Telekom**
- **Telecom Italia**
- **Generali**
- **Nestle**
- **L'Oreal**
- **Danone**
- **Unilever**
- **Veolia**

## Asia

- **Sun Pharmaceutical**
- **Scigen**
- **Sony**
- **Toyo Ink**
- **Fuji**
- **Honda**
- **Sumitomo Trading**
- **Nomura**
- **Samsung Electronics**
- **Daewoo**
- **LG Group**
- **Hyundai**
- **Acer Computers**
- **Macronix**
- **Winbond**
- **Hutchison Telecomm**
- **Jain Irrigation**

# Israel Life Sciences Cluster

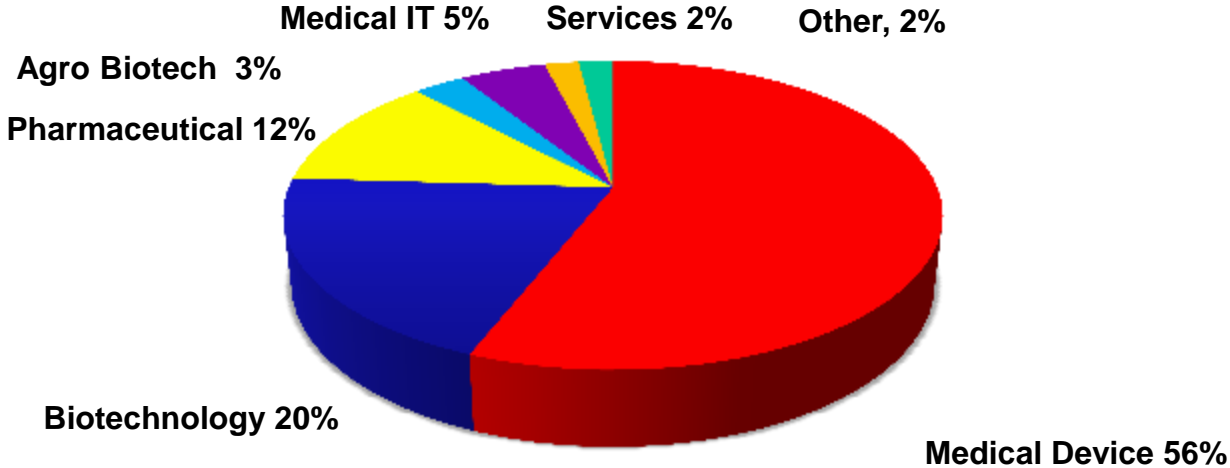


# Israel's Life Sciences Industry

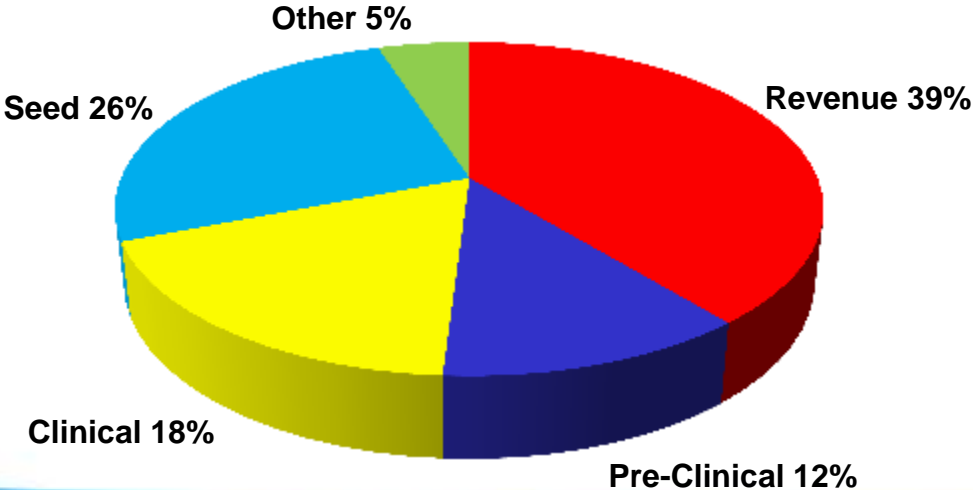
## Blockbuster Launched Products

<i>Product</i>	<i>Indication</i>	<i>Company Licensee</i>	<i>Revenues 2008</i>	<i>Academic Institute</i>	<i>Inventor</i>
Copaxone (glatiramer acetate)	Multiple Sclerosis	Teva	\$M 2,260	Weizmann Institute	Michael Sela
Rebif (interferon beta-1a)	Multiple Sclerosis	Merck-Serono	€M 1,331	Weizmann Institute	Michel Revel
Exelon (rivastigmine tartrate)	Alzheimer's	Novartis	\$M 815	Hebrew University	Marta Rosin
Doxil / Caelyx (Doxorubicin liposome)	Cancer	J&J Schering- Plough	\$M 430	Hebrew University Hadassah Hospital	Alberto Gabizon
Azilect (rasagiline )	Parkinson	Teva	\$M 175 Launched July 2006	Technion	Moussa Youdim
Erbitux	Cancer	Merck-Serono Bristol-Meyers Squibb	€M 565 Launched 07-2008 M\$ 749	Weizmann Institute	Michael Sela

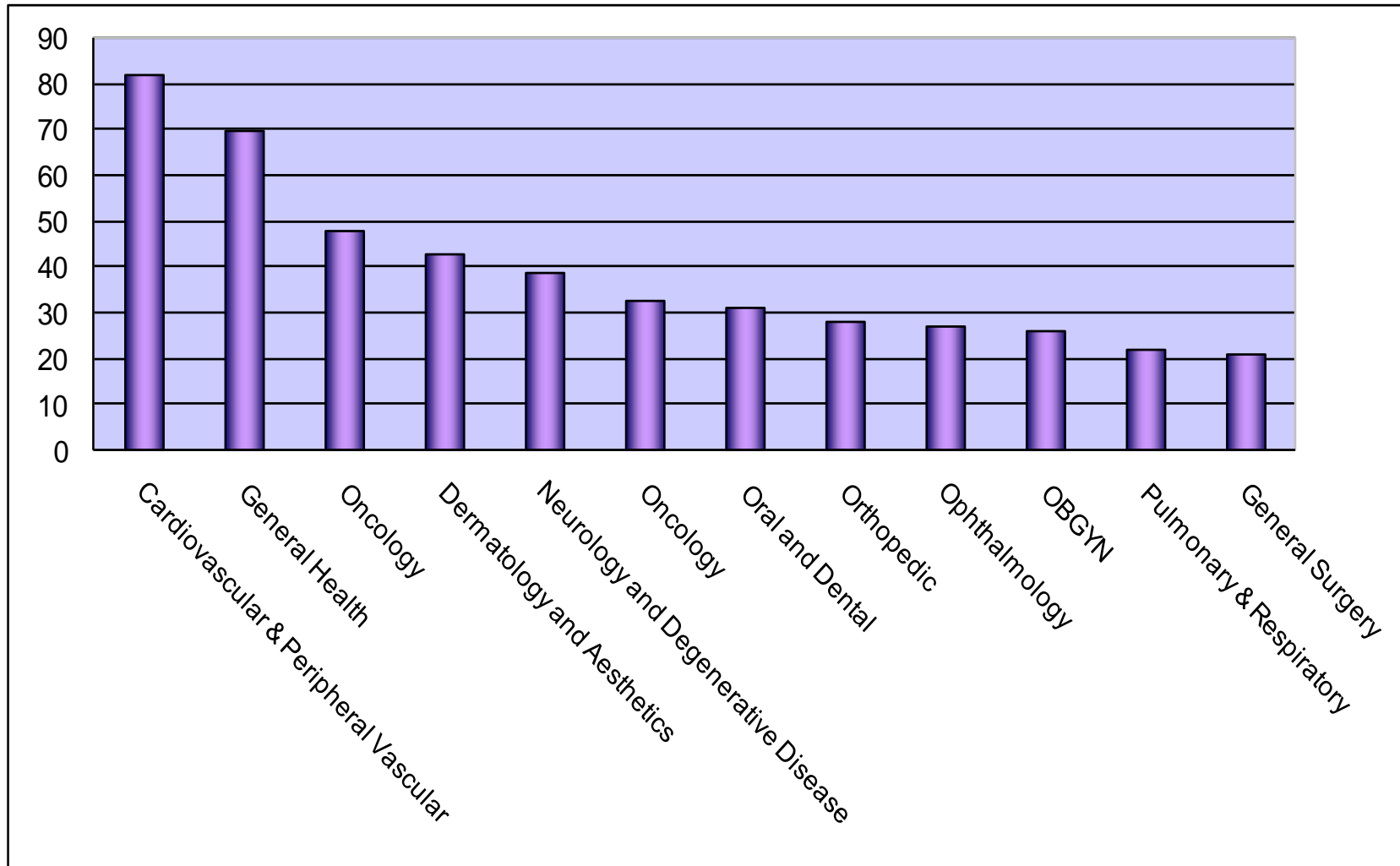
# Israel's Life Sciences Industry – Sectors



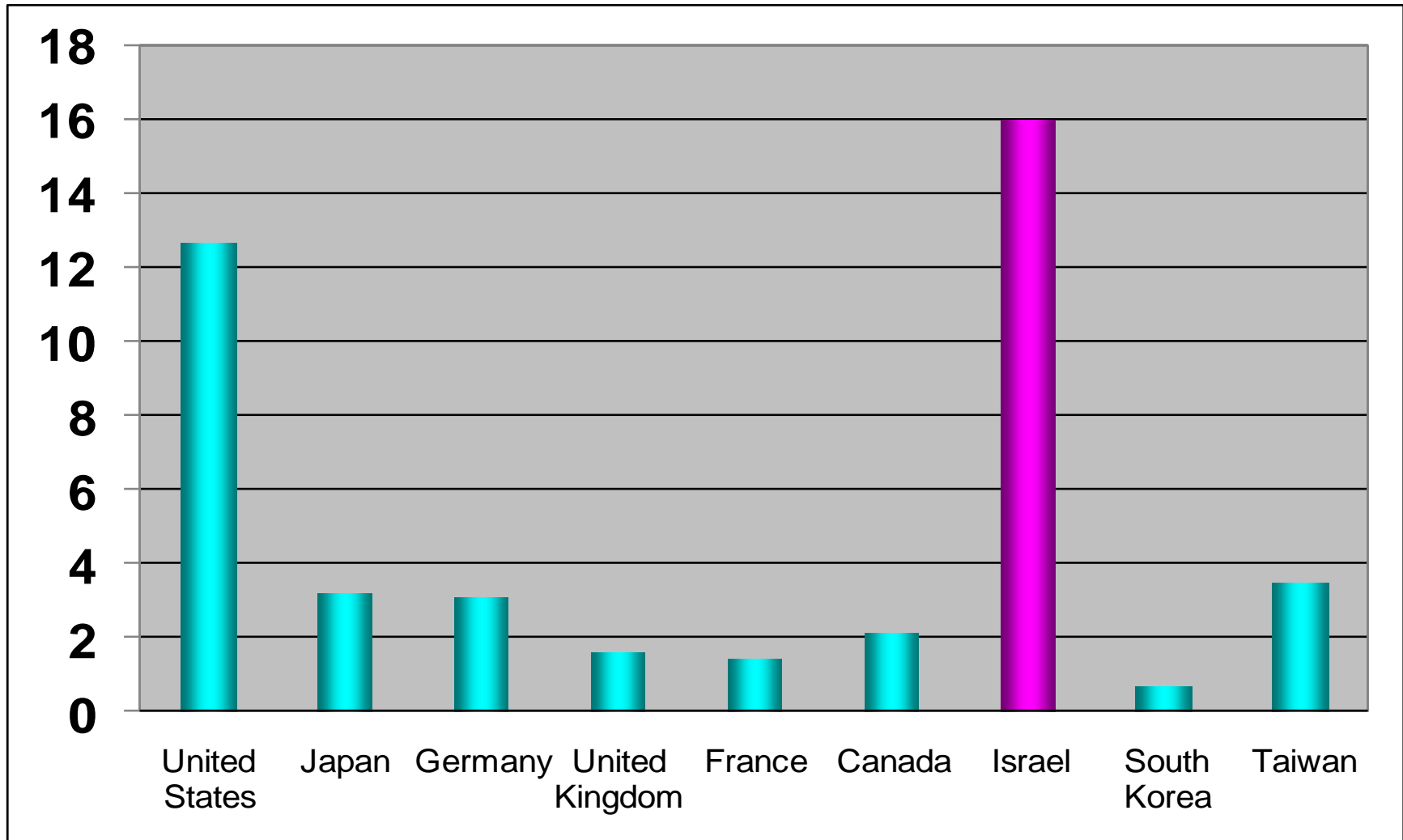
# Companies' Developmental Stage



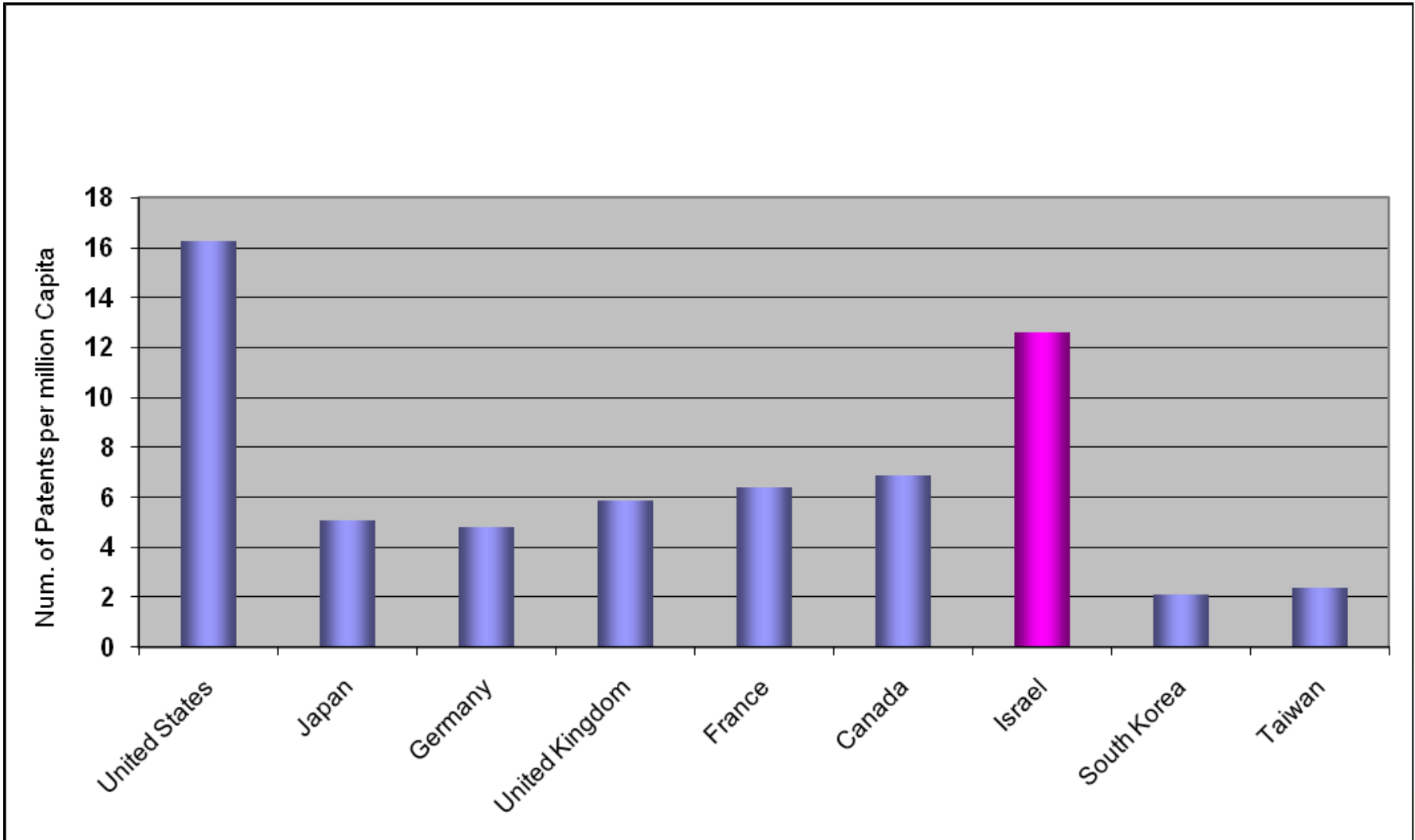
# Main Medical Fields



# Medical Device Patents per Million Capita 2007



# BioPharma Patents per Million Capita - 2007



## Major Therapeutic Areas:

- CNS – Four Blockbuster drugs in market (Copaxone, Rebif, Exelon, Azilect)  
5 Additional drugs in clinical stages
- Regenerative medicine & Cell Therapy (20 active companies, 4 in clinical trials)
- Cancer - Cell Therapy, Monoclonal Antibodies, Small Molecules, Image Guided Technologies
- Inflammation & Autoimmunity
- Cardiovascular
- Infectious diseases, Vaccines

# Israeli Biotechnology Innovations

- **Can-Fite** has developed a platform technology that targets the A3 Adenosine Receptor for treatment of cancer and autoimmune inflammatory diseases.
- **Gamida Cell** is developing unique stem cells therapeutics, based on its proprietary stem/progenitor cells expansion technologies.
- **Rosetta Genomics** is a leader in the development of microRNA-based diagnostics and therapeutics
- **BrainStorm Cell Therapeutics** uses autologous bone marrow derived adult stem cells to combat Parkinson Disease.
- **Cell Cure** employs human embryonic stem cell technology for Parkinson.
- And ...Biocancell(Gene therapy), BiondVax (Intra nasal vaccines for several flu strains), Compugen (therapeutic & diagnostic drug discovery)



# Israeli Medical Devices Breakthroughs

**Given Imaging** - 1st ingestible video camera used to view the small intestine and diagnose disorders



**Insightec** - Image Guided HIFUS (High Intensity Focused Ultrasound)



**Medinol** - pioneered the development of closed cell stent design and many additional innovations to the field of heart catheterization.



GE Healthcare



**GE Healthcare** in Israel manufactured the world's first miniaturized portable cardiac ultrasound system

# Israeli Medical Devices Breakthroughs (II)

The **Philips** Brilliance CT scanner, developed in Israel takes a comprehensive picture of a patient in seconds instead of minutes.

**PHILIPS**  
sense and simplicity



**Galil Medical** - Cryotherapy for minimally invasive targeted ablation

**Insightec** - MRI guided non-invasive surgical procedure

## And many more...

- 3D Endoscope
- 3D Dental Mapping
- Fixed non-cooled Magnet Open MRI
- Simulators for Medical Procedures
- Labor Monitoring
- NiTiNOL Tooling
- Intravascular miniaturized MRI imager
- Spectral Imaging Device
- Various Stents
- Revolutionary Rectoscope
- Implantable Insulin Generator

# Stem Cells

- Israel is one of the world centers for stem cells research and technology development.
- The Jewish religion does not hinder stem cell research – unlike in other cultures - a significant plus.
- Israeli scientists are the most prolific authors on a per capita basis of published articles related to stem cell research.
- There are about 20 companies actively engaged in this new industry.

# Government Support

- The Law for the Encouragement of Capital Investments
  - Competitive grant program
  - Tax exemption path for manufacturing facilities
- The Law for the Encouragement of Industrial R&D
  - Increased grants and longer project support for LS
  - Company-Company, Company-Consortia, company-academy support program
- The Global Enterprise R&D Cooperation Framework
- The Employment Grant program for R&D centers
- Special tax benefits for R&D centers
- Tax exemption for venture capital investment
- Training grant program

# Summary

- Israel is a center of innovation and technological excellence
- Israel is a source for **profit driving innovation** in the fields of Medical Technology and Bio-Pharma
- Foreign companies can conduct **cutting edge research** in Israel cost effectively .
- Favourable government support programs: Investment grants, Tax benefits and R&D grants
- Invest in Israel's main purpose is to assist investors establish a presence in Israel. Please contact us.



# State of Israel

Ministry of Industry, Trade & Labor  
**Investment Promotion Center**

---

5 Bank Israel St., Kiryat Ben-Gurion Jerusalem, Israel  
[www.investinisrael.gov.il](http://www.investinisrael.gov.il) ■ [investinisrael@moital.gov.il](mailto:investinisrael@moital.gov.il)  
Tel: +972-2-6662607 Fax: +972-2-6662983

**Invest in Israel**  
investment promotion center