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Israeli Women Ahead in Science Poised to Lead in Biotech

By David Wainer and Shoshanna Solomon - Aug 21, 2012

Every week, Daniella Nistenpover sits down in a lecture hall for one class in neurophysiology and another in biological processes, and sees a sea of women.

That's not the case when the 22-year-old takes courses in the theory of electrical circuits or differential equations at the predominantly male [Technion-Israel Institute of Technology](#). She says it's evidence that she's picked the right career.

"It makes you feel that in the life-sciences field, a woman can make a mark," says Nistenpover, a bio-medical engineering major at the university in Haifa who plans to work in bio-mechanics or bio-materials research.

Women outnumber men in biology and related sciences in higher education in [Israel](#). That could give women an advantage as the government and private investors put increasing amounts of money into the life-sciences industry, one of the country's fastest growing sectors, collecting the most [venture capital](#) money in the first half of this year.

Hiring and promoting women could also give startups an edge because women still have to work harder and be smarter than men to succeed, says [Hagit Messer-Yaron](#), president of the Ra'anana-based Open University and the Ministry of Science's chief scientist from 2000 to 2003.

"The women that make it to the top usually have to prove themselves and overcome hurdles that are above and beyond what men are required to do," Messer-Yaron says. "When these women make it as managers, they are over-achievers and can help these companies succeed."

Executive Positions

Israel got the nickname "startup nation" in a 2009 book with that title. It has about 60 companies on the Nasdaq Stock Market, the most of any country outside [North America](#) after [China](#). The high-tech industry accounts for 47 percent of manufactured exports.

While most high-tech employees are male, women comprise 60 percent to 70 percent of the biotechnology workforce, according to [Nisha Group](#), a recruiting firm based near [Tel Aviv](#).

Still, men dominate upper management. Women hold about 13 percent of chief executive officer positions in companies in the Tel Aviv Biomed index and less than 5 percent in the [Tel Aviv Technology index](#), according to data analyzed by Bloomberg.

That's destined to change in biotech, says Ora Dar, head of the life sciences sector at the Office of the Chief Scientist in the Ministry of Industry, Trade and Labor.

"As this field matures, you are going to see women increasingly taking executive positions," says Dar, whose team of about 100 evaluators, who decide what projects and incubators to finance with taxpayer money, is more than 70 percent female. "It's a matter of experience."

More Pressure

More women than men earn science degrees in Israel, according to Lizi Shoov [London](#), partner and managing director of the Biomedical and Cleantech division at Nisha Group outside Tel Aviv. About 58 percent of biology doctorate degrees awarded in 2010 were to women, a study by [Israel's Council for Higher Education](#) found. That compares to women earning 44 percent of equivalent degrees in the U.S., according to the National Center for Education Statistics.

"Women traditionally are not the main breadwinners in the family and can afford to pursue a PhD, whereas men have more pressure to go out and make a high salary, says Anat Cohen-Dayag, president and CEO of [Compugen Ltd. \(CGEN\)](#), which was founded by members of an Israeli army intelligence unit that designed software to break codes. The Tel Aviv-based company uses algorithms to trawl private and public databases to discover proteins that may have the ability to treat diseases.

Working Mothers

The industry is a good fit for working mothers like herself, she says. "Because of its academic characteristics, the culture in the industry has traditionally been more permissive, enabling more flexible hours, which has enabled women to juggle career and family."

Cohen-Dayag is one of three female CEOs in the Tel Aviv Biomed index. The others are Kinneret Livnat Savitsky of [BioLineRx Ltd. \(BLRX\)](#), which develops clinical stage therapeutic pharmaceutical drugs, and Pnina Fishman of [Can Fite Biopharma \(CFBI\) Ltd.](#), which is focusing on treatments for autoimmune diseases and cancer.

Most of the companies in the sector are very young, with little or no revenue, according to Uri Geiger, managing partner at Herzliya-based Accelmed, which invests in medical-device makers. Of the more than 1,000 life-science companies in Israel, 57 percent are focused on medical devices, Geiger says, with the remainder in biotechnology, pharmaceuticals, health information technology and other small fields.

Venture Capital

The share of the government research and development budget allocated to health-related companies almost doubled in the last decade to 26 percent from 14 percent, according to Israel Chief Scientist Avi Hasson, head of the Ministry of Industry, Trade and Labor fund that invests as much as \$500 million a year.

Biomedical companies attracted the most venture capital in the first half of this year, according to IVC-KPMG, which tracks the industry. The \$240 million represented 26 percent of all the venture capital invested in startups in the period, more than in the previous year, a IVC-KPMG survey found.

Orbimed Healthcare Fund Management, a New York-based investment management firm focused on health-care, started the Orbimed Israel Partners \$222 million fund in Israel in April with partial [government investment](#), while the Tel Aviv venture capital firm Pontifax Ltd. raised \$88 million for bio-medical investments last year.

Metallo-Therapy Ltd., which is developing a new method for cancer diagnosis by delivering nano-liposomes to tumor cells, recently received a \$4 million investment from Moshe Arkin, former CEO of Agis Industries Ltd. and [Perrigo Co. \(PRGO\)](#)'s vice chairman. Amal Ayoub, Metallo-Therapy's founder and CEO, says she thinks one reason is that she's female -- and Arab.

'Only Natural'

"Being an Arab woman was actually an advantage," says Ayoub, who has a doctorate in biomedical engineering from Ben Gurion University. "It got Arkin's attention."

Galit Zuckerman, founder of [Medasense Biometrics Ltd.](#), which is working on an automated, non-invasive pain monitoring diagnostic device, says women are taking life sciences jobs as academic positions are increasingly hard to find. '

'You have all these women with growing expertise in biology," she says. "It's only natural that they increasingly market that knowledge."

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