16 Israeli research projects on personalized medicine get millions in funding

Multidisciplinary projects, including studies on autism, cancers and trauma, get NIS 60 million ($17 million) in grants from Israel Precision Medicine Partnership initiative

By **SHOSHANNA SOLOMON**
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A researcher at a laboratory in Haifa's Technion University. (Courtesy)

A partnership created to boost precision medicine research in Israel has chosen 16 multidisciplinary projects that will together get some NIS 60 million ($17 million) in funding to promote a variety of studies, e.g., developing nanoparticles to treat cancer, identifying genes to fight inherited retinal diseases, and studying the genetic aspects of autism.

The Israel Precision Medicine Partnership (IPMP), launched in 2018, aims to expand personalized precision medicine research by supporting studies that are expected to lead to a deeper understanding of human diseases and advance the implementation of new healthcare approaches. The overall IPMP budget, some NIS 210 million, enables funding of four application cycles. The duration of each project is up to four years.

IPMP is a collaboration between the Israeli government, including the Planning and Budgeting Committee of the Council for Higher Education and the Digital Israel initiative of the Ministry of Social Equality, the Klarman Family Foundation in the US, and the Yad Hanadiv Foundation in Israel. The IPMP program is administered and operated by the Israel Science Foundation.

“In IPMP’s second program cycle, we have witnessed a wealth of outstanding research programs that reflect the scientific depth and spirit of collaboration among researchers and physicians in Israel, and among universities, hospitals, and health funds,” said Prof. Yuval Dor, head of Life Sciences and Medicine division at the Israel Science Foundation. “The winning proposals are from a range of universities and medical institutions, address fundamental questions in human health, and are expected to generate important scientific insights and medical applications.”

The projects selected will be getting NIS 60 million in grants. In May last year, 14 teams were selected to receive the NIS 60 million in the first cohort chosen by the initiative.

In September 2020, the next call for proposals will be published for the third of the four planned submission cycles, the fund said in a statement on Monday.

Among the 16 research projects selected, out of 75 submitted, are a multidisciplinary team of chemists, biologists and pathologists from the Hebrew University who will get a NIS 4.2 million grant to find a cancer drug using nanoparticles in a patient. Using smart, stimulus-responsive nanoparticles, the team will simultaneously screen the ability of multiple drugs to kill cancer cells in vivo.

Other selected projects:

A team of researchers from the Technion – Israel Institute of Technology working together with the Sheba Medical Center will get a grant of NIS 4.9 million. By combining genetics and biochemistry, their research will map the metabolic profile of pancreatic tumors to decipher mechanisms of resistance to therapy and identify ways to overcome them.

Scientists from the Hadassah-Hebrew University Medical Center, The Hebrew University and Bar-Ilan University will get a grant of NIS 4.2 million to better understand the biology and epidemiology of inherited retinal diseases and will seek to open new avenues for improved screening, diagnosis, genetic counseling, prevention, and treatment of the illnesses.

Tel Aviv University researchers will combine expertise in neuroscience, psychiatry, genetics, statistics, and artificial intelligence to develop a dynamic risk-prediction model for psychopathology after a traumatic event and for the development of psychological problems over time. They will get a grant of NIS 3.5 million.

A Technion team will seek new ways to treat chronic wounds in patients with diabetes via a personalized, wound-specific, artificial skin graft combined with personalized oxygen therapy. The oxygen therapy will be based on a new magnetic-resonance method for wound-specific noninvasive monitoring of oxygen levels. The researchers will get a grant of NIS 4.2 million.

Tel Aviv University researchers are cooperating with the Ben-Gurion University Autism Research Center to study genes thought to be responsible for autism spectrum disorder in order to develop a diagnostic tool using a machine learning approach. They will get a grant of NIS 4.9 million.

In April, another grant program was approved to quickly fund research focused on curbing COVID-19. The NIS 14 million program is funded by the Planning and Budgeting Committee and several philanthropic foundations: Yad Hanadiv, the Klarman Family Foundation, the Russell Berrie Foundation and the Wolfson Foundation. The program is also run by the Israel Science Foundation. The program aims to finance some 30 projects at NIS 180,000–720,000 apiece, which will take six months to two years.

Full disclosure: The Klarman Foundation's Seth Klarman is the chairman and capital partner of The Times of Israel.

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