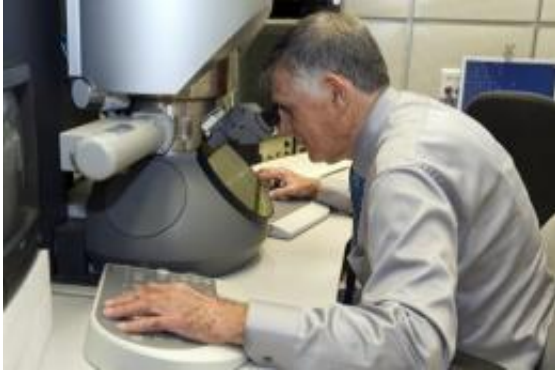


Tiny Israel a giant in scientific research

October 5 2011, by Jonah Mandel



Chemistry Nobel Prize winner Israeli scientist Daniel Shechtman looks through a microscope in the Technion Institute of Technology in the northern port city of Haifa. Shechtman won the 2011 Nobel Prize for Chemistry for the secret of quasicrystals, an atomic mosaic whose discovery overturned theories about solids.

Israel's contribution to the world of scientific research has won it a growing number of accolades, with the Jewish state turning out an impressive number of achievements relative to its size.

Israeli professor Dan Shechter on Wednesday became the tenth Israeli to become a [Nobel laureate](#) when he won the prize for chemistry for his discovery of quasicrystals, which overturned scientific theory on the nature of solids.

"It's a paradigm shift in chemistry. His findings have rewritten the first chapter of textbooks of ordered matter," said Sven Lidin, a member of

the [Nobel Committee](#) for Chemistry.

Shechtman's win [was hailed by Israel's leaders](#) as proof of the country's rich tradition of academic research.

"I want to congratulate you in the name of the citizens of Israel for your win, which reflects the intellect of our people," Prime Minister Benjamin Netanyahu said in a statement.

"There are not many countries who have won such a large number of Nobel prizes," said President Shimon Peres, himself a Nobel laureate.

Over the past 45 years, Israel has won a total of 10 Nobel prizes -- a major achievement for a country of just 7.8 million people.

Four have been in the field of chemistry, two were for economic sciences; one was awarded for literature while three Israelis have won the [Nobel Peace prize](#), including Peres.

Israel is the country which counts the most engineers per head and ranks second only to the United States in the number of companies listed on Nasdaq.

Almost all the big names in technology -- from Intel and Google to Microsoft -- have important research and development centres in Israel, and there are 500 new start-ups every year.

Three of the Nobel chemistry laureates, including Shechtan, were graduates of the Technion, the prestigious technological university in the northern port city of Haifa, which has turned out 70 percent of the country's engineers and 80 percent of the executives of Israeli firms listed on Nasdaq.

Israel's fourth chemistry laureate, who won the award in 2009, came from the Weizmann Institute of Science near Tel Aviv, one of the country's leading research institutes, which has twice won the Turing Award, otherwise known as the [Nobel prize](#) of computing.

Other Weizmann researchers have won the Wolf Prizes in Medicine.

Part of Israel's success in academia, as in high-tech, lies in local researchers and developers who "do more with less," said Saul Singer, author of the 2009 bestseller "Start-up Nation: The Story of Israel's Economic Miracle."

"If you look at the top 25 drugs developed over the last decade or so, seven of them were partly developed at Weizmann. There's no other institution in the world that can say that," Singer told AFP, noting that Harvard developed only two of them -- and on a much larger budget.

"Or Tel Aviv University, which recently ranked number 11 in citations per faculty member. That's above Oxford, Cambridge and Yale. There's no comparison in terms of budgets involved," he said.

Through a mixture of dermination and doggedness, Israel had excelled in both academia and start-ups, he said.

"Israel has gotten very good at doing this sort of thing," he said.

"The dynamics of being determined, creative, and doing more with less -- and also trying to solve big problems -- you see that at both the academic level and the start-up level."

Congratulating Shechtman, Education Minister Gideon Saar said scientific research would be crucial to Israel's future.

"Developing human capital and investing in education and higher education are the key to achievement and scientific research in the future," the minister said.

"The future of the State of Israel will be ensured by research on the highest level."

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Citation: Tiny Israel a giant in scientific research (2011, October 5) retrieved 3 May 2024 from <https://phys.org/news/2011-10-tiny-israel-giant-scientific.html>

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